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INDIAN TARIFF BOARD

Oral Evidence

recorded during enquiry on the

SUGAR INDUSTRY

Volume V

**Local Government, Associations,
Chambers of Commerce, Individual
Firms and persons**



DELHI: MANAGER OF PUBLICATIONS

1938

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Secretaries . { Mr. K. B. Bhatia, I.C.S., up to 5th December, 1937.
 { Rai Sahib H. C. Sen from 6th December, 1937.

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No. 127-T: (1)/37.

DEPARTMENT OF COMMERCE.

New Delhi, the 27th March, 1937.

RESOLUTION.

TARIFFS.

The amount of protection afforded to the Sugar Industry by the duties imposed by section 2 of the Sugar Industry Protection Act, 1932, will determine on the 31st March, 1938, and section 3 of that Act provides that the Governor General in Council shall cause to be made by such persons as he may appoint in this behalf an enquiry to ascertain if the protection of the Sugar Industry during the period from 31st March, 1938, to the 31st March, 1946, should be continued to the same extent or to a greater or lesser extent. The Government of India have decided that this enquiry should be undertaken by the Tariff Board and the following terms of reference have been framed for its guidance:—

- (a) The Board is requested to examine the measure of protection now enjoyed by the Sugar Industry and to report whether it is necessary to continue protection to this extent or to a greater or lesser extent;
- (b) In making its recommendations the Tariff Board will take all relevant considerations into account including that stated in part (b) of the Resolution adopted by the Legislative Assembly on the 16th February, 1933.

2. Firms and persons interested in the Sugar Industry or Industries dependent on the use of sugar who desire that their views should be considered by the Tariff Board should address their representations to the Secretary of the Board.

**Press Communiqué issued by the Tariff Board on the 5th April,
1937.**

In the Government of India, Department of Commerce, Resolution No. 127-T. (1)/37, dated the 27th March, 1937, the Tariff Board has been directed to hold an enquiry to ascertain if the protection afforded to the Sugar Industry by the duties imposed by Section 2 of the Sugar Industry Protection Act, 1932, should be continued to the same extent or to a greater or lesser extent during the period from the 31st March, 1938, to the 31st March, 1946. Those Associations, firms or persons interested in the Sugar Industry or Industries dependent upon sugar who desire that their views should be considered by the Board are requested to forward their representations (with six spare copies) to the Secretary to the Board so as to reach its office at No. 1, Council House Street, Calcutta, not later than the 1st May, 1937.

GOVERNMENT OF MADRAS.

Evidence of Mr. L. B. GREEN, Director of Industries, and Mr. D. ANANDA RAO, Director of Agriculture, recorded at Madras on 7th July, 1937.

President.—Mr. Green, how long have you been working as Director of Industries, Madras?

Mr. Green.—A little over two years.

President.—Before that you were Deputy Director?

Mr. Green.—Yes, for about 19 years.

President.—So that you have been connected with the Department of Industries for nearly 20 years?

Mr. Green.—Yes.

President.—How long have you been Director of Agriculture, Mr. Ananda Rao?

Mr. Ananda Rao.—Just two years but I have acted previously in 1931 for about 8 months and again in 1934 for six months.

President.—Before that were you specially connected with sugarcane in any way?

Mr. Ananda Rao.—I was in charge of the agricultural station at Palur where sugarcane is grown largely and prior to this I was in Coimbatore as Vice-Principal of the College. I was in touch with sugarcane on the farm at Coimbatore, but the farm being intended mainly for teaching very little experimental work was done on that station.

President.—In the Madras Presidency in the last seven years the increase in acreage is only from 114,000 to 121,000. It has been slower in Madras than in any other part of India. Bombay is more or less comparable to Madras in some respects. How do you account for that?

Mr. Ananda Rao.—It is an expensive crop to grow, more expensive than in Northern India. The ryot is poor and he cannot produce the necessary capital; besides sugarcane is an irrigated crop. It is cheaper to produce in Northern India because it is grown under more advantageous conditions. Irrigation does not necessarily mean channel irrigation; it often means lift irrigation from wells which is a very costly item. Sugarcane here is mainly intended for making jaggery as opposed to making of sugar in North India which is more laborious from the individual point of view. He cannot cultivate very large areas to produce jaggery because it takes nearly a month with a single pair of bullocks and a mill to crush an acre of cane. Chiefly he is limited by his capital and he has a very small holding, sometimes 10 cents or so, and therefore the area under cane—subject to these limitations—has not spread so quickly as in the north where conditions are much more favourable as it is a rain-fed crop there.

President.—A very considerable area in Northern India is grown under irrigation in Western United Provinces. In East United Provinces and Bihar it is unirrigated.

Mr. Ananda Rao.—I can only explain local conditions. The question of factories has not arisen here till very recently and so the spread has been very very slow. In a tract like South Arcot where a factory has been in existence for some years the area is fairly large.

President.—If factories were put up, the cultivation would automatically expand?

Mr. Ananda Rao.—I should think so.

President.—Have you got your forecasts for 1936-37?

Mr. Green.—No.

President.—When will that be ready?

Mr. Green.—In about a month's time. I will send them to the Board as soon as they are ready.

President.—Do you expect an increase or decrease in acreage?

Mr. Green.—A small increase, but not very appreciable.

President.—You divide the Presidency into four different areas, Northern Circars—that I suppose does not include Nellore.

Mr. Ananda Rao.—It does.

President.—Is Coimbatore included in No. 2?

Mr. Ananda Rao.—I think it should come under No. 3 because it is neither here nor there. It is more under 3 than under No. 2.

President.—I should rather prefer to call No. 3, the Central area than Ceded Districts: will you put Coimbatore in that area or the Southern?

Mr. Ananda Rao.—If it is called Central Districts, I think it should be put in No. 2.

President.—As regards the West Coast, is there any sugar cultivation in Malabar?

Mr. Ananda Rao.—Very little, but in South Kanara 3,000 and odd acres.

President.—Will you give us figures for the average rainfall in these areas?

Mr. Ananda Rao.—I will supply the information later on.

President.—Please give us an estimate of the average rainfall of the four areas in which you divide the province.

Mr. Ananda Rao.—Yes.

President.—You have given a lot of figures about water rates; they vary so much that they are not very helpful. I would suggest that really the best thing would be to give water rates for the areas in which there are factories existing. Then again give us water rates with reference to Cauvery Mettur; that is very important. Then with regard to your cost of cultivation, I find that they vary enormously. It would be better if you could give us the cost of cultivation in the neighbourhood of factories. Some of the figures you have given I cannot understand. For instance in Kistna the cost is given as Rs. 184 an acre. I can't believe that figure to be correct?

Mr. Ananda Rao.—That is an area where a factory has just been started. They do not spend much money on manures; they use only oil cake. The reason for that is that they have introduced varieties like Co. 213 and Co. 281 which require less irrigation and less manure and therefore the cost of cultivation is lower. These figures have been obtained from raiyats. I can explain some of the variations. In South Arcot, you find two figures—Rs. 326 and Rs. 172. The top figure refers to thick canes grown in the factory area; whereas the second one below refers to Kallakurchi where a reed cane is grown. In this case there is not much manuring nor very much irrigation, and cultivation is rather perfunctory. So the yield is only about 18 tons an acre as against 30 to 35 tons per acre elsewhere.

President.—Do your figures include the cost of propping and wrapping?

Mr. Ananda Rao.—Yes. That is given under after cultivation.

President.—That is an item peculiar to South India. Can you give us figures separately for cost of wrapping and propping?

Mr. Ananda Rao.—Yes.

President.—That on an average I suppose is Rs. 100 per acre?

Mr. Ananda Rao.—Yes.

President.—Propping is only on the East Coast districts?

Mr. Ananda Rao.—Also in the Central Districts like Chittur. But it is cheaper to wrap and prop in Chittur than in the Circars.

President.—If you could give us a note on the question of cost of wrapping in the different areas it would be helpful.

Mr. Ananda Rao.—I will send you the figures later on.

President.—In the West Coast do they prop?

Mr. Ananda Rao.—No.

President.—In the south?

Mr. Ananda Rao.—In Coimbatore they do not prop.

President.—You might give us a note.

Mr. Ananda Rao.—Yes.

President.—With regard to the yield of cane per acre there are considerable variations. One figure particularly struck me. In Trichinopoly and Tanjore you have got an yield of 12 to 15 tons per acre?

Mr. Ananda Rao.—That is a reed cane.

President.—To a certain extent it might be left-out of account for purposes of calculation?

Mr. Ananda Rao.—We can omit that from our calculations. If included it will certainly reduce the tonnage.

President.—The same is the case in Salem. You have got an yield of 15 tons.

Mr. Ananda Rao.—Yes.

President.—You agree that these are low figures. We might take 20 to 30 tons.

Mr. Ananda Rao.—Yes, but the average of it all comes to 27 tons per acre which I consider low.

President.—With the introduction of new canes from Coimbatore what figures do you anticipate?

Mr. Ananda Rao.—30 to 35 tons. We have Co. 419 which gives an yield of 50 tons per acre.

President.—Supposing 27 tons is taken as an average, what figure do you hope to reach in the next 8 years?

Mr. Ananda Rao.—35 tons.

President.—The improved varieties?

Mr. Ananda Rao.—Yes.

President.—I don't follow your sucrose content figures.

Mr. Ananda Rao.—In the case of Anakapalli, for Co. 213, I have given the sucrose content as 9.62 to 12.83. I wish I had explained it in my note. The lower figures put down here are for crops grown under restricted irrigation and manuring. Probably you have heard in Anakapalli we raise sugarcane with one irrigation and the crop which needs one irrigation has to be manured also less. It gets half the quantity of manuring and one irrigation. It is practically a rain-fed crop. When such canes are analysed, we do get a low figure, but if we omit Anakapalli, the other figures are not

President.—The other figures strike me as extremely high.

Mr. Ananda Rao.—These are our own farm figures. Our Agricultural Chemist sends an assistant to every farm for analysis.

President.—They are not similar to factory figures any way. Are they comparable?

Mr. Ananda Rao.—It depends on when they take. If they take it on the same day and at the same period of ripening, there should be no difference. We send round a man in the month of January and he goes to several farms. It may be too early in one farm and too late in another farm.

President.—Palur is near Nellikuppam factory. Their sucrose content is very much lower.

Mr. Ananda Rao.—They probably take the average of a very large number. Ours are not averages of such a large number. From my station reports I obtained these figures. They represent a very small average.

President.—With the sucrose content of this cane, Madras factories ought to make a fortune. I don't think much reliance can be placed upon them.

Mr. Ananda Rao.—We approximately know the time to crush cane. We have got only small quantities of cane. The percentages are high to begin with, but by the time the crushing season is finished, they would have deteriorated 2 to 3 per cent. lower than what we originally started with.

President.—At no time in any factory the sucrose content is as high as 20 per cent.

Mr. Ananda Rao.—Fiji B is as high as 20 per cent. even at Nellikuppam.

President.—Do you consider that the existence of a large number of alternative cash crops retarded the increase of sugarcane cultivation in the Madras Presidency?

Mr. Ananda Rao.—I should not think so.

President.—In Madras judging by what we heard in other places, the alternative crops are more numerous than in other parts of India.

Mr. Ananda Rao.—The only crop that could have competed with sugarcane is Cambodia cotton and that too in restricted areas such as Coimbatore. Some time ago in the Nellikuppam area they tried to grow a little more Cambodia cotton, but when the Transport Act came, the area decreased. I don't think it is very much affected.

President.—You have given us a long list, gingelly, turmeric, tobacco, plantain—a much longer list than any other province.

Mr. Ananda Rao.—These are all cash crops, but they are not alternatives to sugarcane.

President.—What I mean by alternatives is not that they are grown alternatively, but they can be grown instead of sugarcane. That is what we mean. I don't mean that they are grown in rotation.

Mr. Ananda Rao.—For instance take Madura District. I have given a figure of Rs. 10 for chilly. I am sorry it ought to be Rs. 100. These are not alternative crops with cane. They are cash crops.

President.—The point is can they be grown as alternative crops?

Mr. Ananda Rao.—In some districts they are, but in this particular district they are not.

President.—In Bellary, Cuddapah and Kurnool there is no alternative crops.

Mr. Ananda Rao.—Yes.

President.—In Bellary, Cuddapah and Kurnool there is no alternative crop.

Mr. Ananda Rao.—That is the information I have obtained from my Deputy Director.

President.—I rather doubt the correctness of that.

Mr. Ananda Rao.—The point is that other crops are grown in very small areas. For instance, chillies are grown in 5 or 10 cents. They don't take the place of sugarcane which is grown say in half an acre.

President.—What about cotton in those districts?

Mr. Ananda Rao.—It is purely grown as a dry crop and not as an irrigated crop.

President.—I see the Government of India have allotted to you Rs. 89,000, but they did not approve your scheme.

Mr. Ananda Rao.—I believe they would approve it this time. We sent it about a year ago. It looked very much the same as in other provinces, but I think unfortunately we suggested that farms should be taken on

lease in various places where factories are located, and they rather did not approve of it. My revised suggestions are that we should do it on ryots' own lands. What I am particularly anxious is that since conditions vary so much from district to district wherever the factories are they should grow their own varieties. What applies to Anakapalli does not apply to the next district, so that I would like that work is done in various factory areas so that local problems may be best solved there.

President.—Do you consider that you have enough experimental stations for sugarcane?

Mr. Ananda Rao.—We are growing sugarcane in other farms as well. All other farms have fairly small areas under cane. In Aduthurai we have some cane and also in Talipramba and Pattambi. We are growing sugarcane wherever irrigation facilities are available.

President.—Apart from these places, in how many areas have you cane?

Mr. Ananda Rao.—Even in Guntur, a dry farm we are growing cane. We are growing sugarcane in 8 other farms besides these 4—about a dozen altogether.

President.—Perhaps you can give us a note about the other farms in which you do experimental work and the extent of the sugarcane.

Mr. Ananda Rao.—Yes.

President.—You have given us a note on the various experimental work you are doing. I don't think we need ask you about that.

Mr. Ananda Rao.—If the Board wants, I have got a note on the results of these experiments. If it is of any use I can give it now.

President.—You can send it to us?

Mr. Ananda Rao.—Yes.

President.—In regard to the introduction of new varieties, yesterday in Coimbatore we had a talk with Rao Bahadur Venkatraman and Mr. Dutt and we were discussing these new varieties of cane Co. 419 and so on; how long it would take for them to spread in this province. We were first of all looking into the time taken for these improved varieties to spread in the Sub-Tropical Regions and it was on that basis we considered how long it would take for these new varieties to be spread in Madras. Co. 419 is the best and Co. 421 is another one. How long do you think it would take for these varieties to spread?

Mr. Ananda Rao.—I do not wish to hazard a suitable answer to that question. J. 247 which was introduced some 10 years ago as an improved variety is being replaced now by Co. 213.

President.—Improved variety is a relative term.

Mr. Ananda Rao.—Improvement is being made continually, and therefore it is very difficult to introduce better varieties in areas where there are already good varieties.

President.—It took 10 years to introduce new varieties in the sub-tropical region.

Mr. Ananda Rao.—Yes.

President.—Would it take so long a time for Co. 419 to replace the existing varieties?

Mr. Ananda Rao.—I should not think so. In 7 or 8 years it would be possible to cover the same ground.

President.—Improvements on improvements will go on.

Mr. Ananda Rao.—Yes.

President.—Do you consider you have enough experimental stations?

Mr. Ananda Rao.—If I get the so-called sub-stations in the factory areas, I don't think I should worry to have many more, but they are very necessary; otherwise I cannot solve the problems of Kistna and Guntur from either Samalkot or Anakapalli. Wherever there are sugarcane factories, there must be sub-stations.

President.—Is Anakapalli station all right for the Bobbili area?

Mr. Ananda Rao.—No. Even there what appears to be a good cane in Anakapalli is not early enough or producing enough tonnage in the Bobbili area.

President.—What about Vizagapatam?

Mr. Ananda Rao.—In northern taluks cultivation is different from southern taluks.

President.—Is Samalkot all right for Kirlampudi?

Mr. Ananda Rao.—Samalkot farm represents deltaic conditions whereas Kirlampudi does not. Conditions vary so widely.

President.—You say that the promise given by the factories to ryots have not always been fulfilled. Were you thinking of Vuyyur as one?

Mr. Ananda Rao.—Vuyyur is one.

President.—They have explained why their promises have not been fulfilled. What do you think of the prospects of the Sugarcane Growers' Co-operative Unions?

Mr. Ananda Rao.—When once they get set on proper lines, I consider it is the way of tackling the problem. Their difficulties of course have to be met and my own impression is that they are still in the initial stage and therefore they are finding difficulties. When once they are got over, the proper way is to adopt co-operative methods both in farming and crushing.

President.—In answer to Question 20 about the transport of cane in the third circle, the figures are more than double those in any other circle. Why is it so high?

Mr. Ananda Rao.—Because of the difficulty of transport. Even carts cannot be had in sufficient numbers unless one is an extensive cultivator. He doesn't possess the same number of carts as a man in the deltaic areas. There is the difficulty of road transport.

President.—That is rather an abnormal figure.

Mr. Ananda Rao.—Yes.

President.—You may take 1½ to 2 pies.

Mr. Ananda Rao.—Yes.

President.—In this province the Department of Industries have taken and are taking a great deal more interest in the development of sugar industry than some other provinces. Do you help them with advice?

Mr. Green.—Yes. In the case of the Vuyyur factory we drew up the specifications and called for tenders and practically decided the tender. We have advised them on all points during the construction of the factory, have also drawn up the estimates for the Lalgudi factory in the Trichinopoly district and one or two other factories have been assisted in diverse ways.

President.—Have you any sugarcane expert?

Mr. Green.—No. A proposal was submitted to the Government in 1935 for the appointment of a sugar technologist on a three years contract. The idea was that he should devote his undivided attention to the industry and bring his specialised knowledge and experience to bear in the problems that arise in the existing factories, as well as render assistance in regard to the establishment of new ones, but the proposal was negatived.

President.—I suppose the Finance Department turned it down.

Mr. Green.—Possibly. In the Madras Presidency there are several small factories and these are probably more in need of assistance from the Department of Industries than the larger factories in the north. Factories of the size of Nellikuppam do not need any advice, but smaller factories are sometimes in need of assistance.

President.—Have they made more use of you?

Mr. Green.—Yes, the Lalgudi factory for instance.

President.—Are there any other new factories excepting Lalgudi?

Mr. Green.—At the moment there are only two, both of them being in the Trichinopoly district—one in the Lalgudi Taluk and the other in the Karur Taluk. I drew up a scheme for the Lalgudi factory and then the Karur people came along with a proposal to start another factory. I have had nothing to do with the Karur project, but both of them are experiencing very great difficulty in raising finance and it is difficult to say whether the projects will actually materialise within a measurable distance of time.

President.—Do you consider these areas suitable for starting factories?

Mr. Green.—I rather think that the Lalgudi area is more suitable. The Karur area I have not myself inspected, but speaking generally both the areas appear to be suitable under normal conditions.

President.—Have you anything to do with the Hospet factory?

Mr. Green.—Not directly. I meet the General Manager and Managing Director occasionally and have discussions with them. But I have not had any direct connection with the factory except in assisting them in regard to obtaining concessions in railway freights and matters of that kind. They had a very bad season last year.

President.—The Kirlampudi factory received a loan under the State Aid to Industries Act.

Mr. Green.—Yes, to the extent of Rs. 50,000.

President.—Has any other factory been assisted?

Mr. Green.—That is the only factory which has received help under the State Aid to Industries Act. Another factory applied for a loan, but subsequently withdrew its application.

President.—Have the Lalgudi people asked for any help?

Mr. Green.—No.

President.—Is there any direct assistance given by Government? The other things you were talking of were all indirect assistance?

Mr. Green.—As far as the Department of Industries is concerned no direct assistance has been granted except to the Kirlampudi factory.

President.—The Agricultural Department has lent a man to the Vuyyur factory?

Mr. Ananda Rao.—Yes.

President.—Are they paying for him?

Mr. Ananda Rao.—Yes, under foreign service conditions.

Mr. Green.—That ought to have been done a long time ago.

President.—Several of these factories have received financial assistance from provincial Banks.

Mr. Green.—Yes, Vuyyur particularly, and I think Etikoppaka.

President.—Most of these factories do not seem to be doing well. What do you ascribe their lack of success so far to?

Mr. Green.—When these small factories were projected there was no thought of an excise duty. If it had been known that an excise duty would be imposed, these factories would not have come into being. The additional excise duty has dealt them a severe blow. I think that one or two of the small factories would have been able to cover their interest and depreciation charges after paying a not unreasonable price to the growers if prices had remained at the 1934 level.

President.—Do you think that there is some scope for small factories in this province?

Mr. Green.—In the Madras Presidency, areas sufficient in extent to support factories of an economic size, are few. It has been really a question of small-scale development or no development at all in some areas.

If factories organised on a co-operative basis can balance their receipts and expenditure after paying a fair price to the grower, they may justify themselves even if they make no profit at all, but under present conditions it is not possible to cover interest and depreciation charges and pay a fair price to the grower. Since the additional excise duty was imposed, the price paid for cane by some of the small factories has been brought down to a figure at which it is very doubtful whether the ryot can cover his expenses.

President.—Is that likely to have any effect on the area under sugarcane?

Mr. Green.—Gradually it must inevitably have the effect of reducing the area under cane. At present the price of jaggery is so low that the lower price paid by factories for cane is accepted by the grower.

President.—What do you attribute the low price of jaggery to?

Mr. Green.—I find some difficulty in answering that question. It does not appear that there is any great overproduction. Whether the fall is sympathetic or not in its nature it is difficult to say. I think myself that there is more correlation between sugar and jaggery prices than is generally supposed.

President.—The Madras Government have given us a really interesting note on the subject with figures. I presume they come from you. That is a very interesting point which we would like to go into. You know the previous Tariff Board were inclined to come to another conclusion. Your figures and the way in which you have worked them out are very interesting.

Mr. Green.—I venture to dissent from the view of the last Tariff Board that no significant correlation exists between gur and sugar prices.

President.—Am I correct in supposing that you have only been maintaining a record of retail prices from this year?

Mr. Green.—Yes, only from this year. The figures of retail prices I have sent you have been collected from the records of the Triplicane Urban Society. I did not have them on record in my office.

President.—Can that be considered fairly representative?

Mr. Green.—Yes, I think so.

President.—About the Palmyra Sugar Industry, our special attention has been drawn to it. Before I go further I should explain that the amount of sugar produced may not be very large but the matter may be important from the point of view of employing a large number of families in the tapping industry. Can you give us any information about what the tappers earn, what their relations with middlemen are and so on.

Mr. Green.—No, I am afraid I cannot do that off hand. A survey was carried out in 1926 or 1927 but I would not like to put this forward as representing the conditions that obtain to-day.

President.—Could you collect any information for us?

Mr. Green.—Yes.

President.—As at present arranged it is quite probable that we should be visiting Samalkot in the middle of September. Would it be possible for you to give us the information then?

Mr. Green.—You want to know as much as possible about the economics of the tapping industry.

President.—About the tapper—how he deals with the middleman, what his family is expected to earn and so on. That point of view we may say it is more important than the sugar manufacturing point of view.

Mr. Green.—Yes. I will collect the information you require.

President.—With regard to your reply to Question 37 about imports and exports, there appear to be imports and exports from the same area.

Mr. Green.—Of jaggery you mean?

President.—Yes, that is rather curious.

Mr. Green.—It is certainly difficult to explain why that should be so. The quantity of exports is limited.

President.—It is nearly 1,000 tons exported to Mysore. So is the case with the Nizam's States.

Mr. Green.—I believe recently there have been considerable imports of jaggery into the Madras Presidency from the Nizam's Dominions and this will have to be watched.

President.—Will you give us figures later on up to the end of 1936-37 in all cases?

Mr. Green.—Yes.

President.—That applies more to you Mr. Ananda Rao. You might send in any statistics that might come by August.

Mr. Ananda Rao.—Yes.

President.—I gather from the replies to the questionnaire that the system of open pan manufacture of sugar is negligible.

Mr. Green.—It is quite negligible in the Madras Presidency. We thought some years ago that there might be scope for the development of this small-scale industry, but we have more or less come to the conclusion that it is definitely uneconomic and should not ordinarily be encouraged.

President.—Are you satisfied with the accuracy of the statistics of acreage and outturn?

Mr. Green.—I think that on the whole they are fair, but I would not like to say that they are not susceptible of further improvement.

President.—The unsurveyed area of this Presidency would be roughly how much of the total? Would it be about a third?

Mr. Green.—About a third.

President.—Presumably the returns from that area are less accurate.

Mr. Green.—Substantially less accurate. In respect of two-thirds of the area surveyed, the figures may be considered to be reasonably accurate.

President.—I understand that no crop experiments have been done since 1913. Is that not likely to affect the accuracy of the outturn figures specially in regard to the improved varieties of cane?

Mr. Ananda Rao.—Yes. We started this year in three districts and we propose to do the same in other important districts also.

President.—Have you had any results?

Mr. Ananda Rao.—We only started last season. The figures have not reached me yet.

President.—Could you give us a note on that subject?

Mr. Ananda Rao.—We started these in only three districts during this year, viz., Madura, Coimbatore and South Kanara. I doubt whether it would be possible to get these figures in a month or two. If they come before October, I shall send them on to you.

President.—What we would like to know is how these figures compare with standard outturns. That is the most important point. You say definitely that the figures of normal yield are out of date as they were compiled in 1919.

Mr. Ananda Rao.—Yes.

President.—The Imperial Council of Agricultural Research are conducting some enquiries into the average cost of cultivation. In what districts are they working it out in the Madras Presidency?

Mr. Ananda Rao.—In six villages in Vizagapatam, Coimbatore and Bellary.

President.—Have you seen the results?

Mr. Ananda Rao.—I have, and they have been submitted to the Imperial Council of Agricultural Research.

President.—You have given us a very useful note on possible by-products, Mr. Green.

Mr. Green.—In regard to the possibility of utilising the molasses produced by sugar factories for manufacturing butyl alcohol and certain solvents by the direct fermentation process, I may mention that since I first considered the question, prices of solvents have declined considerably, and even when all commodities were rising up to March or April, prices of solvents were falling away owing to competition between the American and British combines. Owing to the fall in the prices of solvents, the proposition for a butyl alcohol factory has been rendered much less attractive, and two firms that considered the question of setting up a factory have given it up. There is in any case probably scope for only one such factory in India. Nevertheless, it is a very interesting proposition and the possibilities of establishing a factory should I consider be borne in mind.

Mr. Rahimtoola.—Mr. Ananda Rao, since how long have you started using the new varieties of cane?

Mr. Ananda Rao.—The Coimbatore varieties from about 10 years. We did not start them in all farms.

Mr. Rahimtoola.—There are altogether four sugarcane farms?

Mr. Ananda Rao.—Yes.

Mr. Rahimtoola.—I find that in other provinces they have made a large increase in the percentage since 1933-34 whereas the percentage in Madras has remained more or less the same as regards new varieties. If you look at the figures, in 1934-35 the acreage was 125,310 and the area under new varieties was only 40,262 which is about 31 per cent.; in 1936-37 out of a total of 121,530 it is only 42,650 or about 34 per cent. What has happened to retard the progress? In other parts of India the percentage of new varieties is very much higher.

President.—As high as 70 per cent.

Mr. Ananda Rao.—Sugarcane is restricted to certain areas only for a very long time. It is only recently that the desire to grow sugarcane has occurred to the farmer only after the fall in paddy prices the substitution of that crop had to be thought of and sugarcane was considered to be really more profitable. But that, I am afraid, does not answer your point “why the area under improved varieties has not improved”? I suppose it is the conservation of the ryot.

Mr. Rahimtoola.—I understand the Madras Presidency is divided into 8 circles and sugarcane is confined to four areas?

Mr. Ananda Rao.—Yes.

Mr. Rahimtoola.—Can you give us the names of the places which comprise these four areas? For instance, what districts are in the Northern Circars?

Mr. Ananda Rao.—Vizagapatam, East Godavari, West Godavari, Kistna, Guntur and Nellore.

Mr. Rahimtoola.—And the second area?

Mr. Ananda Rao.—Chingleput, Madura, Tinnevely, Coimbatore, Salem. In the Central districts—Bellary, Karnool, Cuddapa, Chittur, South Arcot and

Mr. Rahimtoola.—These are too difficult to take down; will you send me the names?

Mr. Ananda Rao.—Yes.

Mr. Rahimtoola.—Which do you consider the most important tract out of the four areas for the growth of cane?

Mr. Ananda Rao.—The Circars.

Mr. Rahimtoola.—What is the acreage under sugarcane in that area? Perhaps you might include that in the note on the four divisions.

Mr. Ananda Rao.—Yes.

Mr. Rahimtoola.—Which place contains the largest acreage under cane?

Mr. Ananda Rao.—Vizagapatam.

Mr. Rahimtoola.—What is the area?

Mr. Ananda Rao.—About 30,000 acres.

Mr. Rahimtoola.—Out of a total of 121,000 acres, 30,000 is in Vizagapatam? How much of this is under new varieties?

Mr. Ananda Rao.—I think about 15,000 to 17,000 acres; of course I am speaking from memory.

Mr. Rahimtoola.—Can you give me the number and name of factories according to these areas and the tonnage of each?

Mr. Ananda Rao.—Yes.

Mr. Rahimtoola.—How many of these are independent factories?

Mr. Green.—There are 13 factories in the Madras Presidency, of which three are palmyra and two crush cane and refine palmyra also. Only two of the 13 factories are co-operative factories, namely Etikoppaka and Vuyyur.

Mr. Rahimtoola.—You say $1\frac{1}{2}$ times the single crop rate for irrigation represents the charges for sugarcane? Does this apply to Trichinopoly and Tanjore? You say "For the irrigation of sugarcane with Cauvery water on ryotwari single crop wet lands in Trichinopoly and Tanjore districts the rate is the single crop wet rate in the locality plus Rs. 7-8-0 per acre". That means sugarcane in that area pays Rs. 11-4-0.

Mr. Ananda Rao.—The rates have been appreciably reduced; it is now Rs. 5-8-0 and the total rate now is Rs. 7-8-0.

Mr. Rahimtoola.—May I just go back to the cost of cultivation. Have you seen the cost of cultivation given to the Board for Madras in 1931? I want to see whether the present cost is higher or lower than what was seven years back.

Mr. Ananda Rao.—I think the information given then was from the Agricultural Stations. What I have given here are figures obtained from cultivators.

Mr. Rahimtoola.—What about the land revenue?

Mr. Ananda Rao.—The cultivator pays that amount; that is a fixed rate according to the area he occupies.

Mr. Rahimtoola.—Take East Godavari cost of Rs. 388: what is the yield for that. Should I take it between 28 and 43 tons?

Mr. Ananda Rao.—28 is for the thin variety.

Mr. Rahimtoola.—The cost of cultivation is Rs. 210 per acre?

Mr. Ananda Rao.—Rs. 210 for thin cane.

Mr. Rahimtoola.—If you take West Godavari the figure given is Rs. 435. The yield is 39 tons?

Mr. Ananda Rao.—Yes.

Mr. Rahimtoola.—Why is there such a big difference between the two Vizagapatam areas.

Mr. Ananda Rao.—The standard of cultivation is high in the southern part of Vizagapatam district and wrapping and propping are resorted to in after cultivation more in the southern taluks than in the northern taluks. Kossapeta is in the northern taluks.

Mr. Rahimtoola.—Which is the greater area under sugarcane, northern or southern?

Mr. Ananda Rao.—I should say southern. In the estimate showing the cost of cultivation of sugarcane, in column 4, you will find that they do not use concentrated manures in the northern taluks. It is only cattle manure whereas in the southern taluks, they use oil cakes.

Mr. Rahimtoola.—But in spite of that, they get a very good tonnage. If you see the tonnage, it is 20 tons and the cost of cultivation is Rs. 177. In the other case it is 30 tons and the cost is over Rs. 400.

Mr. Ananda Rao.—The tonnage figures I have given in some cases do not refer to the figures given in this question regarding the cost of cultivation. In the case of West Godavari it is 39 tons. That no doubt is the correct figure. In the case of 20 tons it refers to Bobbili and northern taluks. 30 tons is an average yield, but not for this particular set of figures obtained from farmers. In fact, in this case it was 39 tons.

Mr. Rahimtoola.—What about northern taluks?

Mr. Ananda Rao.—It is 20 tons, but this particular figure of 23·5 tons.

Mr. Rahimtoola.—How are we to find the figures?

Mr. Ananda Rao.—The idea was to give an average yield for a district. Whereas the cost of cultivation figures refer to particular ryots from whom the Demonstrators and the Assistant Directors obtained information.

Mr. Rahimtoola.—Is this the average of a district?

Mr. Ananda Rao.—That is the average of a district in the case of yield, but in regard to figures about the cost of cultivation, we cannot ask more than a certain limited number of ryots and the average is taken out of that limited number.

Mr. Rahimtoola.—Can you give me the actual costs?

President.—We want the cost of cultivation and the outturn for the same crops, otherwise they are useless for comparison. Can you work out a statement on those lines?

Mr. Ananda Rao.—I have here figures which refer to a few people.

President.—In order to know the cost of cultivation per maund we must obviously deal with the same plot or land. That is the information we really want.

Mr. Ananda Rao.—Yes.

Mr. Rahimtoola.—New let us examine the questions of the sucrose content. There are four farms out of which one belongs to the Central Government. Is there a separate farm belonging to the Provincial Government in Coimbatore?

Mr. Ananda Rao.—There is the Central Farm which belongs to the Provincial Government.

Mr. Rahimtoola.—These are the actual things taken by the Chemist?

Mr. Ananda Rao.—Yes.

Mr. Rahimtoola.—In the Farm itself under ideal conditions?

Mr. Ananda Rao.—Yes.

Mr. Rahimtoola.—I always make a difference—I do not know whether you agree with me—conditions in farms and conditions in actual cultivation are somewhat different. You don't get the same sucrose content in the actual cultivator's land as you do in farm conditions?

Mr. Ananda Rao.—No.

Mr. Rahimtoola.—Can you tell me the difference between the sucrose content; under farm conditions and in a particular cultivator's field?

Mr. Ananda Rao.—I have no information ready at hand. In my office I may have some information, but I don't think I would have information as to the difference between the analysis of cane in a farm and the analysis of cane in a ryot's land in the neighbourhood.

Mr. Rahimtoola.—When the Coimbatore Breeding Station finds certain number of varieties of canes promising, they are sent out to provincial stations for trials, investigation and selection. What exactly is the work done by the provincial Farms when these canes arrive?

Mr. Ananda Rao.—They are grown in small plots—2 cents or 5 cents—depending upon the amount of cane supplied by the Sugarcane Expert or there may be only a single line. That cane is multiplied next year and multiplied again in the following year until we have sufficient quantity to repeat about 10 times along with a number of varieties, but until then

they will be on a very small scale. These are repeated for a number of years, 3 years being the minimum. Then we choose what are considered best under local conditions. Then they go out into what are called "trial plots" in ryots' lands. They are under the observation of the Farm staff and are tried there for three years perhaps on the same ryot's land. If the man does not wish to continue, they are tried in another man's land in the same village. After testing for three or four years, we select one or two of the best ones and grow them in demonstration plots in ryot's own land so that people may come and see. This is the organisation we have.

Mr. Rahimtoola.—What is exactly meant by "the best cane".

Mr. Ananda Rao.—Yield, sucrose content, early or late maturity. These are three things.

Mr. Rahimtoola.—You will be able to give us some idea of the sucrose content in actual cultivator's land.

Mr. Ananda Rao.—We don't go so far as that. Once we test the sucrose content in our own farm, we don't expect that it would vary to such an extent from year to year in the Government farm, but in the cultivator's land the same sucrose content is not likely to be obtained.

Mr. Rahimtoola.—When you are giving the canes or seedlings as you call them to the farmers for demonstration in their own plots, the officer in charge does not keep any record of what happens in the cultivators' land.

Mr. Ananda Rao.—We mainly judge on the yield obtained on the farm. When it comes to a demonstration plot we take its yield. It is also noted whether the variety is early or late. What happens in the trial plot is likely to happen under the same conditions in the cultivator's land. The trial is done in the same village, and therefore it will hardly be different in the land of an adjacent ryot.

Mr. Rahimtoola.—You do not enquire anything after the seedlings are given.

Mr. Ananda Rao.—We don't analyse the sucrose content. That I am pretty certain.

Mr. Rahimtoola.—Do you get reports as to what has actually been the yield?

Mr. Ananda Rao.—Yes.

Mr. Rahimtoola.—You find the same yield?

Mr. Ananda Rao.—It would depend on the treatment he gives.

Mr. Rahimtoola.—Do you offer any advice in regard to manures?

Mr. Ananda Rao.—Yes, we do.

Mr. Rahimtoola.—Have you noticed any difference in the yield?

Mr. Ananda Rao.—We don't take the farm yield into consideration.

Mr. Rahimtoola.—When you are experimenting on different varieties of canes for 6 or 7 years, you naturally look into the question of yield and sucrose content.

Mr. Ananda Rao.—Suppose it gave 40 tons in my farm, if it gave 35 in the ryot's land

Mr. Rahimtoola.—You do not know what the yield and the sucrose content are. I take it the Department looking after the demonstration plots simply give the seedlings and do nothing.

Mr. Ananda Rao.—Seeds are given to ryots for demonstration and we note how they are doing. If, after a certain number of years, they don't do well, we give them other varieties. We don't lose track of them, but the natural speed becomes so great that we cannot keep track of every individual ryot and variety in respect of their yield and sucrose content. I am afraid with the staff we have at present, it is not possible to collect such information.

Mr. Rahimtoola.—I am afraid you have not understood the question properly. You are now tracing the history of how the farms are useful

to the cultivators. You told me that first of all you take 6 or 7 years in your own farm and then demonstrate in the cultivator's land. I want to have the comparison between the two.

Mr. Ananda Rao.—We have figures, but I can't produce them to-day.

Mr. Rahimtoola.—If you have figures, I would like to have them, because I want to know the difference between the two.

Mr. Ananda Rao.—Yes.

Mr. Rahimtoola.—In answer to Question 5 you say: "No attempt has been made to determine finally what could be considered a fair price for sugarcane in the different districts of the Presidency and there has been no demand for it either".

Mr. Ananda Rao.—I have no other answer for that.

Mr. Rahimtoola.—Could you tell us what is the fair price in the four areas into which you have divided the Presidency for the purpose of sugarcane?

Mr. Ananda Rao.—The fair prices given here are fair prices per ton opined by the Deputy Directors.

Mr. Rahimtoola.—That has been struck out.

Mr. Ananda Rao.—Unfortunately they have not issued any instructions as to what answer I should have supplied.

Mr. Rahimtoola.—Do you keep yourself in touch with the Coimbatore Sugarcane Breeding Station?

Mr. Ananda Rao.—The Sugarcane Breeding Expert or the second breeder or their assistants visit once a year practically all the farms. They send us reports on how their varieties are doing.

Mr. Rahimtoola.—You send in your reports as to how they have behaved under local conditions.

Mr. Ananda Rao.—Yes. I have gone myself to the station to consult from time to time the sugarcane officers as to what varieties are suitable. Co. 419 and Co. 421 were introduced two or three years ago after I actually visited the station.

Mr. Rahimtoola.—Have you tried Co. 419 and Co. 421?

Mr. Ananda Rao.—Yes.

Mr. Rahimtoola.—Are the results satisfactory?

Mr. Ananda Rao.—They are the best we have in satisfying our diverse conditions.

Mr. Rahimtoola.—I find from your answer to Question No. 10 that you have submitted a scheme to Government of India. Does the scheme go through the Sugar Committee of Imperial Council of Agricultural Research?

Mr. Ananda Rao.—I don't think so.

Mr. Rahimtoola.—They go straight to the Government of India for sanction.

Mr. Ananda Rao.—I believe so. At least I have no information on it. I sent it to the Local Government and the Local Government sends it to the Government of India.

Mr. Rahimtoola.—How long would it take to get the schemes generally approved?

Mr. Ananda Rao.—With the Government of India we don't directly deal.

Mr. Rahimtoola.—I mean the Imperial Council of Agricultural Research.

Mr. Ananda Rao.—Yes.

Mr. Rahimtoola.—The Sugar Committee is a committee constituted by the Imperial Council.

Mr. Ananda Rao.—The Sugar Committee meets once a year. The Advisory Board meets twice a year and the Governing Body once a year.

Mr. Rahimtoola.—I don't think these schemes are put before the Imperial Council of Agricultural Research.

Mr. Ananda Rao.—This is a special allotment given by the Government of India. I believe they deal directly.

Mr. Rahimtoola.—In reply to Question 12, you say that a lot more could be done if more funds were forthcoming. What additional money would you require?

Mr. Ananda Rao.—What I mean is this. There is the question of pests and diseases which the Imperial Council of Agricultural Research wanted to investigate further. They asked the Local Governments to put up schemes. We submitted a scheme. The idea was that the Local Government should undertake to spend a little amount and the Imperial Council would also contribute. The other provinces said that they had no money, so that although we put up a scheme, it could not be considered. If more money was given in regard to the question of insect pests and diseases, we would certainly be grateful.

Mr. Rahimtoola.—In reply to Question 14, you have given us the estimates of the production of sugar in factories. Does your answer given under (a) for 1935-36 include sugar made from palmyra jaggery?

Mr. Green.—I do not think that the reply to Question 14 was supplied by me and I should have to refer to my detailed figures before I could give you the actual production of sugar by each of the factories. The production of Nellikuppam comprises both cane sugar and palmyra sugar. I have not got with me accurate figures of production for the palmyra sugar factories separately beyond the estimated figures given in answer to Question 29. I could, however, obtain them for you.

Mr. Rahimtoola.—In reply to Question 14, you say that a loan of Rs. 50,000 was granted to the Kirlampudi Sugar Mills. Do you charge any interest?

Mr. Green.—Yes.

Mr. Rahimtoola.—What is the rate?

Mr. Green.—The rate of interest charged was five per cent.

Dr. Jain.—What are the conditions under which you give a loan?

Mr. Green.—We grant loans under the State Aid to Industries Act up to 50 per cent. of the net assets and obtain a first mortgage on the industrial assets,—i.e., in the case of the factory, on the machinery and plant,—sufficient to cover twice the amount of the loan granted. The loan is repayable in a specified number of instalments.

Dr. Jain.—You have not experienced any difficulty in regard to repayment?

Mr. Green.—Kirlampudi is the only sugar factory to which a loan has been granted and we have experienced no difficulty in regard to repayment of the instalments.

Mr. Rahimtoola.—I understand that of these three factories started on a co-operative basis, two commenced working in 1924 and one in 1936.

Mr. Green.—Yes. The Vuyyur factory is the largest one, the erection of this factory was completed in 1935.

Mr. Rahimtoola.—It was just before the time the first excise duty was imposed.

Mr. Green.—Yes.

Mr. Rahimtoola.—Why are they unable to make profit?

Mr. Green.—It is not the only reason in the case of the Vuyyur factory, but it is a contributory factor. Vuyyur was faced with many difficulties in the first year of its existence. The erection of machinery and plant took much longer than was anticipated owing to the foundations having to go much deeper as a consequence of which the factory was not ready to start crushing when the first season's cane was ready. The ryots became discouraged and planted a very much smaller area in the following year.

When the factory did start crushing, it was only able to command a comparatively small acreage.

Mr. Rahimtoola.—And the price must have gone up when the area became smaller?

Mr. Green.—It is a co-operative factory. I don't think there was very much difference in the price of cane.

Mr. Rahimtoola.—The co-operative society fixes the price of cane.

Mr. Green.—Yes.

Mr. Rahimtoola.—Does it not take into consideration the cost of cultivation?

Mr. Green.—Yes, I think so. This year, speaking from memory, it paid about Rs. 10-0-0 a ton for cane.

Mr. Rahimtoola.—Rs. 10 per ton?

Mr. Green.—Yes. It is more than it could afford to pay with reference to the prevailing sugar prices.

Mr. Rahimtoola.—The price of cane is fixed irrespective of the sugar price?

Mr. Green.—I do not know on what basis exactly the society fixes the price from year to year. Presumably it takes cognisance of the prevailing sugar prices also. In this case the price was maintained a long time after the sugar prices had fallen. The rate paid last year was definitely too high with reference to the prevailing sugar prices.

Mr. Rahimtoola.—With regard to the society you mentioned—The Triplicane Urban Society—does it deal in sugar?

Mr. Green.—It is a co-operative stores society.

Mr. Rahimtoola.—How is it able to obtain retail prices?

Mr. Green.—They retail sugar.

Mr. Rahimtoola.—Do they buy it from the Company?

Mr. Green.—They buy it from Parry's.

Mr. Rahimtoola.—Do you know whether it is palmyra or cane sugar?

Mr. Green.—I believe it is cane sugar.

Mr. Rahimtoola.—There is some difference in price between the two.

Mr. Green.—It is more likely to be cane sugar as the Triplicane Urban Society buy it from Parry's in Madras; I don't think very much palmyra sugar is sold in the Madras market.

Mr. Rahimtoola.—I want to know what it is.

Mr. Green.—So far as I know it is cane sugar.

Mr. Rahimtoola.—Where do they sell their palmyra sugar?

Mr. Green.—Trichinopoly, Samalkot and other places in the mufassal. I don't think palmyra sugar comes into the Madras market; nor do I think there is very much difference in the retail prices of the two kinds of sugar.

Mr. Rahimtoola.—Could you ascertain and let us know?

Mr. Green.—I shall enquire and ascertain definitely whether any palmyra sugar comes into the Madras market.

Mr. Rahimtoola.—As regards your reply to question 33, is there any increase in 1936-37?

Mr. Green.—I am afraid I cannot say yet. I have not got the figures.

President.—You can give us the figures later.

Mr. Green.—By the end of August.

Mr. Rahimtoola.—Have you been able to get the total yield of cane?

Mr. Green.—Not yet. I cannot give you these figures before the end of August at the earliest.

Mr. Rahimtoola.—How much gur do you get out of 100 maunds of cane? Have you been able to work that out?

Mr. Green.—The yield is generally taken as 10 per cent.

Dr. Jain.—I have very little to ask you. On page 1, I find there is a definite fall in the acreage under improved varieties in 1935-36? What do you ascribe that definite fall to?

Mr. Ananda Rao.—In 1935-36 the area of cane as a whole fell.

Dr. Jain.—The fall in the acreage under improved varieties is probably more than the fall in the acreage under cane.

Mr. Ananda Rao.—The figures we have obtained are not based on any accurate statistics. They are assumptions based on enquiries. The demonstrator is in charge of two taluks and is not expected to know how much area is exactly under improved varieties of sugarcane. They are rough estimates, I should say, more on the conservative than on the liberal side. My fear is that they are unable to go into each village, and find out the actual acreage.

Dr. Jain.—On the question of bonus payments in order to encourage the introduction of early and late varieties of cane, you say that it is a matter for investigation. What are your views on the subject?

Mr. Ananda Rao.—As I have explained later on in the answer, I think there is no need for a bonus if it can be arranged with ryots to grow cane according to the requirements of particular areas; some may require early varieties, some mid-season varieties whilst others may require late varieties. But although it appears the right thing for factories to do is to arrange to grow early, mid-season and late varieties, if you give a bonus for early and late varieties I am afraid only those varieties will be grown.

Mr. Rahimtoola.—You say the cost of cultivation in Madras is higher than in some provinces. Can you indicate the direction in which the cost can be reduced?

Mr. Ananda Rao.—The cost can be reduced in regard to cultural methods, that is growing varieties which require less manuring and less irrigation; varieties which do not require propping or very little propping; we are testing which manures are more economical than others. Then there is the question of rotation. People think that growing cane every alternate year is a profitable proposition, but we have seen that unless it is rotated once in three years it is not economical. The cost of cultivation increases with reference to irrigation. We are, therefore, introducing varieties which require less manuring and less irrigation and which would also require less propping. These are directions in which reduction can be attained.

Mr. Rahimtoola.—In a note you say that the Industries Department has got some reduction in freight rates. Can you give us an idea of the reduction in rates?

Mr. Green.—All the concessions did not relate to reduction in freights.

Mr. Rahimtoola.—But you are referring to freights specifically.

Mr. Green.—I am afraid I cannot give you the amount of the reduction without looking up the matter in detail; but I do not think it was more than 10 per cent. I will send you the information later.

Dr. Jain.—You have given us some very interesting statistics from which we can calculate the correlation between the price of sugar and price of jaggery. Are these prices wholesale or retail?

Mr. Green.—They are retail prices.

Dr. Jain.—Do you think it will make any difference if they were wholesale prices?

Mr. Green.—I don't think so.

Mr. Rahimtoola.—Do they relate to the same grade of sugar and same grade of jaggery?

Mr. Green.—So far as I know, yes.

Dr. Jain.—As regards palmyra jaggery you say tapping is looked down upon? Are any educated persons taking to it?

Mr. Green.—Not that I am aware of. There has been a general shortage of tappers during the last few years.

President.—Can you give us any estimate of the time within which you expect any reduction in the cost of cultivation—say within seven years?

Mr. Ananda Rao.—We should be able to effect a reduction of cost within seven years, but how far it would be possible to go remains to be seen because it is only recently that we are introducing new Coimbatore varieties and it takes time for the raiyats to follow up. They have to spread to different tracts where factories are situated in the Presidency and that will necessarily take time. But I should think seven years would be a fairly good period.

President.—Mr. Green, would you like to raise any other point?

Mr. Green.—In regard to the question of freight rates on Northern India sugar, I feel that these are unduly low and that the effect of the reduction in rates has been to force down the price of sugar in Southern India to a lower level than would otherwise have been the case. The reason for the introduction of the lower rates was to enable Indian sugar to compete with Java sugar at ports, but the necessity for such low rates has passed and it would help to stabilise the price of South Indian sugar if the freight rates were restored to the level prevailing prior to February, 1935. The railways are losing revenue unnecessarily.

President.—We will take note of that particular point. Are there any other points?

Mr. Green.—I thought I might be asked some questions with regard to the desirability of regulating the production of factories.

President.—That is rather a Northern Indian question!

Mr. Green.—I do not know whether you have seen a recent publication of the Imperial Council of Agricultural Research which contains a copy of an Act dealing with the regulation of the sugar industry in South Africa. It is extremely interesting. In South Africa, quotas for the production of sugar are allocated to the sugar mills with reference to the quantity of cane available and the estimated quantity of sugar to be sold locally and exported in the season. There is this precedent to go upon, and unless there is some regulation of production in this country, it is very difficult to see how prices can be stabilised. I am strongly of opinion that there should be regulation of production in the surplus provinces at any rate.

Mr. Rahimtoola.—With regard to the comparison of prices of gur and sugar, what quality of sugar have you taken?

Mr. Green.—The prices were extracted from a daily sheet of prices which Messrs. Parry & Co. issue, so that they should be a uniform quality, but what particular grade they relate to I cannot say without making enquiries.

Mr. Rahimtoola.—What is Aska sugar?

Mr. Green.—When I got the prices from the Triplicane Urban Society they were given to me as prices of Aska sugar. Now, Aska is a small sugar factory in the old Ganjam district, which has gone over to the Orissa Province. When I made enquiries, I was informed that many years ago they obtained their sugar from Aska and their sugar has continued to be so described although they have been buying their requirements from Parry's for a long time past. I am sure the prices are cane sugar prices.

Mr. Rahimtoola.—There was no difference in price between cane sugar and palmyra sugar in 1923-29?

Mr. Green.—There has never been any appreciable difference between the prices of the two sugars.

Mr. Rahimtoola.—Why have you stopped at 1928-29?

Mr. Green.—I was not able to get the prices for succeeding years at the time. I am now bringing the figures upto date and will send them on to you.

GOVERNMENT OF BOMBAY.

(1) Evidence of Mr. W. J. JENKINS, Director of Agriculture, Poona, and Mr. V. V. GADGIL, Deputy Director of Agriculture, Poona, recorded at Poona on Saturday, the 24th July, 1937.

President.—How long have you been Director of Agriculture?

Mr. Jenkins.—I have been Officiating Director since last November.

President.—Before that?

Mr. Jenkins.—I was for 6½ years the Chief Agricultural Officer in Sind.

President.—And you Mr. Gadgil?

Mr. Gadgil.—I am the Deputy Director of Agriculture for the last 9½ years. I was for 3½ years in Konkan tract which consists of Kolaba, Ratnagiri Thana and Kanara. Since 1932, for the last 5½ years I am here in Poona Division in charge of 5 districts consisting of Poona, Ahmednagar, Sholapur, Satara and Ratnagiri. Most of the Deccan canals is practically in my hands.

President.—Before I proceed with your evidence, I would like to clear up this point. You have just sent in a statement showing the area under sugarcane. That is upto 1935-36. Are those the latest figures?

Mr. Jenkins.—We have the forecast figures for the present year. We can give you these, but they are not final.

President.—When could you give us accurate figures?

Mr. Jenkins.—The accurate figures won't be available till September or October.

President.—If you could give us any later figures before the end of September, we should be grateful.

Mr. Jenkins.—Yes, but I don't think there will be much variation in the sugarcane acreage.

President.—You don't think there would be any decrease in sugarcane acreage owing to the slump?

Mr. Jenkins.—Very slight.

President.—In the United Provinces and in some other parts of India there has been a very considerable reduction in acreage. If you can give us any later statistics not later than the end of September, we shall be very grateful.

Mr. Jenkins.—Yes.

President.—You give the average yield as 45 tons of cane in the Deccan area.

Mr. Jenkins.—Yes.

President.—I think we might confine our questions to the Deccan tract, because no sugarcane is grown in any other area.

Mr. Jenkins.—Yes.

President.—That is for improved varieties.

Mr. Jenkins.—That is for all the varieties. That is the average for the tract.

President.—Pundya has almost been superseded.

Mr. Jenkins.—We have submitted a note on that point. The factories have given up Pundya entirely, but there is still about half the area in the Deccan tract where Pundya is grown by cultivators.

President.—Is that crushed in factories?

Mr. Jenkins.—Not at all.

President.—All the factory cane is improved varieties.

Mr. Jenkins.—Yes, all improved varieties.

President.—I notice from your statistics given that a lot of *Pundya* is grown.

Mr. Jenkins.—Yes.

President.—These figures are correct?

Mr. Jenkins.—Yes.

President.—In so far as they give a proportion of the improved varieties and so on?

Mr. Jenkins.—Yes.

President.—We had some cane growers the other day when your Deputy was here and the sort of figure given regarding the average cost of cultivation was about Rs. 400 an acre.

Mr. Jenkins.—I have got further evidence with regard to that. I have got figures here which were brought out during the enquiry into the cost of cotton and sugarcane cultivation by the Imperial Council of Agricultural Research and the Indian Central Cotton Committee.

President.—In what years did they conduct their enquiries?

Mr. Jenkins.—During the past two years on the *Nira* left bank, in six villages. This is the average figure for two years. I must say they were rather good years. If you would like to have these figures, I shall hand them over.

President.—What is the total?

Mr. Jenkins.—It is different in different villages largely dependent on the cost of oil cake. The average is about Rs. 401 per acre.

President.—That coincides almost with your independent conclusion.

Mr. Jenkins.—Yes.

President.—That is very interesting. Are your costs calculated more or less on the same method in which they proceeded?

Mr. Jenkins.—Our costs?

President.—Your estimates.

Mr. Jenkins.—These probably went into greater detail. They actually investigated the conditions in the villages. *Mr. Gadgil's* costs are based on his own experience of the tract.

President.—You took the same kind of classification in the cost?

Mr. Jenkins.—Yes.

President.—This is very interesting.

Dr. Jain.—Did you include bullock labour?

Mr. Jenkins.—That is included in the cost of cultivation.

Mr. Gadgil.—We have given the charge for bullock labour under item No. 7.

President.—It has been suggested to us that the cost of cultivation in Bombay is very high as compared with most other parts of India and that it might be possible to reduce the cost below Rs. 400. Are there any possibilities of reduction in the cost of cultivation?

Mr. Jenkins.—A large part of our work in *Padegaon* is directed towards reducing the cost as much as possible. As far as the cost of production of *gur* is concerned, it is possible to effect a reduction with improved varieties of cane giving a higher yield and I think there is also the possibility of reducing the cost by determining better methods of manuring, more economical use of manures, and the use of green manures to a greater extent. There are certain items in the labour programme in which saving could be effected by the adoption of improved methods. Perhaps *Mr. Gadgil* may have something to say.

Mr. Gadgil.—We have given two statements showing the cost of cultivation in 1930 and the cost of cultivation in 1936-37. You will see from these two statements that there is a reduction of nearly Rs. 200 in the cost of cultivation.

President.—I observe that.

Mr. Gadgil.—This is mainly due of course to reduction in labour as stated by the Director of Agriculture. The labour charges have been reduced from 8 to 9 annas in 1930 to 5 to 6 annas in 1936-37. That is one of the main items which will reduce the cost by say about Rs. 30 to Rs. 40. Another item of course is the actual price of manures. The cost of oil cake has been reduced. It was something like Rs. 80 to Rs. 85 per ton in 1930-31 and now it has come down to Rs. 40. During the current year there is a slight tendency of a rise in the price of oil cake. The price of castor cake has gone up from Rs. 35 to Rs. 55 at present. Similarly in the case of safflower cake the price has gone up from Rs. 45 to Rs. 60, but during the last four or five years there has been a gradual reduction in the price. That drop in price is responsible for reducing the cost of cultivation. There is the further item as stated by the Director. The new varieties are giving higher outturn and naturally the cost of cultivation per ton is reduced.

President.—The Tariff Board is rather concerned with the period of next seven years which is the period of protection. Could you hazard a guess as to what the possibilities of reduction in the cost of cultivation are in that time?

Mr. Jenkins.—I don't think there would be any very rapid or large reduction in the cost in the next seven years. It will depend on the extent of the propaganda by which these improvements could be introduced. That is not altogether a fast business.

President.—The Phaltan factory suggested to us that they hope to reduce their cost by about Rs. 25.

Mr. Gadgil.—In the case of sugar factories there is one more factor to be considered. They are utilising the steam tackles or gyrotiller and thereby they can reduce the cost of preliminary cultivation from Rs. 20 to Rs. 7. Their average charge comes to about Rs. 7 per acre. That is one of the items which is only possible for big sugar factories. For a small cultivator or for even a big cultivator who cultivates 100 acres, it is not possible to have a gyrotiller. The gyrotiller costs something like Rs. 95,000.

President.—At the Coimbatore Research Station we were informed—I suppose you are aware of that—that researches on the so-called noble or thick varieties of cane were taken up much later than those on thinner varieties in Northern India and therefore he described the tropical tract comprising Bombay, Madras and the adjoining Native States as backward, but when these recently improved varieties have been thoroughly tested and introduced the cost of cultivation in the tropical region might possibly be reduced somewhere near the level of the cost of cultivation in the sub-tropical. Have you any views on that?

Mr. Jenkins.—I don't think that a mere introduction of improved cane will effect considerable reduction in the cost of cultivation, because the people here are very much more inclined to go in for more intensive manuring of their cane crops than they do in the United Provinces and Northern India.

President.—They get a bigger yield for that.

Mr. Jenkins.—It will certainly help towards reduction in cost. We have certain cane from Coimbatore now which are a great improvement on the ordinary pundya, particularly Co. 419.

President.—That brings me to another point. We have been told that owing to this heavy manuring the next crop grown, for example, cotton yields almost double without any extra cost. Therefore in calculating the

cost of sugarcane which you say is Rs. 400 an acre, we ought to allow a figure of Rs. 25 or so from the succeeding crop. Would you agree with that?

Mr. Jenkins.—I don't think it is a common practice in the Deccan area to grow cotton immediately after sugarcane. I don't see how you can divert the sugarcane profit to any general estimate of the cost of cultivation of other crops.

President.—What is usually grown after sugarcane?

Mr. Jenkins.—The common practice here is ratoon after the ordinary first crop, and there are other rotations which Mr. Gadgil will describe later.

Mr. Gadgil.—The system they adopt is this: where the land is rather new, there is a regular system of ratooning especially with the new varieties. Afterwards they grow either groundnut or cotton. As I stated the other day there might be a residual effect of Rs. 25 or so if cotton is just taken after sugarcane and not after the ratoon.

President.—Does that apply to groundnuts?

Mr. Gadgil.—Yes. That residual effect is also seen in the case of groundnut as well as in the case of cotton.

President.—And in both cases it might be Rs. 25.

Mr. Gadgil.—Yes.

President.—That brings me to another point, the question of ratooning. What is your experience in this Presidency about the advantages and disadvantages of ratooning which is a very vexed question.

Mr. Gadgil.—With regard to P.O.J. variety ratooning is much more remunerative. In some cases in our Kopergaon farm, we have found that the ratoon of P.O.J. has given a higher yield than the plant cane.

President.—What would be the difference in the cost of cultivation?

Mr. Gadgil.—Rs. 100 less cost, because the planting and all other operations are practically over and they are not required to apply any farm yard manure. Over and above that there is no difference practically between oil cake and sulphate of ammonia, but the preliminary cost including planting and the cost of setts will be reduced and that reduction will be about Rs. 100 per acre.

President.—As regards the first ratoon crop, the cost of cultivation might be Rs. 100 less and the yield might be less.

Mr. Gadgil.—In the case of P.O.J. the yield is not less. E.K. is not a good ratooner. Co. 290 is a good ratooner. That is a cane which is specially suitable for bad lands and waterlogged areas.

President.—Possibly you have not yet tried experiments on ratooning in Co. 419.

Mr. Gadgil.—Not yet. The variety has only been released last year.

President.—That is rather an important point. When you consider the cost of cultivation taken over a period of two years, that reduces the average cost to Rs. 350 an acre.

Mr. Gadgil.—Yes.

President.—That is a very important point. Kolhapur factory area is rather different from other factory areas, I understand.

Mr. Gadgil.—Yes.

President.—Kolhapur factory has got no land of its own.

Mr. Gadgil.—Only about 600 to 800 acres under sugarcane.

President.—Most of their cane is brought from small growers.

Mr. Gadgil.—Yes.

President.—What would you put the cost of cultivation and the yield per acre in that area at Kolhapur?

Mr. Gadgil.—I would put the cost of cultivation at something like Rs. 325 per acre and the yield at 35 tons or so. They have got one

variety called Kabirya which is just like striped Mauritius. It is not exactly like that quality, but similar to that. It has got stripes and is better suited for that tract. It is dwarf variety. It is not a very tall variety. It is better suited for that tract. It does not lodge if it rains very heavily or if a strong wind blows.

President.—What is the average rainfall there?

Mr. Gadgil.—30" to 45".

President.—What kind of Irrigation is there?

Mr. Gadgil.—Only by well irrigation and pumping plants the crop is irrigated. There are about 150 pumping plants on the river Panchaganga which flows through the Kolhapur territory.

President.—Do you happen to know whether there is any proposal or any idea of starting a factory in any other area?

Mr. Jenkins.—I do not know.

Mr. Gadgil.—The only new factory which is under contemplation or for which orders for machinery have already been placed is Brahan Maharashtra Sugar Factory.

Mr. Jenkins.—There are certain proposals for extending the existing factories.

President.—About the cost of transport of cane I see you give a figure of 2 to 4 pies per maund.

Mr. Gadgil.—Yes, per mile.

President.—That is on the high side compared with figures elsewhere.

Mr. Gadgil.—Most of the cane is taken in a cart here.

President.—I am also talking of the cost of transport of cane by cart.

Mr. Gadgil.—There are not good cart tracks in those parts where factories are situated. The roads are really very bad.

President.—The high cost of transport is to some extent due to the bad condition of the road.

Mr. Gadgil.—Yes.

President.—If the roads were improved, you could reduce the cost.

Mr. Gadgil.—Yes. Another point is that when the cane is required by the factory, there is also going on the work of crushing and manufacturing gur throughout the whole area. So naturally a little higher price is demanded when the cane has to be taken from one place to another. It is not the slack season when labour is available in plenty.

President.—You suggest that the working period of factories might be increased to 210 days.

Mr. Jenkins.—Yes.

President.—How would that be possible?

Mr. Jenkins.—It would be possible by the introduction of different varieties of cane maturing over a longer period and also, of course, by extending the areas in which the factories are at present growing cane.

President.—I understand that Adsali cane tends in that direction.

Mr. Jenkins.—That fits in properly with the crushing season.

Mr. Gadgil.—They begin like this. The work of manufacturing sugar is started generally in October. First, they crush Adsali then they go on to ratoon and afterwards to early varieties of cane and later on to late varieties. There are three planting seasons. First, the Adsali is planted in the month of June and July and then of course for mid Adsali planting is done in October and November. That is harvested in February. Then comes the plant cane which is generally planted in January and February and is ready for harvesting after 12 months. Of course this figure of 210 days has been given from the actual working of the Belapur Company. In the Deccan there is not the same oppressive and excessive heat as is experienced in the United Provinces and Bihar. Therefore it is possible to extend the working period of the factories.

President.—I understand that the average elevation of the Deccan area is about 1,600 to 1,800 ft.

Mr. Gadgil.—Yes.

President.—As in the last Tariff Board report, this Tariff Board also will probably include a short description of the Presidency. I think we may send our note on that to you for checking. It will be only a descriptive note without any particular comments.

Mr. Jenkins.—We shall be very pleased to do that.

President.—It is only the northernmost part of the Deccan which is liable to frost.

Mr. Jenkins.—Yes.

President.—The elevation being 1600 to 1800 ft?

Mr. Jenkins.—Yes.

President.—How much is the average rainfall in the Deccan tract?

Mr. Jenkins.—18 to 24 inches. We have given you rainfall figures in a separate note for all the sugarcane tracts in the Presidency.

President.—I have not touched on this question of irrigation rates because we went into that with Mr. Aitken at some length. Of course, the 1930 Tariff Board received a good many complaints about that matter and we have also received the same representations this time from cane growers.

Mr. Jenkins.—There is a misprint in my written evidence with regard to these water rates. It says there has been much variation. It should be read "there has been practically no variation in the water rates during the past 7 years".

President.—The main improved varieties are P.O.J. 2878, E.K. 28, Co. 290 and Co. 419. Is that correct?

Mr. Jenkins.—Yes.

President.—These varieties have been taken the place of old Paadya variety in the factory area, though to a less extent elsewhere.

Mr. Jenkins.—That is correct.

President.—And yield of as much as 100 tons has been obtained under special conditions.

Mr. Jenkins.—Yes.

President.—There is one small point in your evidence on which there appears to be some difference of opinion between you and the Irrigation Department, that is, about the manufacture of gul from palmyra palms. You say there is none but the Public Works Department say that it is done in Kanara.

Mr. Jenkins.—It used to be done to a very small extent but it has been entirely stopped.

President.—I think that Belapur is the only factory which does not buy any cane normally from outside.

Mr. Jenkins.—I think they have done so in the past though they do not as a rule.

President.—They can grow enough cane.

Mr. Jenkins.—They are in a position to grow all the cane they want.

President.—The other factories buy a small amount.

Mr. Jenkins.—Yes.

President.—Except Kolhapur which buys most of its cane.

Mr. Gadgil.—Three-fourths of their requirements of cane are purchased by them. As regards the other factories, they have not got a sufficient area. The Maharashtra Sugar Factory has got a capacity of 600 tons and the total area under cane is only 1,800 acres which is quite insufficient.

President.—I take it that at present prices for the open pan factory there is not much future.

Mr. Jenkins.—Not at the present rates of gul.

President.—A good deal was done at one time to try and help them. Was that by your department?

Mr. Jenkins.—Mr. Gadgil had a lot to do with it and he has published two pamphlets which I think have been supplied to you.

Mr. Gadgil.—Even the present position is described there. If they manufactured sugar and molassive gul, they would at least get Rs. 250 more per 100 tons of cane, that is, for 2½ acres.

Mr. Rahimtoola.—As regards the improved varieties, I find that the acreage under improved varieties in Gujarat has increased by 87·2 per cent.

Mr. Jenkins.—It is practically entirely Co. 213.

Mr. Gadgil.—That is the variety which is more resistant to frost.

Mr. Rahimtoola.—When all the factories are situated in the Deccan canal area, what is the reason for such a large increase in the acreage under improved varieties in the Gujarat area?

Mr. Jenkins.—The reason is that this variety is more frost resistant. In the last several years they had very bad frosts with the result that the local varieties of canes were all killed. People would not grow them any more. They took to this variety because they were forced to do so; otherwise they would have to give up growing sugarcane.

Mr. Rahimtoola.—They are converting all that into gul?

Mr. Gadgil.—Yes.

Mr. Rahimtoola.—Is that a paying proposition as against other crops like groundnuts?

Mr. Jenkins.—Sugarcane will pay a higher return per acre than cotton or groundnut at present prices. It is the best cash crop on the well irrigation area where they grow it.

Mr. Rahimtoola.—In the 1936-37 forecast you say there will be a reduction in the total area.

Mr. Jenkins.—There will be a reduction due to the low price of gur.

President.—Will the reduction be considerable?

Mr. Jenkins.—Possibly about 15 to 20 per cent.

Mr. Rahimtoola.—Where would you put the South Central Division and the North Central Division.

Mr. Jenkins.—Both in the Deccan. Khandesh and Nasik comprise the Northern Division and Poona, Satara, Ahmednagar, Sholapur would be the South Central Division.

Mr. Rahimtoola.—I would like to go into little more detail as regards the cost of cultivation. There are four costs given by you in your latest statement.

Mr. Gadgil.—That was omitting the cost of manufacture of gur.

Mr. Rahimtoola.—I would like to compare it with the previous Tariff Board's figure for 1930 as representing the cost for the whole of the Presidency.

Mr. Jenkins.—The Pravara and the Nira Left Bank costs would be the most typical.

Mr. Rahimtoola.—I want to get some details because we have also received cost statement from an ordinary cultivator, Rao Sahib Shambekar. There are certain points which require explanation. For example, take supervision charges. What is the figure you have calculated.

Mr. Gadgil.—Rs. 20 or in some cases Rs. 25 per acre. One man can supervise upto 10 acres of sugarcane crop and he must get at least Rs. 230 per year for his maintenance. Therefore he charges Rs. 20 as supervision charge per acre.

Mr. Rahimtoola.—If you look at the statement given by the Superintending Engineer, Deccan Irrigation Canals, he has calculated it at 10 per cent.

Mr. Gadgil.—That is rather too big. He stated however that he gets information from the sub-divisional officers and he has not made a thorough enquiry from the cultivators' standpoint. That makes the difference between our cost and the cost of cultivation given by him.

Mr. Rahimtoola.—What is the rate of interest?

Mr. Gadgil.—It varies from 9 to 12 per cent. and the interest is practically calculated on two-thirds of the total cost. If the total cost is Rs. 400, the interest is calculated roughly on Rs. 300 because the remaining amount is not generally required by the cultivator immediately. And if he includes his charges for manufacturing gur it comes to Rs. 100 per acre and that is eliminated altogether, because as far as he prepares jaggery he sells it in the market and gets ready cash.

Mr. Rahimtoola.—If you see the Mutha Canal figure, the total cost is Rs. 350, so it will require less money.

Mr. Gadgil.—That is due to the low cost of manure. Poona being on the main line, the actual cost of oil cake and sulphate of ammonia is less, and that makes a difference of Rs. 20 to Rs. 25 per acre.

Mr. Rahimtoola.—How much sulphate of ammonia is used?

Mr. Gadgil.—One to two bags. In some cases oil cake is not given in sufficient quantities and they give two bags of sulphate of ammonia. There is one more point about this sulphate of ammonia. It is given more or less for producing more canes from the mother plant and that is the reason why it is given as a first dose three weeks after planting and that is intended for fostering the growth of the suckers and tillers. After three months another dose of sulphate of ammonia is given mixed with oil cake.

President.—On this question of sulphate of ammonia we have had complaints in some of the representations that owing to the application of sulphate of ammonia the quality of gur deteriorates.

Mr. Gadgil.—Yes, if it is given in large quantities. Often. . . .

Mr. Rahimtoola.—You have calculated only one bag of sulphate of ammonia.

Mr. Gadgil.—Yes. That is sufficient for an acre if other doses of oil cake and green manure are given.

President.—If one bag is given, it has no effect on the quality of gur?

Mr. Gadgil.—No.

Mr. Rahimtoola.—What is the reason for the increase in the cost of setts?

Mr. Gadgil.—If the cultivator has to purchase from outside he does not get the setts for less than Rs. 4 per 1000, but if he gets it from his own area he calculates the actual cost of that area and the cost comes to Rs. 3 per 1000 setts.

Mr. Rahimtoola.—In some cases it has gone upto Rs. 4-8-0.

Mr. Gadgil.—In Godavari they generally plant more number of setts; they sometimes plant 12,000.

Mr. Rahimtoola.—With regard to farmyard manure, is there a tendency to use more manure because of the crop that will follow?

Mr. Gadgil.—At present farmyard manure is getting scarce although the price has been slightly reduced, as people are now not in the habit of keeping sufficient number of cattle as they are not sure that if they keep more cattle they will be utilised for the whole year and therefore farmyard manure is being substituted by green manure.

Mr. Rahimtoola.—In statement 'C' you have given the tonnage in terms of gur. May we take 3½ tons as equivalent to 35 tons of cane?

Mr. Jenkins.—This figure is rather low in view of the improved varieties of cane that are now being grown.

Mr. Gadgil.—Government have issued orders to take certain standards as the average yield and these have not been revised for the last 10 years.

Mr. Jenkins.—These were originally based on experiments on Pundya but since then improved varieties of cane have been introduced and cultivation has improved, but the standards have never been altered because we have never been given the money to repeat the crop cutting experiments on which these were originally based.

Mr. Rahimtoola.—In answer to question 5 you say the fair selling price to the grower would be Rs. 14 per ton. On what did you base this figure?

Mr. Jenkins.—We based it largely on the cost of cultivation.

Mr. Rahimtoola.—Cost of cultivation according to your statement is Rs. 11 per ton.

Mr. Jenkins.—I think you are referring to Rs. 14 mentioned by the Deputy Director of Agriculture, Dharwar. That is for Karnatak. We have suggested Rs. 11 to Rs. 12 per ton for the Deccan.

Mr. Rahimtoola.—Have you taken into consideration the profit the cultivator gets from other crops?

Mr. Jenkins.—No. We have only taken into consideration costs on the basis of the cost of cultivation and the yield he obtains.

Mr. Rahimtoola.—If he gets Rs. 11 per ton would it induce him to grow cane?

Mr. Jenkins.—It would enable him to grow sugarcane.

Mr. Rahimtoola.—In answer to question 8 you say the only exception might be fruit cultivation in the Deccan Canals area.

Mr. Jenkins.—It is still only on a very small scale.

Mr. Rahimtoola.—What is the acreage?

Mr. Jenkins.—The total acreage is about 2,000 acres.

Mr. Rahimtoola.—What is the profit the cultivator gets on this?

Mr. Jenkins.—For the first five years he gets practically no profit but after that profit varies from Rs. 300 to Rs. 500 per acre.

Mr. Rahimtoola.—Do you think there has been an increase in the acreage?

Mr. Gadgil.—There is a tendency to plant more fruit trees which they think is a permanent thing. But the profit will mostly depend on the market prices. Last year and this year prices are fairly good and people must have got large profits, but two years back they were practically losers. If one basket is sent to Bombay even railway freight would not be covered. At the present moment they are getting something like Rs. 1-4-0 per dozen fruit of oranges and murambas.

Mr. Jenkins.—We know of a number of sugarcane areas where they have given up sugarcane growing and started fruit cultivation.

Mr. Rahimtoola.—With regard to question 9, how many farms have you at present? Are those mentioned in Statement D the only ones you have got?

Mr. Jenkins.—Yes.

Mr. Rahimtoola.—Of these Manjri has been discontinued?

Mr. Jenkins.—Yes.

Mr. Rahimtoola.—That was closed down when the Padegaon research station was opened?

Mr. Jenkins.—Yes. Government decided to close down Manjri and contribute the amount spent on it towards the Padegaon scheme.

Mr. Rahimtoola.—Was not Manjri a demonstration farm while Padegaon farm is a purely research station?

Mr. Jenkins.—Manjri was also a research station and Padegaon embraces all the work which Manjri was doing and has gone much beyond that in fundamental research work.

Mr. Rahimtoola.—We have had complaints that there is no demonstration farm for the cultivators?

Mr. Jenkins.—Kopargaon is a demonstration farm situated in the Deccan canal tract.

Mr. Rahimtoola.—Does it serve the purpose of Manjri?

Mr. Jenkins.—Manjri combined both research and demonstration.

Mr. Rahimtoola.—Apart from Kopargaon, Padegaon has substituted Manjri?

Mr. Jenkins.—Yes.

Mr. Rahimtoola.—And people are allowed to see how the cultivation is going on at the Kopargaon farm?

Mr. Jenkins.—Yes. We always try to induce people to go there.

Mr. Rahimtoola.—With regard to the Padegaon farm you are doing experiments on manure, water, and varieties of cane. We were told in Phaltan that the cultivator grows sugarcane in order to get a better yield of cotten even if he incurs a loss by the sale of sugarcane. What I want to know is, whether there is a tendency to use more nitrogen than what the real dose should be for sugarcane?

Mr. Jenkins.—I am quite sure that when the cultivator manures his sugarcane crop he has nothing in mind at all as to what crop is to follow the cane.

Mr. Rahimtoola.—With regard to the water rate, I understand that the rate is fixed irrespective of the quantity of water consumed. Is there a tendency to take more water because it is free in this sense?

Mr. Gadgil.—In the case of the cultivator there is a tendency to take more water although the irrigation rules say that watering should be at the interval of 10 days. During the hot weather the land should be watered at an interval of 8 days but sometimes they do not get it even at an interval of 14 days and so naturally there is a tendency to take as much water as they can consume. In the case of sugar factories, I do not think excessive water is utilised. If sugarcane is grown on lighter soil it will consume more water and require more manure.

Mr. Rahimtoola.—When do you consider a cane to be promising one?

Mr. Gadgil.—We take the actual test of ripening when the brix reading comes to 18 or 19. The maximum brix reading is 22 but the cultivator will not wait till then. Even the factories will not wait for the maximum ripening period. They start at 18 and gradually in the course of manufacture the brix reading increases.

Mr. Rahimtoola.—When do you give the cane for demonstration purposes?

Mr. Gadgil.—When the brix reading is 18 or 19.

Mr. Rahimtoola.—I am told Coimbatore sends a few varieties to you and so does Mysore. The actual trials and selection are done by the farm at Padegaon.

Mr. Jenkins.—Padegaon has standard yield tests for all new varieties of cane. If they fall below the standard, they are rejected. If they are above the standard, they are continued and if, after further trials in the farm, they maintain their promise, they are given out for tests in the district.

Mr. Rahimtoola.—When they are given out the department takes interest in seeing what the cultivators get.

Mr. Jenkins.—We keep records of what they get.

Mr. Rahimtoola.—In the cultivator's own land.

Mr. Jenkins.—We have also got records from factories. If we give them canes they give us their mill tests.

Mr. Gadgil.—We have also village trials. They are tried in six places in each village before they are given to the general public. Kopergaon farm is a farm where confirmatory results are taken.

Mr. Rahimtoola.—Where do you get these retail and wholesale prices from?

Mr. Jenkins.—We have price Inspectors in our office who go to the bazaar and obtains these prices. We give these prices to the Bombay Government who get them published in the Bombay Gazette.

Mr. Rahimtoola.—These are then actual prices obtained from the market?

Mr. Jenkins.—Yes.

Mr. Rahimtoola.—Do you get any assistance from the Coimbatore Sugarcane Breeding Station?

Mr. Jenkins.—Yes, they are always very willing to give us any of their new canes for trial and one of their officers came here a shortwhile ago to see how their canes were doing in the Bombay Presidency.

Mr. Rahimtoola.—I would like to ask the question which I put to Mr. Aitken with regard to the statements of the Public Works Department: Is jaggery produced from cocoanut palm?

Mr. Jenkins.—I have already answered that question in reply to the President.

President.—Before Dr. Jain asks you questions, there are one or two points which I want to clear up. The Registrar of Co-operative Societies stated that he had some complaints from growers that factories do not always treat them as they should, underweigh cane and so on.

Mr. Gadgil.—No, from the evidence of the cultivators who supply cane there is practically no complaint like that, but if the cane contains some unripe portion or leaves, deduction is done with the knowledge of the cultivator as well as the factory people. They do make certain deductions. There is no question about that.

President.—While we are on that question, Mr. Bhansali may tell us on what his information is based.

Mr. Bhansali.—My remarks were based on the report which was received by me from the Assistant Registrar long before the questionnaire was received and there these complaints were brought to my notice with regard to the areas mentioned in my report. I have not personally investigated that.

President.—The other point was about the question of gur prices. We have been told that in some provinces the prices of gur vary so much that the published gur prices are not of very much value.

Mr. Gadgil.—I don't think it is applicable to this Presidency.

President.—Probably the prices do not vary so much in Bombay as compared with other provinces.

Mr. Gadgil.—There is little difference, because we have always given prices for at least half a dozen markets. Prices in Baramati may not be the same as in Kopergaon or Poona or Belapur, because Baramati is situated at a little distance from the main line of the G. I. P. Railway and merchants will always take into consideration the actual cost of transport and also the railway charges from the main station to the small station. So we have been observing that the price of gur at Baramati is lower by Re. 1 per palla of three maunds than what we see at Poona or Belapur.

President.—That is what you would accept really.

Mr. Gadgil.—Yes.

President.—You think gur prices are fairly accurate?

Mr. Gadgil.—Yes.

Dr. Jain.—About the statement of costs of production of sugarcane which you have just handed in prepared by the Imperial Council of Agricultural Research, it is an average of two years. What are these years please? Are they 1933-34 and 1934-35?

Mr. Jenkins.—Yes. May I say I am not sure if I am entitled to give you these figures officially, because the results of the enquiry have not yet been published by the Imperial Council of Agricultural Research.

Dr. Jain.—They will be treated as confidential. In your departmental report of 1929-30 you make a reference about the absence of a scientific machinery for investigating economic problems facing agriculture and you endorse the recommendation of the Indian Economic Enquiry Committee, the Royal Commission on Agriculture and the Banking Committee about the establishment of a Board of Economic Enquiry.

Mr. Jenkins.—Yes.

Dr. Jain.—Has anything been done in that direction?

Mr. Jenkins.—Nothing has been done in Bombay in the same way as the Board of Economic Enquiry instituted in the Punjab. There is nothing of that sort.

Dr. Jain.—If such a Board were established, it would be an appropriate machinery for studying the cost of cultivation of sugarcane.

Mr. Jenkins.—I think that would be one of its most essential duties.

Dr. Jain.—In your report of 1931-32 I notice an interesting reference about the tour of 8 prominent Deccan canegrowers in company with the Deputy Director of Agriculture to United Provinces.

Mr. Gadgil.—That is myself. I had taken the cultivators to several factories in United Provinces and Bihar and there they got the idea of starting sugar factories. As a result of the tour, three sugar factories were established. Dhanukar's factory originated with that trip. He saw the actual conditions of the factories in the United Provinces and Bihar. Rao Sahab Baravake who was here the other day was also one of the party of cultivators. They are all of practically one community called malis and they started the Saswad Mali Sugar factory at Akluj. I showed them 8 or 10 sugar factories including the two small sugar factories at Buxar (60-ton factory) and Lady and they got the idea of starting their own sugar factories in the Deccan.

Dr. Jain.—That was in 1931?

Mr. Gadgil.—In 1932.

Dr. Jain.—Did you take them since again?

Mr. Gadgil.—I have myself gone once since then, but I could not take them.

Dr. Jain.—In the same report I find a special reference to three Agricultural Magazines in this province in Maharati, Gujerati and Kanarese under the Deccan Agricultural Association.

Mr. Gadgil.—Yes.

Dr. Jain.—Are they much used by the raiyats?

Mr. Gadgil.—Yes, very much patronised by them. The Agricultural Department contributes for something like 1,500 copies and they are supplied free of cost to all the Deccan Agricultural Associations in this Division as well as to the revenue and other officers free of cost.

Dr. Jain.—Do these magazines pay themselves?

Mr. Gadgil.—They do.

Dr. Jain.—What is the average circulation?

Mr. Gadgil.—Maximum circulation is 3,800 copies per month.

Dr. Jain.—In answer to question 31 you say you are not in favour of zoning system and that there should be no restriction on the starting of new factories.

Mr. Jenkins.—We say we would prefer that before new factories were allowed . . .

Dr. Jain.—It would be more economical if the existing factories were given facilities for expansion.

Mr. Jenkins.—Yes.

Dr. Jain.—What do you think should be a suitable economic unit for this Presidency?

Mr. Jenkins.—1,000 tons.

Dr. Jain.—We were given 750 tons.

Mr. Gadgil.—The Belapur Factory has got a capacity of 650 tons. I understand they are thinking of having another factory of 1,000-ton capacity. Capacity mostly depends upon the sugarcane area which will be available. If the area is available for 1,000-ton capacity, surely it will be more economical than 750 tons.

Dr. Jain.—In 1935-36 season the Maharashtra Chamber of Commerce organised a competition with a view to getting the maximum yield of cane. Various factories competed and obtained as much as 80 to 100 tons.

Mr. Gadgil.—104 tons was the maximum per acre.

Dr. Jain.—I want to know if the economics of the thing were studied.

Mr. Jenkins.—They were never studied. Heavy manuring was done, but unfortunately the results were not followed up, as far as I can make out, with reference to the succeeding crops. So we have not got any data with regard to the economics of the experiment. Of course we can give the cost of cultivation, what it took to produce the yield obtained, but it has not been followed up with regard to the effect in subsequent years, *e.g.*, whether the soil had been damaged or not.

Dr. Jain.—It was not of much practical use.

Mr. Gadgil.—So far as the yield was concerned, they were satisfied when they got 104 tons at a cost of about Rs. 800 and the actual cost came to less than Rs. 8 per ton. That was a fairly accurate data. The cutting of the crop was done under the supervision of a Committee of persons and even the sugar test was very satisfactory. In one factory the actual sugar content of one acre cane was 11 tons, but as the Director suggested, we have not studied whether it has deleterious effect on the soil by applying more manure and more water. That ought to have been studied really speaking, but as this competition was done under the auspices of the Maharashtra Chamber of Commerce of which Mr. Walchand Hirachand is the President and Rao Saheb Shambekar was the originator of the scheme, they could not follow it later on.

Dr. Jain.—Is it proposed to repeat it and follow it up?

Mr. Gadgil.—I don't think so.

President.—There is one other question. In the Deccan Canal area can the Government, practically speaking, prevent a new factory coming into operation owing to its control on irrigation and so on?

Mr. Jenkins.—I think they could prevent it to the extent that no factory is likely to start unless they have a guarantee of adequate water supply.

President.—If the guarantee of water supply is withheld, no factory could start.

Mr. Jenkins.—Quite so.

President.—Practically speaking they have control to that extent.

Mr. Jenkins.—Yes. There is no possibility of a factory starting in any other part of this Presidency.

Mr. Rahimtoola.—What is the proportion of well cane to canal cane to-day?

Mr. Gadgil.—The well cane is confined to half the Karnatik and the whole of Gujerat. The rest is canal cane.

Mr. Rahimtoola.—Is Padageon Research Station doing anything about diseases of sugarcane?

Mr. Jenkins.—No, we are not doing anything except as a side line. We have no Plant Pathologist working there. As a matter of fact the Imperial Council has been discussing the question of investigation of sugarcane diseases. It is largely a matter of finance.

Mr. Rahimtoola.—How much time does a scheme take to go through after it has been approved by the Imperial Council of Agricultural Research?

Mr. Jenkins.—Sir T. Vijayaraghavachariar could tell you more about that than I can.

Mr. Rahimtoola.—What is the opinion of the Local Government?

Mr. Jenkins.—It largely depends on the funds required and on the stage in which the scheme is put in the list of preference. Some schemes are considered to be more urgently required than others and put higher in the list of preference.

(2) Evidence of Mr. M. D. BHANSALI, I.C.S., Registrar of Co-operative Societies, Bombay Presidency, Poona, recorded at Poona on Saturday, the 24th July, 1937.

President.—Mr. Bhansali, how long have you been Registrar of Co-operative Societies?

Mr. Bhansali.—Nearly a year now.

President.—In regard to this contribution of Rs. 33,700, that is out of the provincial share of the excise duty.

Mr. Bhansali.—Yes.

President.—Is it all utilised by the special staff for the organisation of Cane-growers' Societies?

Mr. Bhansali.—Yes.

President.—Are these Societies in the factory areas or elsewhere?

Mr. Bhansali.—I have got a list of Societies here. They are not all in the factory areas. They are mainly in Poona and Ahmednagar contributes the largest number. Nasik has got some and the Gujerat side very few. In fact there is only one in Gujerat and two in process of being registered.

President.—How are these Societies getting on?

Mr. Bhansali.—It is too early to say anything about them.

President.—Is it the idea in the factory area they should supply cane from the Societies?

Mr. Bhansali.—There is hardly any demand from the factories at present.

President.—Are these Societies really intended to promote better cultivation?

Mr. Bhansali.—Instead of the original pundia type they now grow E.K. variety and P.O.J.

President.—It is more a question of cane cultivation than cane supply.

Mr. Bhansali.—Yes.

President.—You would like more money as most people would.

Mr. Bhansali.—As a matter of fact the full grants were not utilised last year, because we had actually to lower the rate at which subsidy was to be granted, from Rs. 25 to Rs. 15 per acre and keep it to a maximum of 15 acres for an individual.

President.—You would like to give a higher figure.

Mr. Bhansali.—Rs. 25 would be a more appropriate figure.

President.—Would you like to organise great many more Societies, if you had more money?

Mr. Bhansali.—Yes, if I could at the same time have sufficient supervision over them.

President.—Do you want more supervising staff as well?

Mr. Bhansali.—Yes.

President.—The two go together.

Mr. Bhansali.—Yes.

President.—What do you think would be a sort of reasonable figure that you would like to ask for? Have you made any sort of estimate?

Mr. Bhansali.—I am afraid I cannot give you any figure off hand.

President.—I have already asked you about the question of complaints of growers. I think it has been recorded already, so I don't think we need repeat that.

Mr. Rahimtoola.—How was Rs. 25 fixed?

Mr. Bhansali.—We consulted the Director of Agriculture and he suggested that Rs. 25 per acre would be suitable. It really is supposed to represent the difference in cost to the agriculturist between the old variety used and the new variety.

Mr. Rahimtoola.—Is that correct Mr. Jenkins?

Mr. Jenkins.—I am afraid I am not in a position to answer that. I was not here when it was done.

Mr. Gadgil.—This was considered about two years ago. At that time of course the new varieties were not so much in existence. If the cultivators had to purchase cane from a long distance and incur all the cost of transport, the total cost of setts per acre would be Rs. 50. The concession proposed being half the cost, the figure of Rs. 25 was arrived at.

Mr. Rahimtoola.—Rs. 50 was considered as an increase in cost between the old variety and the new variety.

Mr. Gadgil.—The actual cost of the setts of the new variety would be Rs. 50 including the cost of transport.

Mr. Rahimtoola.—The calculation was made five years ago.

Mr. Gadgil.—2½ years ago.

Mr. Rahimtoola.—To-day it would be much less.

Mr. Gadgil.—Yes. The cultivators have calculated that Rs. 40 would be the cost of setts. If a cultivator has got his own area under a new variety, he will charge only Rs. 30.

Mr. Rahimtoola.—I want to know whether the co-operative societies have proved useful to the cultivators?

Mr. Bhansali.—Co-operative societies would certainly be useful to the cultivators, but I think that their utility would be greater if they have power crushers.

Mr. Rahimtoola.—What is the rate of interest which the co-operative societies charge?

Mr. Bhansali.—These are really supply societies.

Mr. Rahimtoola.—That means supplies of setts.

Mr. Bhansali.—Setts of improved varieties are supplied to the agriculturists. They are not really credit societies. We have a lot of credit societies where the rate would be 9½ per cent., in the canal areas particularly.

Mr. Rahimtoola.—What is the system of payment? How much is paid per acre?

Mr. Bhansali.—In the canal area you mean?

Mr. Rahimtoola.—By the credit societies in the canal area?

Mr. Bhansali.—It used to be Rs. 500 per acre in the past, but now it has been reduced to Rs. 150.

Mr. Rahimtoola.—Is this reduction due to the new varieties of cane?

Mr. Bhansali.—Financial condition and the fact that in the past these societies were financed indiscriminately.

Mr. Rahimtoola.—They must be finding it difficult to get the money back.

Mr. Bhansali.—Yes, in the canal area. That has no bearing on the new societies to which reference has been made. We have 61 canal credit societies and a large number of them are in difficulties.

Mr. Rahimtoola.—Are they doing well?

Mr. Bhansali.—They are in difficulties. They are not doing well. The figures which I have given here refer to the new societies started under the scheme.

Mr. Rahimtoola.—There are also credit societies.

Mr. Bhansali.—Oh yes, in the Deccan area, there are nearly 61 societies.

President.—I would like to ask the Director of Agriculture whether he put up any scheme for the utilisation of subsidy or whether he has got any scheme in mind.

Mr. Jenkins.—Very definitely we have. We could do a lot with it. We are very anxious to introduce as a village industry the open pan system based on a central centrifugal to which the cultivators can take their rub for the manufacture of sugar and molasses in gur. We think that that is the only way in which we could benefit them at present rates of gul prices. Mr. Gadgil has elaborated a scheme for that purpose and we want to establish centrifugal factories on a five mile radius to which the cultivators can take their rub. We have just received information that the Government of India are allowing us Rs. 50,000 for the next three years as a contribution for the Padegaon Research work.

President.—Will that be sufficient?

Mr. Jenkins.—Not sufficient but the contribution make it easier to carry on. The great trouble is that the Imperial Council of Agricultural Research insist on a fifty per cent. contribution from the provincial government. Padegaon has a very expensive scheme.

President.—At Padegaon we were told that if more money was available, it could be spent in the opening of two subsidiary farms for demonstration purposes.

Mr. Jenkins.—That was proposed at a cost of Rs. 53,000. We wanted to have two substations on typical soils in order to transfer the work of trying out to Padegaon. But that was rejected by the Council. They did not consider it necessary.

President.—Are you still in favour of them?

Mr. Jenkins.—They will be very useful.

President.—Has this scheme for a central centrifugal been actually put up?

Mr. Jenkins.—It has never been put up.

President.—Is it going to be put up?

Mr. Jenkins.—Yes, as soon as we can see some means of financing the scheme. It is no use putting it up to the Imperial Council. It is not a research scheme.

President.—I was thinking more of financing it out of the subsidy. At present all the money is given to the Co-operative Department.

Mr. Bhansali.—Mostly for organising these societies.

President.—Nothing is given to the Agricultural Department?

Mr. Jenkins.—No. I have not discussed the question with Mr. Bhansali but I am afraid I do not agree with him when he says that the provision of power crushers is going to make any great difference to these societies. I think it would be very much better if we could get a central factory established on the open pan system on a very much bigger scale among the growers.

President.—At the present level of prices, would that be a feasible proposition?

Mr. Jenkins.—At present prices, it would give an extra profit of Rs. 250 per 100 tons of cane to what they are getting by merely manufacturing gur.

President.—That would work out to a net profit.

Mr. Gadgil.—It will be so much addition to their present realisation.

President.—Or it would enable them to cover up their present losses.

Mr. Jenkins.—You can put it that way too.

Dr. Jain.—There was a conference in 1932-33. What became of the suggestion to put up a centrifugal at Nira?

Mr. Gadgil.—That has been given in the bulletin. Last year we made further experiments. I want to elucidate the point made by Mr. Bhansali. There is a great necessity for power crushers in the Deccan canal area, and

we have not got a sufficient number of power crushers. We have only 98 working regularly in my division, which will not cover the whole area. Unless we have more power crushers it will not be possible to introduce new varieties which are harder than the local Pundya. That is one of the reasons why our progress has been rather slow in replacing all the Pundya with new varieties. When we want to introduce new varieties, they say that they want to be helped with power crushers.

President.—Do you mean that the new varieties are too hard to be crushed?

Mr. Gadgil.—Yes.

Mr. Rahimtoola.—On an average all the new varieties are hard and arrowy?

Mr. Gadgil.—Yes.

Mr. Rahimtoola.—Is that the reason why you want to have more power crushers?

Mr. Gadgil.—Yes. They contain more percentage of fibre. The tops are absolutely not used. Some people would like to go in for the local Pundya cane which gives a very good yield of top which is very useful as food for cattle. Excluding the factory area, the new varieties form only 22 per cent. It will be more if we get the help of power crushers. At present there are only one or two bullock power mills—Cooper Engineering and Kirloskar Bros.—which are able to crush the cane. But the extraction is low.

Mr. Rahimtoola.—Have you drawn the attention of the Coimbatore director to the complaints made by the cultivators?

Mr. Gadgil.—Not only that. Another sugarcane specialist was specially asked to find out a thick cane which can be crushed by the bullock mills.

President.—Is there any other point which you would like to raise with us?

Mr. Jenkins.—No.

**Extract from Evidence of Mr. W. J. JENKINS, Director of Agriculture,
Poona, and Mr. V. V. GADGIL, Deputy Director of Agriculture,
Poona, recorded at Poona on Saturday, the 24th July, 1937.**

President.—Before Dr. Jain asks you questions, there are one or two points which I want to clear up. The Registrar of Co-operative Societies stated that he had some complaints from growers that factories do not always treat them as they should underweigh cane and so on.

Mr. Gadgil.—No; from the evidence of the cultivators who supply cane there is practically no complaint like that, but if the cane contains some unripe portion or leaves, deduction is done with the knowledge of the cultivator as well as the factory people. They do make certain deductions. There is no question about that.

President.—While we are on that question, Mr. Bhansali may tell us on what his information is based.

Mr. Bhansali.—My remarks were based on the report which was received by me from the Assistant Registrar long before the questionnaire was received and there these complaints were brought to my notice with regard to the areas mentioned in my report. I have not personally investigated

(3) Evidence of Mr. C. E. AITKEN, Superintending Engineer, Deccan Irrigation Circle, recorded at Poona on Saturday, the 24th July, 1937.

President. How long have you been in charge of this particular Division?

Mr. Aitken.—A year last January.

President.—Could you give us a brief description of what the arrangements are about sugarcane growing from the irrigation point of view?

Mr. Aitken.—The details are given in the report of the Deccan Canals Financial Improvement Committee which, I suppose, you have seen. Sugarcane is practically the only thing that suits the canal area because for one thing every other crop needs less water and therefore the canals have to cover a bigger area. Sugarcane is also one of the few things that takes water all the year round.

President.—Can you supply water all the year round?

Mr. Aitken.—Yes.

President.—From all the canals?

Mr. Aitken.—Not from the canals from small tanks.

President.—What is the period of closure of canals for silt clearance?

Mr. Aitken.—We have practically done away with it. We have no trouble in regard to silt. It is mostly weeds that we were troubled with. For about two years now we have been doing what is called rush irrigation. We are now giving water day and night and finishing the irrigation and closing the canal. We are trying now to irrigate for 7 days in 10. The consequence is that we have practically never to close at all for clearance.

President.—Am I correct in thinking that in the factory areas the cane-growers are obliged to supply cane to the factory?

Mr. Aitken.—That is only the case so far as one factory area is concerned. The Government have been very loath to bring any pressure to bear on the local irrigators until it has been proved that a Company could not get sufficient cane without Government intervention. In the case of Phaltan Factory the area is very small compared to the size of the factory. So it was there that Government introduced the rule that no local irrigator would be given water for cane unless his application was countersigned by the Company. The Company did not have to take the cane but they had to agree to his growing the cane. That has not been introduced yet in the other factory areas, but water for cane in one other area is liable to be stopped from next year.

President.—Do you mean if they do not supply cane to the factory?

Mr. Aitken.—Yes, in this case the factory did not like to have cane supplied to them because there was always the question about weight and other things. In the Phaltan area there has been a lot of friction. The cane supplied is said to be mixed up with leaves and there has been a certain amount of discontent about weight. Some of the factories are luckier. They started in areas where there was no cane already and no new cane area is started and so there has been no trouble.

President.—No one can grow sugarcane in any area irrigated by the canals without your permission?

Mr. Aitken.—No. They have got to apply for water. They have also got to apply for blocks and have their land measured.

President.—It must be sugarcane and not some other crop. Is that a fact?

Mr. Aitken.—Yes, they have to apply for the crop they want. Our rates vary with different types of crops for different seasons.

President.—If they apply for sugarcane they have got to pay the rate for sugarcane whether they grow it or not.

Mr. Aitken.—Yes, unless they ask to have it cancelled within a month from receipt of intimation of sanction.

President.—So, practically you can control from year to year the amount of sugarcane in the canal area by refusing permits?

Mr. Aitken.—Not so easily from year to year because the blocks are sanctioned for six years. We have a six year block period. We revise it every six years.

President.—During that period they have got to maintain a certain rotation?

Mr. Aitken.—Yes, they are only allowed to plant cane in any portion of that land in two years in five.

President.—Over a longer period, would it be correct to say that you can control the amount of cane cultivation?

Mr. Aitken.—We can reduce it. We can cancel the blocks by giving a year's notice under the rules, but Government are not willing to do that unless there are very strong reasons because the land is generally leased for a longer period.

President.—I was asking that question because sometime or other the question may arise as to the reduction in the area under sugarcane if there is overproduction.

Mr. Aitken.—We can do that as far as gul is concerned and not as far as factories are concerned because factories have got a guarantee for thirty years.

President.—All the factories?

Mr. Aitken.—Yes. They are asking for increased guarantees.

President.—How many factories are there?

Mr. Aitken.—Altogether 8. One is not quite started.

President.—Which is that?

Mr. Aitken.—Brihan Maharashtra Sugar factory. They have got sanction; they have ordered the machinery; but they are working, without much capital, from year to year. So far, they have been using the open pan system and growing their own seeds.

President.—Is that the factory in Sholapur?

Mr. Aitken.—Yes.

President.—The last Tariff Board—I do not know whether you have read their report—in 1930, drew attention to the fact that the irrigation rates were particularly high in the Deccan canal area. They also drew attention to the fact that there were a good many complaints about the manner of distribution of that water and so on. In the course of our present enquiry we heard exactly the same complaints especially about the highness of the rates charged. Of course, you are aware that you are charging about double the rates charged in any other part in India. Am I right in thinking that the high rates charged are due to the fact that the canals were unusually costly to construct?

Mr. Aitken.—In other parts of India, they have only to construct canals. But we have had to construct tremendous storage tanks. None of our works were giving any return. A few canals are now starting to give a return of about 4 per cent.—only two of them. From some of them we get no return at all. That was the reason for the appointment of the Kamat Committee.

President.—Is it all treated as one system or do you take each canal individually?

Mr. Aitken.—Each canal system individually.

President.—In calculating the capital, do you take it all as one big system?

Mr. Aitken.—No, we take each separately.

President.—Would you just give us the names of the canals? How would you classify them?

Mr. Aitken.—The major canals are:—Nira Left Bank Canal, Nira Right Bank Canal, Mutha Canal (which feeds Poona), Pravara canal and Godavari canal. Apart from these there are minor canals like the Kadva canal system, the Girna canal, etc. There are no cane blocks in the areas served by these canals and the rates are lower.

President.—Is the system different under those canals?

Mr. Aitken.—There are no cane blocks, and seasonal irrigation is allowed.

President.—Cane is not grown in that area?

Mr. Aitken.—Very little.

President.—There are practically 5 canal cane areas. Is that correct?

Mr. Aitken.—Yes. The Mutha canal cane area is about 3,000 acres only. There is a certain amount of restriction on account of the fact that we have to keep a lot of supply in reserve in case Poona goes dry.

President.—Which factory is situated there?

Mr. Aitken.—There is no factory in the Mutha canal area.

President.—Which of the canal systems have factories?

Mr. Aitken.—There is a factory on the Girna canal—Ravalgaon factory. There is no factory on the Godavari canal. There are two factories on the Pravara canal. On the Nira Left Bank canal there is one and on the Right Bank there are three. The other one that they talk about is Belvandi sugar factory which is a very small thing on a minor tank and they do not get a guarantee of area but a proportion of the water in the tank at the end of the year.

President.—We are of course primarily concerned with sugar manufacture and not gul manufacture and so from our point of view the three canal systems under which factories are located are more important. Of these three systems, can you tell us which is paying and which is not?

Mr. Aitken.—You mean what is the return on capital?

President.—Yes.

Mr. Aitken.—The return for the Nira Left Bank canal in 1935-36 was 3.74. The Nira Right Bank canal is not yet fully constructed. So, there has been no return. The Godavari canal gave nothing in 1935-36. The Pravara canal system gave a return of .83 per cent. only in 1935-36. But the year before it gave 2.85 per cent. and this year it will probably give 3 per cent. The Girna canal system gave 1.9 per cent. in 1935-36.

President.—We have heard a good deal about the extra charge for drainage which we have been given to understand is charged only to factories. Is that correct?

Mr. Aitken.—Yes.

President.—Can you tell us what would really be the average rate charged for water? Most of them take water for more than 12 months, don't they?

Mr. Aitken.—They take for about 14 months.

President.—Have you any figures to show what the average charge would be?

Mr. Aitken.—Rs. 49 to Rs. 53.

President.—Most of them do take for 14 months.

Mr. Aitken.—Yes.

President.—But of course the charge varies.

Mr. Aitken.—Yes.

President.—The adsali crop is 18 months.

Mr. Aitken.—Yes. There is one point about the extra charge for drainage which may need explaining, with reference to the system of blocks and the limit of cane. We fix the limit of cane in each catchment and that is done with the idea of reducing concentration and consequently there is not so much damage as there is in the factory areas. When we concentrate cane in any big area in the Deccan we always get water logging.

President.—Do you mean that there is much more damage in the factory area than in the ordinary area?

Mr. Aitken.—There is bound to be water-logging in the factory area.

President.—Is that the reason why you put a special charge?

Mr. Aitken.—Yes. We control it that way. Actually the rate of Rs. 15 added to Rs. 45 makes Rs. 60 which is the ordinary rate to irrigators who have cane outside the block in the canal system. Some people objected to blocks because cane-growers do not want to grow any other crop. So they were told on certain distributaries that they would be allowed to have cane for two years in five with no blocks and charged Rs. 60.

President.—A flat rate of Rs. 60 which includes drainage.

Mr. Aitken.—It does not go to drainage at all. The original proposal was to charge the factories Rs. 60 and do the drainage at Government expense.

President.—Is the area grown under this Rs. 60 rate extensive?

Mr. Aitken.—No.

President.—Can you give us an idea as to how much it would be?

Mr. Aitken.—I am afraid I cannot. It had been tried only on 3 distributaries. It was not very popular.

President.—The area would be inconsiderable.

Mr. Aitken.—Very.

President.—I take it, from time to time, you have had a certain amount of complaint from these factories?

Mr. Aitken.—From new factories. They all want to have the same condition of things as Belapur had and they always keep on going back to that.

President.—Belapur is the only factory which has got special rates?

Mr. Aitken.—It was only granted under the old lease which we cannot touch, and on their extensions they have exactly the same rules as the other factories have. Under the old lease there was no drainage rate and there is no control about this 2 years in five and the rate is limited to Rs. 45.

President.—These are the points on which they may be said to have concession?

Mr. Aitken.—Yes. The depth of soil and drainage do not come into that as they are not governed by the Bombay Canal Rules. They are governed by the ordinary lease rules.

President.—There is no other concession beyond that?

Mr. Aitken.—I don't think there is except the depth of the soil in which they can plant, the drainage and the number of years. I think these are the only ones which the other factories complain about.

President.—We visited the Padegaon Farm about a week ago and we were told that as a result of the experiments that have been made on soil and so on, some modification of the rules may be possible.

Mr. Aitken.—They have never come out with what they have done yet.

President.—You possibly know what they are doing there?

Mr. Aitken.—I saw it only last year.

President.—Speaking broadly what is the restriction you make about the soils at present?

Mr. Aitken.—The ordinary cane-grower has to have soils 18" deep; nearly all the factories are allowed 12" and in a few cases where the ground is

shallow and where drainage is done they will be allowed cane in 9". The reason is that the shallow soil takes a tremendous amount of water and dries very quickly and is also generally on ridges. The cultivation on ridges takes a tremendous amount of water and causes waterlogging lower down.

President.—The Padegaon Farm has been conducting some experiments about the amount of water required for cultivation: have the Irrigation Department been doing any independent experiments?

Mr. Aitken.—We have made a lot of experiments such as the use of sewage as manure and so on.

President.—What conclusions have you arrived at, speaking broadly, as to the amount of water? Is the amount of water given at present excessive or inadequate?

Mr. Aitken.—It is excessive. The companies' duty improves every year.

President.—You are no doubt aware of the experiments they are carrying out at Padegaon. Their conclusion is that the water usually taken by the average cultivator is considerably in excess.

Mr. Aitken.—Yes. The most extraordinary thing about Belapur is that last year when there was very great shortage of rain in that district, the Belapur factory got a better outturn and a better quality of sugar. I do not know whether it was due to less water or due to more regular supply of water.

Mr. Rahimtoola.—I would like to run through the answers you have given to the questionnaire so that you might be able to follow the points that are raised. Have you got a copy of the letter which was sent to us by the Public Works Department of the Government of Bombay. With regard the area under sugarcane, the statement you have supplied is till 1935-36. Can you give us the 1936-37 figures?

Mr. Aitken.—It is sent in September. I could probably get that for you.

President.—If you could give us an advance copy as soon as it is available, it would be useful.

Mr. Aitken.—You want the total area including overlap?

Mr. Rahimtoola.—Yes. In 1929-30 the area was 28,703 and in 1935-36 it was 42,471 acres. There was an increase of about 33 per cent. Do you think there is any likelihood of a further increase this year?

Mr. Aitken.—Yes, because the factories have extended.

Mr. Rahimtoola.—The total area under sugarcane according to the Director of Agriculture is 78,791 acres, so that roughly 50 per cent. is under irrigation.

Mr. Aitken.—He is probably including area under tank irrigation. In the Sholapur district, for example, tanks have got cane on it. Then he is probably including Kolhapur but that is not under me. My figures refer only to the cancels I have mentioned.

Mr. Rahimtoola.—I don't think he has included Kolhapur.

Mr. Aitken.—He has included Gujrat, East Khandesh, West Khandesh, Sholapur and Satara with which I have got nothing to do. All I have got practically is Nasik, Ahmednagar, Poona and a small portion of Sholapur.

Mr. Rahimtoola.—So 42,471 acres are out of that area only?

Mr. Aitken.—Yes, 42,471 is in the Deccan Irrigation Circle area alone. None of the rest comes under me at all.

Mr. Rahimtoola.—With regard to irrigation charges I would like to ask you a few questions. According to the statement of the Government of Bombay, sugar factories enter into an agreement with them which lays down that only one-third of the total area of the company's land should be under sugarcane.

Mr. Aitken.—That is a guarantee which has to be given by the factories. They have got to have three times the area suitable for cane cultivation. It has not been enforced yet.

Mr. Rahimtoola.—That is to say out of, say 3,000 acres of land they can grow sugarcane only on 1,000 acres?

Mr. Aitken.—Yes, and that 3,000 acres should not include area like roads, buildings and all that sort of extra land.

Mr. Rahimtoola.—What do they do with the other 2,000 acres?

Mr. Aitken.—They are allowed to grow cane only 2 years in five. If they have land under cane this year and the next year they cannot grow cane for another three years. The two in five is a reduction in their favour as a third would be 2 years in six only.

Mr. Rahimtoola.—The charge of Rs. 45 is only for the sugarcane area?

Mr. Aitken.—That is only for the area actually planted with sugarcane in that year.

Mr. Rahimtoola.—If they plant any other crop in the other two-thirds, have they got to pay extra?

Mr. Aitken.—Yes, for *rabi* they pay Rs. 5, for monsoon Rs. 3 and Rs. 8 for hot weather crop.

President.—That is irrespective of the crop?

Mr. Aitken.—No. It depends on the crop.

Mr. Rahimtoola.—When did this Rs. 45 rate come into force.

Mr. Aitken.—It has been in force for years. The rate for cane was sanctioned at Rs. 66 per year but this has never been enforced. There was such an outcry about it that it was kept back from year to year and it is still being kept back.

Dr. Jain.—So that this Rs. 66 has been a nominal rate?

Mr. Aitken.—It has not been enforced.

Mr. Rahimtoola.—I understand this is based more or less on gur prices which have gone down recently?

Mr. Aitken.—Government came to the conclusion at the Irrigation Conference that to base it on gur prices was all wrong. There was a proposal to put up a sliding scale based on gur but that has been thoroughly gone into and condemned.

Mr. Rahimtoola.—Do I understand that Rs. 45 is the minimum charge irrespective of gur prices?

Mr. Aitken.—It may go up to Rs. 66. This is based actually on the amount of water taken. It is based on three times the rate on seasonal crop because cane takes three times the water.

Mr. Rahimtoola.—This rate for the whole year irrespective of the amount of water taken?

Mr. Aitken.—Yes, except that Government can limit the water. At present there is no limit.

Mr. Rahimtoola.—What amount of water is covered by Rs. 45?

Mr. Aitken.—At present they can take as much water as they can.

Mr. Rahimtoola.—And there is no limit and no extra charge?

Mr. Aitken.—That is so.

Mr. Rahimtoola.—You have given us the cost of cultivation of an acre of land.

Mr. Aitken.—The Agricultural Department know about this better than I do. These figures have been supplied to me by the sub-divisional officers on the basis of what they have heard.

Mr. Rahimtoola.—With regard to question 7, your opinion is that if the sugarcane area is restricted there will be a loss to Government so that you would rather encourage the cultivation of sugarcane?

Mr. Aitken.—Yes.

Dr. Jain.—Have you got figures worked out of the minimum amount required so that there will be no loss?

Mr. Aitken.—We have not got that for different canals. We are working from the other direction—how much cane we can grow with the water we have got. After we have got that and the figure when the canals are fully developed, we will know where we are.

Dr. Jain.—Would you regard 1936-37 figures as adequate?

Mr. Aitken.—No. We are still improving. We have still water to spare.

Mr. Rahimtoola.—Is the cost of cultivation that you have given is for the improved variety or for pundia cane?

Mr. Aitken.—This is for the improved variety.

Mr. Rahimtoola.—In answer to question 15 you say that factories grow their own cane in the beginning owing to the uncertainty of quality of the cane bought from the Cultivators. You mean they prefer to grow their own cane?

Mr. Aitken.—They grow better qualities themselves except in very extraordinary cases. For instance in the case of the Kalamb factory they buy from Mr. Shembekar who is a very good irrigator but the ordinary irrigator does not supply cane of the quality which the factories themselves grow.

Mr. Rahimtoola.—With regard to the consumption figure given in reply to question 29 how have you arrived at the figure of 37,000 tons.

Mr. Aitken.—This figure is not reliable and may be omitted.

Mr. Rahimtoola.—You say in the representation that jaggery is produced from cocoanut, palm, toddy, in the coastal districts of the Presidency.

Mr. Aitken.—That is from information given by Government in Public Works Department.

Mr. Rahimtoola.—Have you any personal knowledge?

Mr. Aitken.—None at all. As far as I am aware it is done somewhere in the Kanara district; it is not produced in my Circle.

Dr. Jain.—A few suggestions have been made by the cane-growers. I just want to know what you think of them. One suggestion is that the irrigation charges might be recovered in three instalments.

Mr. Aitken.—At present they recover twice in the year.

Dr. Jain.—I understood them to say that they were recovered in a lump sum on the 15th March.

Mr. Aitken.—You mean for the sugarcane alone?

Dr. Jain.—Yes.

Mr. Aitken.—I have got a complaint from the Maharashtra Sugar Mills asking us to recover only once and not twice.

Dr. Jain.—Another suggestion which has been made is that no charges should be made for growing sugarcane crop in the waterlogged area. Have you anything to say about that?

Mr. Aitken.—It is generally impossible to grow cane in waterlogged areas. They have been experimenting in Belapur. They have a method by which they have proved they can do it. We still charge for water if it comes from the canal. There must be surplus water in the area if cane can be grown.

President.—There would not be any waterlogging if there was no water.

Mr. Aitken.—Yes, if there was no water.

Dr. Jain.—The third suggestion is—I do not know whether I should ask you about it—that the distribution of water should be controlled by the Agricultural Department.

Mr. Aitken.—That is quite impossible.

GOVERNMENT OF THE PUNJAB.

(1) Evidence of Mr. H. R. STEWART, Director of Agriculture, Punjab, and Sardar KARTAR SINGH, Marketing Officer, representing the Government of the Punjab, recorded at Simla on Tuesday, the 17th August, 1937.

President.—How long have you been Director of Agriculture?

Mr. Stewart.—I have been permanent Director since 1932. Previous to that I had officiated as Director at various times since 1927.

President.—Have you devoted any special attention to sugarcane?

Mr. Stewart.—Nothing more than to other ordinary crops.

President.—The Tariff Board, as at present advised, are going to give a brief description of each province and possibly parts of provinces and so we would like to know—the question has not been specifically answered in the replies to the questionnaire—how you would divide up the Punjab for descriptive purposes from the sugarcane point of view.

Mr. Stewart.—Canal irrigated tracts, well irrigated tracts and barani.

President.—What parts or districts do these tracts represent geographically?

Mr. Stewart.—Roughly canal irrigation—western districts, well irrigation—central districts and barani—eastern montane and sub-montane districts.

President.—Barani means dry?

Mr. Stewart.—Yes.

President.—In your statement of different areas under sugarcane in the province you have mentioned South Eastern dry tracts, montane and sub-montane, South Western, Central and North Western tracts. But that seems rather over-elaborate for our purpose.

Mr. Stewart.—The one I have given just now will meet the case.

President.—In which of these areas are the vacuum pan factories situated?

Mr. Stewart.—Leaving out sub-montane areas, there are factories in the other areas—two in South Eastern Punjab, one in South Western Punjab, one in the Central Punjab which is really in Kapurthala State (Phagwara), one up in the north of Lahore in Gujranwala District and one in the western district in Bhalwal.

President.—If you look at the statement, montane and sub-montane tract is really the most important sugarcane growing area judged by the acreage.

Mr. Stewart.—That is not my statement.

President.—So you would divide up the Punjab as you have just stated.

Mr. Stewart.—Yes.

President.—As regards the question of the cost of cultivation, we are most interested of course in what may be called the factory areas and we should like as far as possible to have figures for what might be fairly styled the factory areas. As regards water rates for sugarcane, a good many rates are given. I do not know whether the statement is put in by you.

Mr. Stewart.—We have a fixed schedule of rates for canals.

President.—It is somewhere about Rs. 10.

Mr. Stewart.—You may take Rs. 11 as the average. It varies slightly under different canals.

President.—What about the inundation rates? Are they of much importance from the sugarcane point of view?

Mr. Stewart.—No.

President.—If we take Rs. 11 as the water rate, would that be fair?

Mr. Stewart.—Yes.

President.—In answer to question 4, certain figures have been given regarding the cost of cultivation. Are these given by your Department?

Mr. Stewart.—Yes.

President.—Could you give us details?

Mr. Stewart.—The figures which have been supplied to you are those which were collected by us under a scheme which was financed by the Imperial Council of Agricultural Research. But independent of these we have various others. Sardar Kartar Singh and I have been interesting ourselves for some years past in the question of farm accounts. Between us we have put out several publications. Here is one (handed in) published by Sardar Kartar Singh in which you will find the cost of cultivation of sugarcane amongst other crops. In a number of instances the costs vary somewhat from these (given in reply to the Board's questionnaire) largely because the latter contain a greater variety of items than the other. For instance according to your form, rent of land, interest on capital and various other charges have to be included. Many of these items are theoretical rather than actual items of expenditure for the cultivator. In the other case we have dealt only with those things which are real items of expenditure for the cultivator and in addition we have put a value on his own labour.

President.—Can you give us a copy?

Mr. Stewart.—I shall get you a copy later.

President.—Could you direct my attention to the actual page?

Mr. Stewart.—These data (page shown) I should say were collected by us from one of our departmental farms.

President.—You have taken manual labour.

Mr. Stewart.—Actually we kept a record of the exact number of hours of work done and we put a valuation on the labour based on the actual number of days. We did similarly for our bullock labour.

President.—It includes manual labour, bullock labour, seed, implements.

Mr. Stewart.—It does not include land revenue or land rent.

Mr. Singh.—In the case of Government farms we do not pay any land revenue.

President.—For purposes of the Tariff Board, we naturally have to include rent in estimating the cost of cultivation.

Mr. Stewart.—In the figures submitted to the Tariff Board rent is included.

President.—Can they be taken as reasonable?

Mr. Stewart.—I feel that they include quite a number of items which are theoretical items of expenditure. They are not incurred in actual practice. That is the only thing about them and as such when you include these, you will find in some cases that the cultivator will be working at a loss.

President.—There is a South Indian proverb which I have quoted before and that is, when you begin to calculate the cost of cultivation, nothing is left, not even the plough share.

Mr. Stewart.—When we ourselves keep original accounts we leave out items of theoretical cost and merely include those that the cultivator would incur. We say that what he has got is his return for the labour of himself and the other members of his family and for such investment as he has made. We leave it at that.

Mr. Singh.—According to the accounting system, as agriculture is carried on at present, it is very difficult to separate one crop from the other. For

instance, any crop that follows sugarcane will give a higher yield and sugarcane does not get any credit for that increase.

President.—What credit would you allow?

Mr. Singh.—On some experiments conducted in the Lyallpur Farm, I have seen it gives about 5 maunds more yield.

President.—What will that be in rupees?

Mr. Singh.—Rs. 15 to Rs. 20 per acre.

President.—In Bombay we were told that cotton following sugarcane gave a net additional yield of Rs. 25 an acre.

Mr. Singh.—We put wheat after sugarcane and not cotton.

President.—With regard to cotton, would you say that it would be a fair average?

Mr. Stewart.—It is much too high. At present prices, it represents a fifty per cent. addition to the yield.

President.—There is another complication in calculating the cost of cultivation and that is the question of ratooning. Is ratooning common in the Punjab?

Mr. Stewart.—Since these Coimbatore canes have been introduced, it has become quite common.

President.—How many ratoons do they take?

Mr. Stewart.—It is very difficult to say. One knows of instances where they have taken as many as half a dozen; in ordinary practice, 2 to 3.

President.—What is your opinion about the advantages and disadvantages of ratooning?

Mr. Stewart.—I am opposed to the ratooning of any crop. From the point of view of insect pests and diseases, I think it is a great mistake to ratoon any crop. At the same time, one realises that there are circumstances in which ratooning does serve a particular purpose. For instance, we occasionally get a severe frost in the Punjab which damages the standing cane to such an extent as to render it unfit for seed. In those circumstances, the practice of ratooning means that next year the cultivators have a sugarcane crop; otherwise they would have none.

Mr. Singh.—From the economic point of view, the ratoon crop gives a higher return than the plant crop.

President.—Would it be really fair to take the plant crop and the ratoon crop together and strike an average for two years? Would that be a fair way of estimating the yield?

Mr. Stewart.—I think it is better to keep it separate because the ratoon area altogether may not be large all over the Punjab.

President.—Would you take the plant crop and the ratoon crop together in order to arrive at an estimate of the yield?

Mr. Stewart.—I would.

President.—The figures showing the cost of cultivation by themselves are not of much use unless the yield is given. I don't find that very clear in reply to the questionnaire.

Mr. Stewart.—We have given yield figures.

Dr. Jain.—Are these maunds or tons?

Mr. Stewart.—Maunds of gur.

President.—What we want is maunds of sugarcane.

Mr. Stewart.—Roughly ten times that.

Dr. Jain.—You would remove the decimal point.

Mr. Stewart.—Yes.

President.—In Jullundar you get an yield of 420 maunds.

Mr. Stewart.—The yields in the cases quoted are very low all over. Lyallpur yield is particularly low for canal irrigated land. On our own

farm we have no difficulty, I think, in averaging from 70 to 80 maunds of gur.

Mr. Singh.—These are cultivators' figures. Jullundar is slightly higher than others. Lyallpur is slightly lower.

Mr. Stewart.—According to standard yields published every five years the average for the province is 25 to 26 maunds of gur.

President.—Applying these figures to the three areas you have given, what would you say would be the average cost of cultivation in the canal area? Can we take the Lyallpur figure?

Mr. Stewart.—It could be definitely taken as typical. It is under canal irrigation. The average would be about Rs. 175 per acre.

President.—And Jullundar?

Mr. Stewart.—That is well irrigated. The cost of lifting water adds greatly to the cost of production. As you will see according to the figures we have got, it is Rs. 100 per acre more than the canal irrigated tract.

President.—What about the third figure?

Mr. Stewart.—That figure is a combination of barani or rain fed and irrigated. There is a fair proportion of barani in it. Since the submission of these figures to the Board we have separated purely barani figures.

Mr. Singh.—In the case of two villages in the barani area, figures are separately worked out. The total cost and the yield per acre have been given per village as well as the average. The figures given in reply are a mixture of barani and irrigated.

President.—The Director of Land Records gives the cost of cultivation at Lyallpur as Rs. 70 per acre?

Mr. Stewart.—That is impossible.

President.—We may perhaps ignore his figures. The fair price for cane may be estimated at As. 5 to As. 5-6 per maund: is that your estimate?

Mr. Stewart.—If you were to include all those items of expenditure which have been included in the cost of production the cost would be, at least that amount, but if you do not include them, probably As. 4 to As. 4-6 will be nearer.

Dr. Jain.—The figure you have given is 6-7 annas.

Mr. Stewart.—If you look at the Gurdaspur figure, the cost is Rs. 135 per acre and the average yield is about 18 maunds of gur only.

Mr. Rahimtoola.—Then the cost will be higher in Gurdaspur?

Mr. Stewart.—Yes, owing to the very low yield. In the three areas the price is 6-7, 9 annas and 10 annas.

Mr. Singh.—The cost of cultivation does not vary so much as the yield.

Dr. Jain.—You have put the fair price at 5 annas per maund.

Mr. Stewart.—It will vary according to the cost in the district. It is 5 annas for Lyallpur, 5 annas 6 pies for Jullunder where there is well irrigation. In Gurdaspur where there is lift irrigation it will be still higher.

President.—There are three areas in which you divide the province. What figures would you put for each of these?

Mr. Stewart.—In Gurdaspur the yield in the case quoted is low and therefore the cost per maund shown there is probably too high. But I think the Jullunder and Lyallpur figures would fairly represent the other two tracts.

Mr. Rahimtoola.—I would just like to get an idea of how Punjab is divided according to the sugarcane cultivation. During the last enquiry the province was divided into North Punjab and South Punjab and it was stated that in the South Punjab conditions were fairly similar to those in the United Provinces.

Mr. Stewart.—South Punjab, for purpose of sugarcane, is regarded as comprising Karnal district, Rohtak district, and Ambala district. Then there is a certain amount of cane grown in Gurgaon.

Mr. Rahimtoola.—What percentage of cane is grown in the South Punjab?

Mr. Stewart.—You will find the percentage given in the report of the Sugar Conference Committee, 1919. In Rohtak it was given as 3 and in Gurdaspur 6 to 7 per cent. of the total crop in the area.

Mr. Rahimtoola.—Those figures are old. Can you give us the information up to date?

President.—Would you prefer the other division you mentioned?

Mr. Stewart.—We would prefer the division I have suggested. Probably that was considered of importance at that time because in that area you have the Sonepat factory, which was the first sugar factory to be started in the province.

Mr. Singh.—Rohtak and Ambala districts are called the south eastern districts.

Mr. Rahimtoola.—The reason why I am putting you this question is that during the last enquiry it was stated that it was only in this tract that there was a possibility of starting sugarcane factories. I don't mean to say that Punjab should be divided in this way but my whole point is to find out whether the factories that were started soon after protection was granted were in this area or any other area.

Mr. Stewart.—They did not follow the recommendations made there. I will give you the exact information as to their location.

Mr. Rahimtoola.—With regard to the irrigation charges, are they based on actual costs?

Mr. Stewart.—My department has nothing to do with that. I cannot say on what basis they are fixed.

Mr. Rahimtoola.—With regard to the costs given in answer to questions 4 and 5, I think you tell us that if some of the items are omitted the cost would be 4 to 4½ annas per maund of cane for the whole province.

Mr. Stewart.—I think that will be a fair average to take.

Mr. Rahimtoola.—What particular items had you in view when you said that?

Mr. Stewart.—If you look at the footnote there you will see that I say "the figures given do not represent the actual outlay of the cultivator as many of the items included in the cost of cultivation are not items of actual expenditure (cash) by the cultivator. The actual outlay (in cash) will be very much less than the figures above indicate". Cost of production includes items like human labour, bullock labour, seed, manuring, land revenue and other cesses, water rates or cost of lift water, interest on working capital and general charges. A great many of these items are not items of actual expenditure incurred by the cultivator. Many of them are theoretical calculations and do not represent the actual outlay of the cultivator.

Mr. Rahimtoola.—Out of the items mentioned just now how many would you consider as theoretical?

Mr. Stewart.—We have put a value on human labour. It has been fixed at a certain figure, at 4 annas per day. It does not follow that it is a correct figure: it might be more or it might be less. It is not a matter in which money actually changes hands. The cultivator ploughs his own land.

Mr. Rahimtoola.—But there must be some amount set aside under this item?

Mr. Stewart.—I have always preferred in my own accounts not to put any value on that. Deducting the actual items of expenditure the balance is the return to the man and his family for the labour they have put into the farm or crop plus any capital he has invested.

Mr. Rahimtoola.—What will be the actual cost if you calculate on that basis?

Mr. Singh.—In the Punjab the cultivator has been growing sugarcane from 4 to 5 lakhs acres annually and preparing gur and selling it at a certain price. We take the price per maund of gur and work it out per maund of cane and according to that it will come to 4 annas.

Mr. Rahimtoola.—Is hoeing included?

Mr. Stewart.—Yes. It comes under human labour or bullock labour.

Mr. Rahimtoola.—The last item you have given is Re. 1-12-0.

Mr. Stewart.—They have shown three ploughings and have given an arbitrary figure of Rs. 2 per ploughing. We have prepared our figures on a totally different basis.

Mr. Singh.—Labour is simply for irrigation and for manuring. It does not include any other human labour. The two items manuring and irrigation have been subdivided into two parts while in the cost of cultivation manual and bullock labour have not been separated but lumped.

Mr. Rahimtoola.—Would you regard Rs. 135 as the fair cost of cultivation.

Mr. Stewart.—Yes.

President.—You have given these figures as collected by the Imperial Council of Agricultural Research. You have not stated what the yields are.

Mr. Stewart.—We have in answer to question 4; the first is the cost and the second is the yield.

President.—Would you take the average of the three figures given for each of the places concerned? Let us take Lyallpur. I suppose we will have to take the average of these three years.

Mr. Stewart.—That is the latest information we have got.

Dr. Jain.—You have not got figures for 1936-37?

Mr. Stewart.—No.

Mr. Rahimtoola.—Even if I work on these basis the cost does not come anywhere below 6 annas?

Mr. Singh.—In this case we have calculated from the yield of gur which was obtained after crushing cane and boiling it, but that fair price of 4 to 4½ annas will not include that.

Mr. Rahimtoola.—Do I understand that the cost of cultivation given by you in answer to question 4 includes cost of manufacture of gur?

Mr. Singh.—Yes.

Mr. Rahimtoola.—Rs. 135 would be the cost of manufacturing gur?

Mr. Singh.—Cost of growing sugarcane and converting it into a product which he puts on the market.

Mr. Rahimtoola.—Is Rs. 135 the cost of cultivation of cane or does it include a part of the cost of manufacturing gur? If so what amount would you consider as the cost of cultivating cane?

Mr. Singh.—Roughly 12 annas to Re. 1-4 is the cost of manufacturing one maund of gur. I will send you separate figures but for the present you can take it as Re. 1.

Mr. Rahimtoola.—In that case I will take Rs. 32?

Mr. Singh.—Yes.

Mr. Rahimtoola.—If I deduct Rs. 32-2, then it comes to Rs. 103. Will that be the fair cost of cultivation?

Mr. Singh.—Yes, roughly.

Mr. Rahimtoola.—The yield is 322 maunds per acre.

Mr. Singh.—I will supply you the figures later.

Mr. Rahimtoola.—If the cost of cultivation is Rs. 103 and the yield is 322 maunds then the cost per maund would be 5-1 annas. If you like you can supply the exact figures later.

Mr. Singh.—Yes.

President.—Could you give us figures for the three tracts, the Western, the Eastern and the Central, in respect of the actual cost of cultivation of cane and the actual estimated yield for that cultivation? That is what we want apart from the manufacture of gur.

Mr. Singh.—Yes.

Mr. Rahimtoola.—What is meant by barani?

Mr. Stewart.—Rain-fed lands. There is no artificial irrigation. Crops grow by rainfall.

Mr. Rahimtoola.—In Gurdaspur it comes to 8 annas.

Mr. Stewart.—I do not know whether these figures include the cost of gur making. I would look into that point and let you know later.

Mr. Rahimtoola.—The reason for asking you this question is to find out the difference between costings if I take the figures as they are, in Gurdaspur, it comes to more than 8 annas and in the other two districts, 6-7 annas and 6-1 annas.

Mr. Stewart.—I will verify those figures and let you know whether the cost of making gur is included.

Dr. Jain.—There is one point about the various items (12 items) in the cost of cultivation. There is one item, interest on working capital. Do you call it theoretical? Is it not actually paid?

Mr. Singh.—Has the cultivator put in money?

Dr. Jain.—Has the cultivator to borrow money for manure, seed, etc.?

Mr. Singh.—The income from another crop is utilised for the cultivation of the succeeding crop. Cotton is harvested in January and February and that money is utilised for sugarcane. What he gets from cotton is used for crushing sugarcane.

Dr. Jain.—Does it mean that he never borrows or borrows very little?

Mr. Singh.—If he is in debt, he will borrow.

Dr. Jain.—What is the usual practice? You have conducted enquiries regarding the cost of crops.

Mr. Singh.—There comes the question of the indebtedness of the Punjab peasant. If the cultivator is in debt, he will have to borrow. There are many who are not in debt and they may not have to borrow.

Dr. Jain.—What is the proportion of people who will borrow for sugarcane? Would it be correct to say that 50 per cent. borrow and 50 per cent. do not?

Mr. Singh.—Mr. Darling's Report gives the position of the indebtedness of the peasantry and beyond that we do not know.

Dr. Jain.—You have given the average sucrose content of Coimbatore varieties and local cane in different districts of the Province. Does it mean that the local cane is better than the Coimbatore varieties from the point of view of sucrose content? You have given the average sucrose content for Coimbatore varieties in Lahore as 10-2 and for the local cane 10-8; Lyallpur 9-5 for Coimbatore varieties and 10-2 for local cane. There is an appreciable difference; I should have thought that the local cane had less sucrose content than Coimbatore cane.

Mr. Singh.—It depends on the variety of Coimbatore cane.

Dr. Jain.—Is that the general experience of the Punjab? Is the local cane better than the Coimbatore cane?

Mr. Singh.—As regards the percentage of sucrose, even the Coimbatore varieties differ amongst themselves.

Dr. Jain.—The average is misleading.

Mr. Singh.—On such samples as our Agricultural Chemist has analysed, those are the results.

President.—Could you give us any estimate, supposing you have to take into consideration, the interest on working capital, of the rate of interest at which the ryot would borrow? Have you any information on that point?

Mr. Singh.—Private money-lenders charge 15 per cent. and Co-operative Societies charge 8 to 9 per cent.

President.—I gather from your answer to question 8 that there are no other cash crops which can be compared to sugarcane. Is that the correct conclusion?

Mr. Singh.—You mean money return?

President.—Yes.

Mr. Singh.—It is very difficult to say. Cotton is the only crop that competes with sugarcane.

President.—In answer to question 8 certain figures have been given. Are they given by you?

Mr. Stewart.—Yes, collected in the same enquiry.

Mr. Singh.—Those returns are gross returns.

Mr. Stewart.—When you are comparing the returns which he gets from sugarcane, you must always bear in mind that the area under sugarcane is strictly limited.

Mr. Singh.—The sugarcane cultivation gives the cultivator work in his spare hours. If sugarcane were not grown in Lyallpur, the total number of working days would be about 99. When the cultivator grows sugarcane, his working days will be 123. The cultivator grows sugarcane just to fill up the spare time.

President.—You have been utilising funds received from the Government of India and I want to know what particular work has been done on this question of insect pests.

Mr. Stewart.—You will see at Lyallpur that we have a big Entomological Section which deals with most of the insects which are a source of trouble to sugarcane and other crops. We know all about the life history of these insects, but in regard to method of control we do not know sufficient. So far as sugarcane is concerned, we know a good deal about them, but I don't regard the methods of control of some of them as very practical. For instance when we get a pest which lays innumerable eggs, I don't regard the system of control that requires a man to go about and squash the eggs as very satisfactory.

President.—What you need is more investigation into the best methods of control.

Mr. Stewart.—Yes. We are hoping to get a grant from the Imperial Council for further work in this connection to assist us in what we are already doing ourselves.

President.—Would you say work in that direction is backward?

Mr. Stewart.—The methods are very definitely backward.

President.—You have applied for a grant?

Mr. Stewart.—The Central Body has undertaken some work on that. I am a member of the Advisory Board and many of us felt that those most intimately and immediately concerned—South-East Punjab and United Provinces where these pests are bad—should be given practical help. That was ruled out at the beginning. There is a definite prospect now of our getting financial assistance.

President.—What about other diseases—for example mosaic? Is that important?

Mr. Stewart.—I would not regard it as of any serious consequence. The insect pest is the thing that matters.

President.—In answer to question 12 you are more or less satisfied with the amount of money you have received from the Imperial Council of Agricultural Research?

Mr. Stewart.—Might I explain the position? We have a grant of Rs. 1,33,000 for 5 years. You will see the work in progress at Lyallpur. It is directed to the finding of better varieties of cane. The question of finance comes in. While the money that we get from the excise duty is sufficient for the work we are doing, it is not enough for the schemes we originally put up. We put up a scheme which included the co-operative marketing of the cane as well. I prepared a scheme for the improvement of cane in the localities from which sugar factories draw their supplies. The Registrar of Co-operative Societies in consultation with me put in a scheme for co-operative marketing. When the scheme was sent up to the Government of India, we were told that the combined cost of the two parts was much greater than the excise duty that the Punjab is entitled to on its production. They therefore gave us money for the purely agricultural part only and not for the co-operative marketing organisation.

President.—That answer requires to be somewhat qualified.

Mr. Stewart.—That comes in elsewhere.

President.—I find that only one factory at Sonepat has co-operated with the Agricultural Department to introduce improved varieties of cane.

Mr. Stewart.—Yes. None of the factories have so far increased the area under better varieties of cane in their tracts except Sonepat. For some years at least the management of the Sonepat factory imported better varieties of cane from the United Provinces and some parts of the Punjab into the tracts from which they draw their supplies and we helped them. We met the cost of transportation, so that the cultivators might be able to obtain the cane cheaply. Because of the special effort made in that direction, we know from our own surveys of cane that within a five or ten mile radius of the factory something over 90 per cent. of the total cane is improved varieties. We don't get that in other parts of the Province.

President.—Regarding the main difficulties of canegrower, the answer to question 15 in some respects seems to imply that there are malpractices in the matter of weighment and so on.

Mr. Stewart.—I have no proof. Canegrowers definitely do say that there are certain malpractices such as irregular weighments, unfair payment by commission agents, etc. I can't say from my personal knowledge that these allegations are true.

Dr. Jain.—What is your experience as a Marketing Officer?

Mr. Singh.—These are the complaints one hears from the growers.

President.—Do you think there is much of these malpractices going on? Are they common? What is your impression?

Mr. Stewart.—If one believes what he has been told by the growers then he will certainly get the impression that these malpractices are common, but there is no proof.

President.—There are some places in which we are told that the cultivators are trying to pass off the diseased cane, as good cane.

Mr. Singh.—There are no cases of that kind here.

President.—I see that the Punjab Government did at one time consider the question of fixing prices and generally control the markets, but they gave up the idea.

Mr. Stewart.—I didn't supply that information.

President.—No, that was supplied by the Industries Department.

Mr. Singh.—It was never brought into force.

President.—In regard to the question of cost of transport of cane—it is a very important one—you have given the average as about 1½ pies per maund per mile in most cases.

Mr. Stewart.—In actual practice, it is not an usual item of actual expense. The cultivator transports it with his own cart.

President.—From the theoretical point of view, we have to allow him something.

Mr. Singh.—As a result of enquiries conducted by me in connection with some other crops, my findings were:—

Pucca road	1 pie per maund per mile.
Kucha road	1.5 pies per maund per mile.
Pucca and Kucha combined	1.25 pies per maund per mile.

It varies with the lead because loading and unloading have to be done. If the lead is longer the rate per mile will work out to something less than if the lead is shorter.

President.—I should like to put you a few questions about the gur industry. Is it a fact that prices have fallen very much in the last year or two?

Mr. Stewart.—Prices have fallen only a little. For our own information we keep a record of the prices prevalent at Lyallpur day by day (graph shown and explained).

President.—Has the present price of gur affected the amount of cultivation in the current season?

Mr. Stewart.—I don't think so. The information that I got last week for the sugarcane forecast shows that it is very much the same as last year.

President.—I dare say you have heard that in parts of the United Provinces there has been a contraction in the area under cultivation.

Mr. Stewart.—We have not had the same difficulty in getting rid of sugarcane as they had.

Dr. Jain.—Is Lyallpur the most important mandi?

Mr. Singh.—Amritsar imports a large quantity from the United Provinces and there is also local gur. In the case of Lyallpur also it is local gur as well as imported.

Dr. Jain.—Which is more important?

Mr. Stewart.—Lyallpur is a much bigger producing centre.

Mr. Singh.—Amritsar is a good market for gur.

Mr. Stewart.—We have our own shop in the Lyallpur market and so can collect our own information. We have not similar facilities elsewhere.

Mr. Singh.—These are the prices (hand in) which I got from the Commission Agent. I could not get figures for three or four years.

President.—Did your figures include the Delhi area?

Mr. Stewart.—When originally statistics were compiled, it was included.

President.—From your reply to question 42, it appears that the khand-sari industry and open pan factories have been killed.

Mr. Stewart.—Since this information was supplied by me, we have got some additional information which shows that actually more open factories have been functioning. We have got particulars to show that there are 49 more.

President.—Is that the total number?

Mr. Stewart.—So far as our information goes the total is 55.

President.—How many of these have been working?

Mr. Stewart.—These were actually working last year.

President.—We get rather conflicting evidence in this matter. The Director of Industries says that there is no open pan factory or the khand-sari industry working in the Punjab.

Mr. Singh.—I think he is not correct. According to the enquiries I conducted 10 days ago, these were all working last year.

Mr. Rahimtoola.—The reply given to us is something different.

Mr. Stewart.—Since I sent in my replies, I got this further information.

Mr. Singh.—I have a combined statement showing the factories working in 1936-37.

Mr. Rahimtoola.—The Board's question was: "Can you give us the number of open pan factories and khand-saris in your province?" The answer given was that there were 36.

Mr. Stewart.—You will have to ask the Director of Industries.

Dr. Jain.—Will you send us a copy of the list you showed us?

Mr. Singh.—Yes.

President.—What is your opinion about the future of open pan concerns and khand-sari industry?

Mr. Stewart.—Personally I don't feel that there is very much scope for them at present prices of sugar. If the figures which have been supplied to us are reliable, then there is no chance for them.

President.—The improvements of the open factory system are undertaken by the Industries Department or by your Department?

Mr. Stewart.—I don't think the Industries Department takes any part in it. Our efforts to bring about improvements have so far been directed towards dealing with the juice after it is extracted from cane. There has always been difficulty in getting sufficient fuel and our investigations have been directed towards evolving improved furnaces which would require less fuel.

President.—Is that work done by your Department?

Mr. Stewart.—Yes.

President.—And not by the Industries Department?

Mr. Stewart.—No.

President.—Is the answer (given in question 47) yours? It is rather difficult to find it out.

Mr. Stewart.—It is not mine.

Mr. Rahimtoola.—As regards your reply to question 10, the description given is with regard to Lyallpur farm?

Mr. Stewart.—No.

Mr. Rahimtoola.—How many farms are in your province?

Mr. Stewart.—Six to seven areas for dealing with cane. Our scheme is to place in the areas round each factory an Agricultural Assistant to help the spread of better varieties of cane (early maturing varieties, late maturing varieties, and varieties of higher yield and better sucrose content). We have an Assistant also for helping to control the insect pests in that tract and also for doing the chemical analyses of these improved varieties.

Mr. Rahimtoola.—I want to know what is actually being done to-day.

Mr. Stewart.—That is being done for the last two years.

Mr. Rahimtoola.—That is in one farm.

Mr. Stewart.—A factory draws its supplies of cane from within a radius of 5 to 10 miles. At each factory centre we have that special staff.

Mr. Rahimtoola.—Is there any research work done as to the best type of soil necessary for sugarcane?

Mr. Stewart.—No.

Mr. Rahimtoola.—Have you made any research with regard to the amount of water which is required for the sugarcane cultivation?

Mr. Stewart.—Only roughly. We have a big scheme for water requirements of all crops, including sugarcane, already approved by the Imperial Council but money has not yet been provided for it. Meanwhile for years past we have been making some rough experiments on our farms with regard to the number of irrigations.

Mr. Rahimtoola.—You have a farm in the Punjab which is under the control of Central Station Coimbatore.

Mr. Stewart.—Yes, Karnal farm.

Mr. Rahimtoola.—Do you get any assistance from it?

Mr. Stewart.—From that farm we get new varieties of cane for testing.

Mr. Rahimtoola.—Are you getting any assistance from the Sugar Technologist?

Mr. Stewart.—No, except in such small matters as the introduction of new cane crushers, and things like that.

Mr. Rahimtoola.—Does he not visit your province?

Mr. Stewart.—Generally speaking, no.

Mr. Rahimtoola.—With regard to your reply to question 14 we want to know the actual percentage of cane crushed in factories apart from that use for the manufacture of gur.

Mr. Stewart.—Since we supplied that figure we have had much more detailed information. Our details show that as far as we can judge, about 4 per cent. of the cane crop is made into sugar by all processes, about 70 per cent. is made into gur, 12 per cent. is used for seed and for chewing and 14 per cent. for fodder.

Mr. Rahimtoola.—In one of the answers it is stated that cane is imported by the Punjab Factories from United Provinces.

Mr. Stewart.—That happened at Sonepat. Sonepat factory agents said that within the tract from which they brought in their supplies locally they could not get adequate cane. We, on the other hand produced facts and figures to show that there was adequate cane in that tract. Sonepat has always maintained that its sugar extraction from local cane is much lower than from cane obtained from United Provinces. When I visited Sonepat factory they said that their average was 7.7 per cent. They were getting 8 per cent. at that time from the local cane but they said that they could get as much as 10 per cent. from cane imported from the United Provinces, without any trouble.

Mr. Rahimtoola.—Were there at any time 16 factories working in your province?

Mr. Stewart.—Never more than 12 and not more than 6 producing sugar from cane; the rest were refining gur.

Mr. Rahimtoola.—How many out of this were able to obtain whole of their requirements of cane from the province itself?

Mr. Stewart.—Eliminate 6 out of that straightaway as they merely produced sugar from gur. The only factory which has imported cane from outside the Punjab of which I have knowledge is Sonepat and even there the quantity imported is small.

Mr. Rahimtoola.—All the rest are getting cane from within the province?

Mr. Stewart.—Yes.

Mr. Rahimtoola.—Will you refer to question 15? I want to know what happens when you receive complaints from the cultivators. Do you address any letters to the factories.

Mr. Stewart.—I have not interfered in any way.

Mr. Rahimtoola.—With regard to cartage what would you consider as fair figure to take?

Mr. Stewart.—One pie per maund per mile.

Mr. Singh.—According to the figures given here the average is about 260 maunds of cane per acre so it comes to 260 pies per acre. Sonepat factory draws its supplies from within a radius of ten miles.

Mr. Rahimtoola.—We were told Rs. 10 per acre which comes to about one anna per maund of cane.

President.—One anna has been taken as the mean. What would you take as the average?

Mr. Stewart.—I should say 5 pies.

Mr. Rahimtoola.—In answer to question 27 you have supplied wholesale and retail prices of sugar collected from three different sources.

Mr. Stewart.—Retail prices have been impossible to get. Any data that have been collected in this connection have come to me from the Director of Land Records.

Mr. Rahimtoola.—With regard to the cost of khandsari sugar is it as high as Rs. 10 per maund?

Mr. Stewart.—I do not know to what extent these figures supplied by my Deputy Director can be taken as accurate. Since I gave my written answer this is the information I have received (shown).

Mr. Singh.—I have got figures about open pan factories. In one case it is Rs. 10 and in another it is Rs. 8-4 the reason being that he had two centrifugals and heavy engines and manufactured only 150 maunds. His overhead charges being high in this case the cost was higher. But next year he said he was going to manufacture more sugar and the cost would be less.

Mr. Rahimtoola.—Is there any difference in the cost between the open pan and khandsari or approximately Rs. 8-4 can be taken as the average cost of manufacture in both cases?

Mr. Stewart.—As far as our information goes.

Mr. Singh.—I may point out that in all these cases molasses have been sold at a comparatively higher price. In working out the costs the value realised on the sale of molasses have been deducted and the figures are 10 annas to 15 annas per maund, the same being sold for tobacco manufacture. The extraction being poor, only 4½ per cent., these molasses are rich in sugar.

Mr. Rahimtoola.—With regard to question 29, what is the population of the province?

Mr. Stewart.—In British Punjab the population is about 23 millions.

Mr. Rahimtoola.—Does this consumption figure apply to both these?

Mr. Stewart.—For the British Punjab it is a little over 23 millions. We have made a calculation which indicates that the probable total consumption is half a maund per head per annum of gur and sugar together and of that 3 of a maund is probably gur and 2 sugar.

Mr. Singh.—As far as Punjab is concerned there is no separate province from the trade point of view. There is one trade block consisting of Punjab, Delhi, North-West Frontier Province and some States lying within the border of the Punjab. For the Punjab we have got figures of production but for imports and exports we had to depend on the whole trade block and for the purpose of this figure we have taken the Punjab and the North-West Frontier Province as well as Delhi.

Mr. Stewart.—We do not hold that the figure is accurate. We have not got separate data for the Punjab, but it is as accurate as possible with such data as are available.

Dr. Jain.—We have got two entirely conflicting estimates you have given us 484,000 tons and the Director of Industries 213,000 tons: half a million in one case and a quarter million in the other, as the estimated normal consumption of sugar in the Punjab.

Mr. Stewart.—If you take the figure I have given per man per head, that works out to 480,000 tons, $\frac{2}{3}$ th of which is sugar and the rest gur.

Mr. Rahimtoola.—What maundage do you take per ton.

Mr. Stewart.—27 maunds.

Mr. Rahimtoola.—Perhaps the reason why this percentage is defective is because large quantities of sugar are used in confectionery.

Mr. Stewart.—We have some information about that, but the quantity used in confectionery is relatively small.

Mr. Rahimtoola.—Is that for the whole of India.

Mr. Singh.—No, 24 lbs. for the Punjab per head gur and 16 lbs. per head sugar.

President.—Is sugarcandy an important industry in the Punjab?

Mr. Singh.—There are some factories in Amritsar and Lahore. In all they are using 4,000 maunds of sugar.

Dr. Jain.—Almost all the points have been covered. There is really nothing that I have to ask except about statistics of acreage and production. You say that acreage statistics are sufficiently reliable. Are the estimates of production also reliable?

Mr. Singh.—Definitely unreliable. I have little faith.

Dr. Jain.—Are any efforts made to improve them?

Mr. Stewart.—There is very considerable difficulty. I do not know what end you are going to start from. It is a very intricate subject. I have been much more concerned with cotton than with sugarcane. We have a means of checking production in the case of cotton. There is the Cotton Ginning and Pressing Factories Act under which every ginning factory has to send weekly returns of the cotton that is pressed. We have a definite means of checking the cotton crop and we know that our statistics of production of cotton are very short of the mark. If we take the standard yield for cotton, the outturn would be 9 lakhs of bales of cotton, but the actual outturn in the year has been 14½ lakhs. In addition there is the home consumption of cotton. In the only instance where we have been able to check in any way, we find that the figure of production is definitely an underestimate. I have no reason to believe that the position is other than similar in the case of wheat, sugarcane or any other crop.

Dr. Jain.—Do you think the production of sugarcane is underestimated?

Mr. Stewart.—Yes, probably. Take the statistics published by the Land Records Department for standard yields, total production and so on. In determining the quantity of gur which the province is estimated to produce we find that the custom is to take a figure for the outturn of gur per acre in each district and multiply that figure by the total area of of cane in each district. This gives a certain result, but in actual practice this does not represent the actual production. I have stated previously that only 70 per cent. of the cane produced is converted into gur and the rest is used for chewing or for some other purpose, whereas the total quantity of gur has been calculated on the whole of the cane produced. The underestimate in the case of gur perhaps has been minimised by the method of calculation adopted. The method of calculation is certainly wrong. It takes the whole area as being converted into gur whereas only 70 per cent. is actually converted. Probably the estimate in regard to gur is nearer right than the estimates of some other crops.

President.—Owing to the method having been wrong.

Mr. Singh.—The cost of manufacture of gur had been taken out. I have seen the statement on my file.

Mr. Rahimtoola.—Rs. 135 would be the cost of cultivation of sugarcane.

Mr. Singh.—Yes.

Dr. Jain.—I find a mention of the conversion of a sugar factory into a factory for producing starch.

Mr. Stewart.—I do not know.

Mr. Singh.—I have seen that concern.

Dr. Jain.—Is it working satisfactorily?

Mr. Singh.—It produced starch and supplied to the Ahmedabad cloth mill and for the last 6 months it has not been working as he is arranging to get the machinery.

Dr. Jain.—It is rather an interesting point, the conversion of a sugar factory into a factory for producing starch. I was anxious to know more details. That may solve the problem of uneconomic factories.

Mr. Kailashchandra, grower of Abdullapur refers to a lot of cane standing in the fields. Has it happened in the Punjab?

Mr. Singh.—No.

Mr. Rahimtoola.—If you take Rs. 135 as the average cost of cultivation and the yield as 322 maunds it comes to 6·7 annas which is different from the fair price calculated by you.

Mr. Stewart.—But it must be remembered that many things which are not actual items of expenditure have been included.

Mr. Rahimtoola.—The only item which you would consider theoretical is the cost of labour.

Mr. Stewart.—I didn't say that. I meant interest on capital, rent and such things.

Mr. Rahimtoola.—From our information we learn that they actually borrow at as high a rate as 24 per cent. The average is 9 to 12 per cent.

Mr. Singh.—Supposing a man manufactures gur, for 32 maunds at the rate of Rs. 3, it comes to Rs. 96. To make one maund of gur, we will require 10 maunds of cane. Therefore one maund of cane will be about 5 annas. If he sells his cane, he could afford to sell at a lower price and he is saved the botheration of manufacturing gur. This figure of 4 annas is not based on the cost of cultivation, but upon the existing conditions. Before the manufacture of sugar he has been growing 4½ to 5 lakhs acres of cane annually and manufacturing it into gur and selling it at that rate.

Mr. Rahimtoola.—Does Rs. 135 include the cost of labour?

Mr. Singh.—That was the cultivation including all the items.

Mr. Stewart.—We have given you the figure of 4 annas to 4 annas 6 pies on a basis entirely separate from Rs. 135.

President.—It looks as if what you describe as theoretical figures has no practical bearing. Do you agree to that?

Mr. Stewart.—They don't represent the actual state of affairs in practice.

President.—Are there any other points which you would like to raise with us?

Mr. Stewart.—No.

Mr. Rahimtoola.—Can you tell us whether the average cultivator knows that his cane is a diseased one when he sells it to the factory?

Mr. Singh.—Yes by chewing his cane he can tell as much as you or I can. The insect pest lives by sucking the juice of the cane and so it will not be difficult for him to find that out especially in the case of pyrella and topborer.

**(2) Evidence of Rai Bahadur Lala RAM LAL, Director of
Industries, Punjab, recorded at Simla on Thursday, the
19th August, 1937.**

President.—The first question I should like to put to you is how many factories and refineries in the Punjab actually worked last season?

Rai Bahadur.—Seven.

President.—Can you give us the names? You have given a good deal of information for previous years but not for 1936-37.

Rai Bahadur.—Amritsar Sugar Mills Company, Amritsar.

President.—Is that refinery?

Rai Bahadur.—Yes. Sarasvati Sugar Mills, Abdullapur.

President.—That is vacuum pan factory.

Rai Bahadur.—Yes. The third one is Sonepat Sugar Mills.

President.—That is also vacuum pan factory.

Rai Bahadur.—Yes. The other four factories are:—

Gujaranwalla Sugar Mills.

Bhalwal Sugar Mills.

Punjab National Sugar Mills (which worked for 15 days).

Pattoki Sugar Mills (which worked for 25 days only).

Dr. Jain.—Leaving out the last two factories, there are only 5.

Rai Bahadur.—Yes.

President.—You say that Pattoki Sugar Mills worked only for 25 days. Is that because they started late?

Rai Bahadur.—They gave it up because of the imposition of the excise duty, for it would not pay them to troy longer.

President.—Have these two mills closed down?

Rai Bahadur.—Yes.

President.—The other five factories are going to work.

Rai Bahadur.—The Sonepat factory may be shifting to another place. They advertised in the papers and called for tenders in the hope that somebody would tender for the factory, but I am told they have not had a good response. The Sonepat factory is the one in which the Government of Punjab interested themselves and took shares to the value of Rs. 1,50,000. They have lost every pie out of it. Abdullapur is likely to continue to work.

President.—That is somewhere near the United Provinces border.

Rai Bahadur.—Yes, in fact for most of its supplies of cane, it has to depend upon the United Provinces.

President.—What is the next one?

Rai Bahadur.—The other one which is likely to work is the factory at Itahwali (Gujranwala). In the first season it did not make any profit. Last season it was just level. Sonepat is slightly better, but it cannot profitably continue where it is. As regards refineries, I do not know whether they can work at all because there is no chance of their making any profit.

President.—Have not all of them closed down?

Rai Bahadur.—Yes, except Amritsar.

President.—What is the name of the factory in the Kapurthala State?

Rai Bahadur.—Jagatjit Sugar Mills Co., at Phagwara.

Dr. Jain.—Did it work?

Rai Bahadur.—I think it is working.

President.—From the point of view of the sugar industry in the Punjab, we ought to include that.

Rai Bahadur.—We do not deal with it because it is in the State. If know in the year when it was opened, all the open pan sugar factories in the adjoining area were closed because all the available cane supply was taken over by the Phagwara factory.

President.—It would be six mills including the one in the Kapurthala State.

Rai Bahadur.—Yes.

President.—You say that all the open pan sugar factories have closed down. When you say that, do you mean large concerns or smaller concerns?

Rai Bahadur.—Smaller ones.

President.—The Director of Agriculture informed us that there were a lot of small concerns working last season.

Rai Bahadur.—My information is not that. I leave it to him to say what he likes. One of the mills at Batala to which a loan under the Industrial Loan Act was sanctioned could not continue as a sugar factory and have after necessary alterations in the centrifugal has taken up the manufacture of starch. Not a single open pan sugar factory with which I am concerned, worked last season. The Industries Department gave loans to small scale sugar manufacturers in order to encourage and help the industry.

President.—Do you think that no open pan concern worked at all in the Punjab?

Rai Bahadur.—Not a single open pan sugar factory, to my knowledge. In fact it could not pay them to work.

Mr. Rahimtoola.—Do the khandsari and open pan factories come within your jurisdiction?

Rai Bahadur.—I deal with them so far as financial assistance and technical assistance are concerned.

Mr. Rahimtoola.—If they were working, you would have known.

Rai Bahadur.—Yes, I should have.

President.—Are you doing any thing to try and improve the open pan system in the Punjab.

Rai Bahadur.—No, it is a hopeless job now.

President.—You have given it up, have you?

Rai Bahadur.—Yes.

President.—In our discussions with the Director of Agriculture we told him that we would probably give in our report a brief description of the province and we asked him how he would divide the province. He said that he would divide it into three areas for purposes of description, viz., western tract which is canal irrigation, central tract which is mainly well irrigation and the eastern sub-montane and montane tracts which are dry. Do you consider that a fair division?

Rai Bahadur.—That may be so from the point of view of agriculture. From the sugar industry point of view, it is the eastern and southern tracts which are most important on account of climatic conditions and nearness to the United Provinces. The Central Punjab because of irrigation facilities may be good, if we can acclimatise the improved varieties of cane to feed the factories for the whole season. Also the colony area in the Shahpur district in the west has some small importance.

President.—How would you divide the province then? We do not want too elaborate a division—just a rough division for description.

Rai Bahadur.—I feel that the area which is important from the point of view of the sugar industry is the Eastern and Southern Punjab and the Central Punjab. So far as the Western Punjab is concerned there is nothing very much.

President.—It is not merely a question of the sugar industry. It is a question of sugarcane areas because gur is also a matter which engages our attention.

Rai Bahadur.—In that case I would accept on the whole the division of the Director of Agriculture as we get cane all over the province.

President.—The western tract is under canal irrigation.

Rai Bahadur.—Yes, partly.

President.—Very little sugar is manufactured in that area.

Rai Bahadur.—Yes.

President.—The central tract is well irrigated.

Rai Bahadur.—Yes also canal irrigated.

President.—There are some factories in that area.

Rai Bahadur.—We have at Rahwali and Amritsar.

President.—In the western tract is there any?

Rai Bahadur.—There is Bhalwal.

President.—The eastern and southern tracts are the most important.

Rai Bahadur.—Yes.

President.—Are these tracts dry?

Rai Bahadur.—Not very dry. There are not many canals that side. They are not as well irrigated as the Central or Western Punjab.

President.—That area consists of how many factories?

Rai Bahadur.—Sonepat and Abdullapur.

President.—Those two are the best.

Rai Bahadur.—Yes. They have local supply of cane; they can also draw their supplies from the United Provinces.

President.—We understand from the Director of Agriculture that the area under sugarcane has not decreased this year.

Rai Bahadur.—He is a better authority on that point, though I should think that there would be a shrinkage in the area.

President.—In spite of the fall in the price of gur?

Rai Bahadur.—The effect of that will not be known this year. For instance, immediately after the excise the prices of cane fell because they could not sell it. We might probably see the effect of that next season.

President.—He was talking about planting done this year. He said there had not been an appreciable decrease.

Rai Bahadur.—I am not in a position to say anything about that definitely but the indications are to the contrary.

President.—With regard to question 15 about the difficulty of cane-growers, I do not know whether the answer is yours.

Rai Bahadur.—Yes. I feel that there is no possibility of malpractices in the Punjab because the supply is not sufficient to meet the demand. The growers get a very good price; in fact, they can dictate their own terms.

President.—How many qualities of gur, speaking broadly, are manufactured in the Punjab? Is it possible to give that information?

Rai Bahadur.—There are one or two known varieties of gur in the market, viz., Deshi and Purbi gur. The gur which we get in the Central Punjab is comparatively whiter. In the other parts, it is rather dull in colour.

President.—Generally, the Industries Department interest themselves in the sugar factory—in the vacuum pan business—to some extent.

Rai Bahadur.—I have already stated that the Government of Punjab did take shares to the tune of Rs. 1,18,000 in the Sonepat factory. We also gave other people some loans.

President.—Do you consider these wholesale and retail prices of gur as reliable?

Rai Bahadur.—These we have taken from the dealers in different places. It is rather difficult for us to reconcile some of these. We have given them for what they are worth. They are not recorded by any Government agency. In one or two instances we got from Taksils. We took what we were told by the dealers.

President.—*Per capita* consumption of sugar in the Punjab I think is about 16 lbs.

Rai Bahadur.—I think so.

President.—*Per capita* consumption of gur is about 24 lbs.

Rai Bahadur.—Yes. The consumption of sugar has slightly increased on account of its low price.

President.—The consumption of 16 lbs. of sugar *per capita* is high compared with the rest of India. The average for India is only about 7 lbs. What is the reason for that?

Rai Bahadur.—I think the Punjabi eats better and likes better food.

President.—Do you mean he has a better standard of living?

Rai Bahadur.—Yes, compared with some of the other provinces, I think the Punjabi eats better food.

President.—Is the consumption of coffee or tea more in the Punjab?

Rai Bahadur.—The consumption of coffee is confined to the upper classes. Tea is generally consumed in the Punjab. Sugar and gur are consumed in *sarbats*, sweets, etc.

President.—Can you tell us whether there is much import or export of sugar or gur by road from the Punjab?

Rai Bahadur.—There is no agency to record that information. All the statistics we get are from the Director General of Commercial Intelligence and Statistics.

President.—Do you know of any quantity exported by road?

Rai Bahadur.—We are so deficient in that respect that I could not say anything at all.

President.—To what do you really attribute the ill success of the sugar industry in the Punjab?

Rai Bahadur.—The first reason is inadequate supply and supply of poor qualities of cane. The second reason is that the season in the Punjab is not as long as in the United Provinces and Bihar. The third and the most important reason is the excise.

President.—Excise is common to all provinces.

Rai Bahadur.—The sugar industry was taken up in the Punjab rather late. So, it could not compete with other provinces with all these disadvantages.

President.—Why can't they compete?

Rai Bahadur.—Until they are able to plant improved varieties of cane and get adequate supplies, it will be difficult for them to compete.

President.—Is the sucrose content of Co. 213 less in the Punjab than in the United Provinces?

Rai Bahadur.—Yes.

President.—For the same kind of cane?

Rai Bahadur.—Yes.

President.—Owing to climatic conditions?

Rai Bahadur.—Yes. Then there is the danger from frost.

Mr. Rahimtoola.—But there is also frost in some parts of United Provinces?

Rai Bahadur.—It is not so very bad as in the Punjab.

Dr. Jain.—Is there any difficulty about labour?

Rai Bahadur.—Not much I think. They are able to import some people from the United Provinces and one factory imported some Chinamen.

Mr. Rahimtoola.—You said just now that there is not much of improved varieties of cane in the Punjab. I find that the figure given in one of the answers is 40 per cent.

Rai Bahadur.—I happened to have been a Director of the Sonepat factory before the liquidation and the managing agents said that every time they tried to get improved varieties they failed.

Mr. Rahimtoola.—Is it a fact that improved varieties of cane cannot be grown in the Punjab?

Rai Bahadur.—That is not so. In fact the agriculturists have not taken the same interest as they ought to, because they were not assured of a continuous profit or continuous return.

Mr. Rahimtoola.—Punjab was predominantly a gur area before the sugar industry started and gur prices in the Punjab are very much better than in other places.

Rai Bahadur.—Gur which can be used for the manufacture of sugar is not what you get in the Punjab. Punjab gur is not as suitable for that purpose as the gur produced in other parts of India.

Mr. Rahimtoola.—You said the quality of cane is not so good. I want to know the reason. I find that the cane which is very well known, in United Provinces and Bihar, viz., Co. 213, is being grown in the Punjab?

Rai Bahadur.—My information is that we have not enough quantities of improved varieties of cane available in the Punjab, to meet the demand. Punjab cane may be good enough for the manufacture of gur but it is not generally suitable for the manufacture of refined sugar.

Mr. Rahimtoola.—Do you know anything about the irrigation charges?

Rai Bahadur.—No.

Mr. Rahimtoola.—With regard to the difficulty about the season mentioned by you I find that one factory has worked for seven months?

Rai Bahadur.—It must have used imported cane.

Mr. Rahimtoola.—Is that still the case with that company?

Rai Bahadur.—For a longer season you have to depend upon imports from the United Provinces.

Mr. Rahimtoola.—What is the season in the Punjab?

Rai Bahadur.—It has gone up to 100 days. Beyond that they have to depend upon imported cane.

Mr. Rahimtoola.—Imported cane would be costlier?

Rai Bahadur.—Yes, and the sucrose content also goes down.

President.—What is the distant they have to import it from?

Rai Bahadur.—Sometimes 20, sometimes 30 or even 40 miles.

President.—Cane comes from United Provinces by rail?

Rai Bahadur.—Yes.

Mr. Rahimtoola.—Do they experience any difficulty about transport?

Rai Bahadur.—Generally there are no complaints to make; one or two cases arise but you cannot avoid that.

Mr. Rahimtoola.—You have given us a statement showing that seven mills worked last year. Is it a fact that there are altogether 16 mills in the Punjab including refineries?

Rai Bahadur.—16 are registered factories.

Mr. Rahimtoola.—They all worked at one time or another?

Rai Bahadur.—Yes.

Mr. Rahimtoola.—Out of those only seven are working to-day?

Rai Bahadur.—Yes.

Mr. Rahimtoola.—Did they stop working due to the shortage of cane?

Rai Bahadur.—Partly for that and partly for other reasons already mentioned by me.

President.—Could you get us returns from Sonepat factory, Bhalwal factory, Punjab National Sugar Factory and Pattoki Sugar Mills?

Rai Bahadur.—I will get them for you.

Mr. Rahimtoola.—I would like to ask you a question or two about confectioneries. I suppose that comes under your department?

Rai Bahadur.—Yes.

Mr. Rahimtoola.—Could you give us an idea of the amount of sweetmeat produced in the Punjab?

Rai Bahadur.—We have not got any record.

Mr. Rahimtoola.—Do you know what raw material they use?

Rai Bahadur.—I cannot give you the components of each kind of sweet, but they consume quite a lot of sugar.

Mr. Rahimtoola.—Do they produce large quantities of sugarcandy.

Rai Bahadur.—Not much. They produce something on the Multan side but not in very large quantities.

Mr. Rahimtoola.—With regard to the question of excise duty, your opinion is that the open pan factories stopped working because of the additional excise duty?

Rai Bahadur.—Yes, to a large extent.

Mr. Rahimtoola.—What are the other causes.

Rai Bahadur.—Some of the bigger factories started taking away their cane by paying a better price for it.

Mr. Rahimtoola.—Do I understand that there is really a shortage of cane for the open pan factories?

Rai Bahadur.—For instance when the Phagwara factory was opened all the open pan factories in that locality had to close down because Phagwara paid a little better price.

Mr. Rahimtoola.—Is it due to the tendency of the cultivator to make gur rather than to sell cane to the factories?

Rai Bahadur.—When they get a better price for cane it really saves them the trouble involved in the manufacture of gur.

Mr. Rahimtoola.—You say that Punjab should be exempted from the levy of excise duty for at least two years.

Rai Bahadur.—Because ours is an infant industry and we therefore want a little time to grow up before we are in a position to compete with United Provinces and Bihar.

Mr. Rahimtoola.—The factories in the Punjab generally apart from Sonepat were started after protection was granted to the industry?

Rai Bahadur.—Yes. The impetus was given by the protection.

Mr. Rahimtoola.—Apart from Sonepat were there any factories existing in the Punjab before 1932?

Rai Bahadur.—Yes. There were 6 of them; but they were not flourishing.

Mr. Rahimtoola.—The principal point that you would like to emphasise is about the price of cane?

Rai Bahadur.—The point I had in view was that the condition of the Punjab sugar industry was such that it was not in a position to compete with provinces like United Provinces and Bihar.

Mr. Rahimtoola.—Do you really think that Punjab is suitable for the growth of sugarcane to a large extent?

Rai Bahadur.—With proper patronage, by which I mean the removal of the disabilities from which it suffers at present, it should be able to grow sugarcane.

Mr. Rahimtoola.—What about Karnal Farm?

Rai Bahadur.—I could not tell you much about it because it belongs to the agricultural department but it is so far away that it cannot feed Sonapat.

Mr. Rahimtoola.—I am talking about the research work.

Rai Bahadur.—We can know the practical result of that only from the utilisation of the cane grown there in the adjoining factories.

Mr. Rahimtoola.—Are there any demonstrations held?

Rai Bahadur.—If the Agricultural Department hold it I do not know. I confine my enquiries to the localities which feed the factories.

Mr. Rahimtoola.—The existing factories may be wrongly situated?

Rai Bahadur.—When people started these factories they did not consult the Industries Department as to whether they should establish these. They acted on their own.

Mr. Rahimtoola.—The factories were started without any proper guidance?

Rai Bahadur.—Very probably.

Mr. Rahimtoola.—I find that you drafted sugarcane rules for fixing the price of cane. At what stage were they dropped?

Rai Bahadur.—We followed the United Provinces rules, but immediately they were issued all the sugar factories protested: an enquiry was made and we found that it was premature for the Punjab to fix a minimum rate; representations were made to Government and they thought it was too early to enforce them.

Mr. Rahimtoola.—Premature in the sense that they could not arrive at a fixed cost of cultivation?

Rai Bahadur.—There was no justification for it, justification in the sense that there was an inadequate supply of cane so that the necessity of fixing a minimum price did not arise and in the second place we found that there might be some practical difficulties. In fact the Punjab grower can get very good price for his cane near the factories.

Mr. Rahimtoola.—Do you know what the factories do with their molasses?

Rai Bahadur.—They have a lot of difficulty regarding the disposal of molasses. Some people had to part with their molasses at 3 or 4 annas per maund and some had to throw away on the road side and the railway people protested. The Public Works Department have been trying to use molasses for the roads but have not yet been successful.

Dr. Jain.—From your experience of the Punjab, what do you think would be the economic unit of a sugar factory?

Rai Bahadur.—Our smallest unit, so far as big factories are concerned, is 100 tons. Smaller units find it difficult to carry on unless some concessions are given to them.

Dr. Jain.—Would you consider 400 tons as an economic unit for the Punjab?

Rai Bahadur.—I think so.

Dr. Jain.—In the United Provinces we have been told it is 750 tons.

Rai Bahadur.—The bigger the unit, the better.

Dr. Jain.—To put it in other words if the capacity of these was 400 tons and above; they would have done better.

Rai Bahadur.—Yes, but they would have greater difficulties in getting cane. If they had adequate supply of cane, they would do better and also stand the competition better.

Dr. Jain.—Punjab is the next important sugarcane growing area.

Rai Bahadur.—You are right, but the varieties of cane that have been grown in the Punjab were not really started with a view to manufacturing sugar. They are with a view to the manufacture of gur.

Dr. Jain.—There is one other point. I take it the reply is yours in regard to the assistance given by the Industries Department to the sugar factories.

Rai Bahadur.—Yes.

Dr. Jain.—It is said that the Industrial Chemist of the Department rendered technical assistance to the sugar factory at Bhatwal and Batala factory which was later converted into a factory for producing starch.

Rai Bahadur.—Yes, so far as the Batala factory is concerned. We found that the owner could not carry on the open pan system of manufacturing sugar. His money was lying idle. We told him to convert his factory into one for producing starch.

Dr. Jain.—It was an open pan factory.

Rai Bahadur.—Yes.

Dr. Jain.—Was it quite easy to convert it into a factory for producing starch?

Rai Bahadur.—Yes, they are doing very well.

Dr. Jain.—One way of avoiding loss in the case of open pan factories would be to convert them into factories producing starch.

Rai Bahadur.—I do not know whether every one would do it. He is the only man who has shown the inclination to do it. He is the man who took a loan from us and we worried him for its return and later suggested to him this alternative. The Industrial Chemist went to Balata many times to advise. Now whatever he manufactures, he is able to sell.

Dr. Jain.—What did it cost him to convert?

Rai Bahadur.—I don't think it cost him very much; nothing appreciable.

Dr. Jain.—Did he have to buy any new machinery?

Rai Bahadur.—The main thing altered was the centrifugal. He didn't have to instal any important additional machinery.

Dr. Jain.—Since the question was raised in the Council, why should you not advise others to do the same?

Rai Bahadur.—We told everybody. Everybody has not the same enterprise; nor the same capacity to market goods.

Dr. Jain.—Really lack of enterprise and not lack of capital, you will say.

Rai Bahadur.—In the case of business some people have the knack or capacity of doing it, while others have not. The man who does not get on well in the initial stages may say: "Leave it at that. Let us not get further."

President.—On the principle that good money should not be thrown after bad.

Rai Bahadur.—That may be more or less the argument. People have the money, but people are not the courage to plant a new venture in the existing circumstances.

Mr. Rahimtoola.—They are not afraid of starting sugar factories in India.

Rai Bahadur.—Now they are.

Mr. Rahimtoola.—The capital was not shy and they were able to start good many sugar factories.

Rai Bahadur.—Yes. When protection came, they thought they would do very well.

**(3) Evidence of Khan Bahadur Maulvi FATEH-UD-DIN, M.B.E.,
I.A.S., Deputy Director of Agriculture, Punjab, recorded
at Lahore on Monday, the 23rd August, 1937.**

President.—Khan Bahadur, you are the Deputy Director of Agriculture, Jullundur?

Khan Bahadur.—Yes.

President.—Are you specially concerned with sugar?

Khan Bahadur.—Not throughout the province, but I have the Sugar Research Station at Jullundur in my charge and I am also a member of the Sugar Committee and in that way I am interested in it.

President.—Is Jullundur more important than Lyallpur?

Khan Bahadur.—Both Jullundur and Lyallpur Farms are doing research work on this crop but from the sugarcane point of view, Jullundur is more important than Lyallpur, as (1) Percentage of cane area to the total cultivated area in the Jullundur District is more than that in the Lyallpur District. (2) Jullundur has got no alternative crop while Lyallpur has got an important alternative crop in cotton. Jullundur is not so important from cotton as from the sugarcane point of view.

President.—What particular work are you doing at Jullundur?

Khan Bahadur.—We are carrying on research work or experiments regarding cultivation of cane which include trials of various varieties, trials of different systems of cultivation and manurial experiments. This is as far as the cultivation side is concerned. As for the manufacture side, we are working on the improvement of the local furnace for the manufacture of gur and rab. We have improved it to a very great extent. We are also doing some work on the manufacture of sugar by the open pan system. We are further working on the improvement in clarification of juice and the process of gur making because gur ordinarily made is not of uniform quality. We are trying to introduce methods by which they can make better quality gur and of uniform colour.

President.—What is the method?

Khan Bahadur.—We use mucilaginous substances, which facilitate the coagulation of impurities. In the case of rab we also use saji (a mixture of crude carbonate and some sulphate salt). These two give the best results; and then we are also trying the carbon process, which the Director of the Imperial Institute at Delhi has introduced. But we have started that only last year and it has not yet gone into the villages.

President.—Jullundur gur is supposed to be very good?

Khan Bahadur.—Yes. It is very famous; it is exported to most places in the Punjab itself and also to Rajputana.

President.—It commands a definitely higher price?

Khan Bahadur.—Yes.

President.—What is the price compared to ordinary gur.

Khan Bahadur.—Jullundur gur will always be 8 to 12 annas per maund higher.

President.—At what price was it selling?

Khan Bahadur.—On the farm we were selling it up to Rs. 5 per maund but generally it was from Rs. 4 to Rs. 4-8 per maund. The average price in the market was between Rs. 3 and Rs. 4 per maund.

President.—The farm gur is particularly good?

Khan Bahadur.—It is very good because it is better clarified.

President.—What varieties of cane have you been growing in Jullundur?

Khan Bahadur.—On the farm we are growing about 150 varieties; but the promising varieties which we have distributed to the people, are Co. 285;

Co. 213, Co. 312 and Co. 313. Co. 285 stands drought and frost better than other canes, also resists insect pests better. Another cane which is very popular in Jullundur District is Co. 213, which responds to good cultivation and good irrigation and good manuring. People have obtained very high yields from this cane. I myself had a small area of this crop crushed when out on tour and got as much as 131 maunds of gur per acre from a cultivator's field. I made a similar experiment elsewhere and found the same thing. I cut down 1/20th of an acre and simply weighed the cane. I got 1,400 maunds of cane per acre. But these are not the averages. Another cane which is getting very popular and is spreading is Co. 312 and last of all is Co. 313 because it is an early variety. Another advantage is that it will yield 11 maunds of gur from 100 maunds of cane. It has a further advantage that it does not deteriorate by standing long in the field. These are the important canes which we are recommending and people are cultivating.

President.—Do you take 10 maunds of cane to a maund of gur?

Khan Bahadur.—That is about the average as taken by the zamindars but Co. canes give an average of one maund of gur from nine maunds of cane.

President.—Is it possible to grow a good crop of cane in the Punjab?

Khan Bahadur.—Yes. In Jullundur there are certain areas where even now the average crop will be 700 to 800 maunds. That is only in Jullundur because it is well irrigated and the people are good cultivators and they use as much manure as they can possibly provide.

President.—313 is the most promising?

Khan Bahadur.—Yes. It is one of the most promising.

President.—Do you know the yield from 313?

Khan Bahadur.—On the farm at Jullundur the average of the whole farm, which is 16 acres under cane, including certain varieties which yield very little, is nearly 100 maunds of gur per acre and 313 would yield that much but I reckon outside with the zamindars it will give about 70 to 80 maunds per acre. Our best cane on the farm was Co. 312, which gave about 144 maunds per acre which is 1,400 maunds or 52 tons of sugarcane.

President.—What are the average cost of cultivation and average yield in Jullundur area?

Khan Bahadur.—Cultivation differs so much in the Jullundur area that I cannot give you one figure for all the tracts. I would say that the average cost of cultivation for plant irrigated cane would be Rs. 140 an acre and the yield would be about 500 maunds of stripped cane.

President.—Can you give us any details?

Khan Bahadur.—Yes. I have worked out the details for Jullundur. I have included these items:—Preparatory tillage, manure, seed, planting of seed, irrigation and after cultivation.

President.—Have you included rent?

Khan Bahadur.—I have not included rent because in Jullundur, there are very few people who rent land; they are all small holders who grow their own cane.

President.—We have been told that in the Punjab not much money is borrowed particularly for the cultivation of sugarcane.

Khan Bahadur.—That is true.

President.—The interest on working capital is not a very important item. Do you agree with that?

Khan Bahadur.—Yes.

President.—What does your figure work up to?

Khan Bahadur.—My figures works up to Rs. 140 for irrigated plant cane.

President.—On that outlay, what yield do you expect on an average?

Khan Bahadur.—I will expect a yield of 500 maunds if not more.

President.—We are now talking of an average cultivator.

Khan Bahadur.—Yes.

President.—Your estimate of Rs. 140 does not include rent?

Khan Bahadur.—No.

President.—Or land revenue?

Khan Bahadur.—No.

President.—What would be an average figure for rent?

Khan Bahadur.—Rs. 15 to Rs. 20 per acre.

President.—What would be the average land revenue?

Khan Bahadur.—Rs. 3-4.

Dr. Jain.—I wonder if you have got information about the consumption of gur in regard to Jullundur.

Khan Bahadur.—Jullundur proper or Jullundur District. I have no figures to show the total consumption. On an average it will be 16 to 20 seers a year per head.

Dr. Jain.—About 30 to 40 lbs.

Khan Bahadur.—People in Jullundur eat more gur than in most other places.

Dr. Jain.—Jullundur gur is the best gur in the Punjab?

Khan Bahadur.—Yes.

President.—Are you acquainted with the conditions in the United Provinces?

Khan Bahadur.—Not very much.

President.—You can't make any comparison between conditions there and conditions here.

Khan Bahadur.—Except that our cost of cultivation is higher than in the United Provinces on account of irrigation charges and labour.

President.—Is the cost of labour higher in the Punjab?

Khan Bahadur.—Yes.

President.—Under the tube wells in the United Provinces the cost of irrigation may be considerable. What is the cost of irrigation? Have you included that?

Khan Bahadur.—Yes.

President.—What is your figure?

Khan Bahadur.—In Jullundur it varies anything from Rs. 50 to Rs. 75 an acre.

President.—That is all lift irrigation?

Khan Bahadur.—Yes, lift in some places is 50 feet.

Dr. Jain.—We have had some figures given to us by the Director of Agriculture, Punjab, about the sucrose content and a comparison is made between the Coimbatore varieties and the local cane. For Lahore, it is said the sucrose content of Coimbatore variety is 10·2 whereas for the local cane the sucrose content is 10·9; similarly for Lyallpur for Coimbatore variety the sucrose content is 9·5 and 10·2 for desi variety. These figures show that the Coimbatore varieties are less favourable than the local varieties from the point of view of sucrose content. Is that your experience?

Khan Bahadur.—I do not think these figures could be true for the whole of the crushing season and again it would depend upon the time of crushing. You may be comparing two varieties, one which is early and another which is very late grown under different conditions. Desi is an early cane. If you crush a ripened variety, it will give you a higher sucrose content than that which is not fully ripened. I do not say that desi variety is bad as far as sucrose goes but its main defect is that it has high fibre

content and gives poor yields. I have tried this cane giving the best of attention and the best of treatment. It will not give more than 50 maunds of gur per acre while in the same field with the same treatment, 312 or 213 will give you anything about 100 to 120 maunds.

Dr. Jain.—So that in sucrose content there is not much difference.

Khan Bahadur.—No. Sucrose per acre in Coimbatore canes is much more than in Desi. Some canes of course give very high yields, for instance 213. I do not know which varieties they were talking about.

Dr. Jain.—The average may be misleading.

Khan Bahadur.—Yes.

President.—Can you tell us anything about diseases and insect pests in the area in which you are specially acquainted?

Khan Bahadur.—Diseases and pests are present in the area which I come from. Three years ago these were very bad. In fact we lost most of our crops.

President.—From what?

Khan Bahadur.—From pyrilla. After that we had not had the same conditions. We had only normal conditions, but the pest is still there.

President.—Is it disease or insect pest?

Khan Bahadur.—Insect pest.

President.—What about mosaic?

Khan Bahadur.—It is present in our canes but I have not seen any harm or damage done by mosaic.

President.—Are you making any investigations into insect pests.

Khan Bahadur.—We have got a man specially deputed to do this work.

President.—Recently?

Khan Bahadur.—He has been here for the last three years.

President.—Has any progress been made?

Khan Bahadur.—He has made some progress. These things spread so rapidly and the notice comes to us so very late that control is generally impracticable. When the crop has grown very high, it is not easy to deal with this pest. People really do not bother about pests unless the thing is actually doing harm and they see it openly. They haven't got a pest trained eye. But the greatest difficulty in dealing with pests is lack of co-operation and organization.

President.—What about the top-borer?

Khan Bahadur.—They are always there. They have not assumed any serious proportions so far.

President.—What about the damage by frost?

Khan Bahadur.—It comes occasionally.

President.—There is a certain amount of frost every year.

Khan Bahadur.—Yes. In Gurdaspur it comes almost every year. Every 5 years there will be quite a serious frost and once in 15 to 20 years the whole crop is destroyed including the seed.

President.—In the case of an ordinarily severe frost, what would be the loss?

Khan Bahadur.—The loss in the ordinary severe frost is that it stops crushing and the quality of produce is affected.

Sardar.—The quality of the gur is affected very much.

Khan Bahadur.—If you stop crushing, there is not much loss, also the loss will depend upon the dry weather following frosty nights. Bright hot days will cause most damage than cloudy wet days.

Dr. Jain.—What is your experience of ratooning?

Khan Bahadur.—Ratooning is getting very popular. I think in Jullundur 50 per cent. of the crop is ratooned.

Dr. Jain.—Once or twice?

Khan Bahadur.—They take about 3 ratoons. Some of the crops in my circle, I think, are the 8th ratoon.

President.—Has it not led to any disease?

Khan Bahadur.—I have not noticed anything.

President.—One opinion expressed is that you should not go beyond one ratoon.

Khan Bahadur.—The advantage in Coimbatore cane is that they ratoon well. Whatever you do, people will continue to ratoon and they can safely take 2 to 3 ratoons.

President.—What about the cost of cultivation and the yield?

Khan Bahadur.—The cost of cultivation in the case of ratoon crop is about Rs. 40 less than in the case of plant crop, because there is no preparatory tillage and no cost of seed.

President.—What about the yield?

Khan Bahadur.—Ratoon sometimes yields better than the planted cane with farmers.

President.—How much?

Khan Bahadur.—I could not exactly say, but it may be up to 10 per cent. better than the first ratoon and the yield does not deteriorate much in the second or third ratoon.

President.—In estimating the cost of cultivation, strictly speaking, you ought to take into consideration the cost of ratoon following the plant crop.

Khan Bahadur.—But all crops are not always ratooned.

President.—You have given a figure of Rs. 140.

Khan Bahadur.—Yes.

President.—Is it ratoon cost?

Khan Bahadur.—I am talking of the plant cost. In the case of ratoon crop it is Rs. 40 to Rs. 50 less than plant cane.

President.—When looking at the cost of cultivation, one might take a period of two or three years.

Khan Bahadur.—Yes. If everybody ratooned his crop.

President.—If a man ratooned his crop, and took a period of even two years, it would make a considerable difference in the cost of cultivation.

Khan Bahadur.—It would.

President.—What is the method of cultivation practised in the Punjab? Is it what is known as the flat or the trench system?

Khan Bahadur.—Generally it is the flat system; trenching is now gradually spreading, but I do not think it is even one per cent. It has just started.

President.—Does the trench crop resist frost better than the flat crop?

Khan Bahadur.—Yes. To some extent because it does not lodge and thereby escapes damage from rats also.

President.—Which varieties of cane are best frost resisting? Is there any difference in varieties?

Khan Bahadur.—There is lot of difference.

President.—Do the Coimbatore canes resist frost better than desi varieties?

Khan Bahadur.—Yes, some of them.

President.—Which is the best frost resisting variety?

Khan Bahadur.—So far 285 is the best.

President.—Better than 312?

Khan Bahadur.—Very much better.

President.—What is the reason for that?

Khan Bahadur.—I really could not say but it is an inherent character.

President.—You are going to send us your figures of cost of cultivation?

Khan Bahadur.—Yes.

President.—Have you any figures of cost of cultivation in the farm?

Khan Bahadur.—Yes, but they relate to small plots which are experimental.

President.—It would be of help to us in this enquiry.

Khan Bahadur.—I think the figures from outside would serve your purpose better as the farm figures are very high due to the experimental nature of plots.

Cost of cultivation in the Central Districts, per acre of plant sugarcane (for well-irrigated land).

	Rs. A.
<i>Preparatory tillage—</i>	
6 ploughings	9 0
Sohagings 3	1 2
Manuring (15-5) 10 tons	15 0
Cane seed (15 marlas)	18 12
Preparation of seed for planting (8 men)	3 8
Planting (1 ploughman and 5 labourers)	3 6
<i>After cultivation—</i>	
Hoeings 4 (32 men)	14 0
Sohaga after blind hoeing	0 6
<i>Irrigation—</i>	
Irrigations (14)	70 0
Tying (8)	3 8
Revenue	3 4
Total	141 14

Land rent is not included in the above. It is usually Rs. 16 per acre, but mostly the sugarcane-growers own land or grow it on Batai and in very few cases cash rents are paid.

Average yield—500 maunds of stripped cane.

Cost per maund of cane—4 annas 6 pies.

Average sucrose contents—9 to 12 per cent.

NOTE.—There has been no variation in the cost during the last seven years.

**(4) Evidence of Mr. KARTA KISHAN, Personal Assistant to the
Director of Land Records, Punjab, recorded at Lahore
on Monday, the 23rd August, 1937.**

President.—The only point we have to ask you about is the method of preparing the records. Are they prepared by you?

Mr. Kishan.—They are compiled in our office and officially passed by the Director of Land Records. The acreage figures are quite correct. The accuracy may be taken to be perfect.

President.—Is there any unsurveyed area?

Mr. Kishan.—No.

President.—So that we may take the acreage figures as correct?

Mr. Kishan.—Yes. Every field in the province is surveyed and entered in the records. As regards crop there are very few mistakes. There may be some inaccuracy as regards the hill tracts as regards the production of sugarcane.

President.—What is the yield?

Mr. Kishan.—With regard to that, we have to base it on crop cutting experiments and the system on which they are carried out is explained in Chapter 15 of the Punjab Land Records Manual. The results obtained on these crop cutting experiments are tabulated in our office. We reject all the abnormally good and had ones and take the fair yield for each district and then multiply that by the acreage. There is one thing: we do it on the sown area. In the case of sugarcane the failed area is not more than 3 per cent. Most of the cane is irrigated and with good irrigation and good manuring the uncertainty is much less in the case of sugarcane than in other crops.

President.—Are these experiments carried out every year?

Mr. Kishan.—They are always going on. They are carried out both by the representatives of the Agricultural Department as well as those of the Revenue Department and after the results are received, the Director of Agriculture and the Director of Land Records sit together and scrutinise the experiments and reject or accept according to the results of individual experiments.

President.—Do you maintain that you claim a fair degree of accuracy for your production figures?

Mr. Kishan.—I think so. While making enquiries we found that in the case of outturn of sugarcane we do not make any allowance for seed chewing and fodder.

President.—Can you give us an estimate of what these ought to be?

Mr. Kishan.—They might be about 12 per cent, altogether.

President.—We were told that the sugarcane fed to cattle alone might be as much as 15 per cent.?

Mr. Kishan.—In fact in the course of looking into these things for the Tariff Board I found this to be the case.

President.—Obviously you must make considerable allowance for seed and for chewing; a very appreciable quantity is chewed.

Mr. Kishan.—We are a bit too cautious in framing our estimates. They might be 12 per cent. lower than they ought to be. In the case of cotton we have found by experience that the amount of cotton actually produced and ginned at the mills is generally in excess of what we estimate and probably the same remark applies to sugarcane. These averages are used for assessment purposes so I think our estimates generally err on the right side.

President.—It is rather curious that no allowance has been made so far for chewing and so on. That is rather a very important factor.

Mr. Kishan.—Looking through the actual basis on which these estimates are made you will find that we have a very limited area, say 1/20th or 1/40th of an acre on which we base the estimates.

President.—About your figures for prices, what extent of accuracy do you claim for them?

Mr. Kishan.—I think they are fairly accurate though the arrangements, I think, are capable of improvement. Prices are recorded in the registers on the information supplied by bazar choudhries. With the growth of democratic institutions we find some difficulty because they are not paid for and sometimes officials have to go around the market and find out. The trouble is you can't always find records kept in every shop for all commodities. I feel there is certainly room for improvement there, but the prices may be taken to be approximately correct.

President.—Does the price of gur vary very much from locality to locality?

Mr. Kishan.—Yes. But there may be difference in quality. For instance the quality of gur produced in Jullundur is very superior and fetches a higher price.

President.—For what markets do you publish figures for gur?

Mr. Kishan.—Ambala, Amritsar, Gurdaspur, Sialkot, Lyallpur, Jullundur and some other places mentioned in Chapter 14 of the Land Records Manual. But these are the important ones.

President.—Price of gur varies very considerably from one market to another in those localities?

Mr. Kishan.—Jullundur gur is the best. Now the price has considerably gone down.

President.—Have you got any figures available for 1936-37?

Mr. Kishan.—I shall supply the figures later on.

President.—Do you record retail price of sugar in the Punjab? I want this information because sugar is becoming increasingly important. There is one general question I would like to put to everyone here. To what extent is sugar replacing gur in the Punjab?

Mr. Kishan.—To what extent it is replacing gur is very difficult to say. We know what the import of sugar into Punjab is and we also know the local production.

Mr. Macpherson.—More people are using sugar than they were using before. For one thing there is tea which is becoming popular and in every ceremonial function sugar is used because it is a sign of respectability to be able to produce white sugar rather than gur! But it seems to me that the consumption of gur has not gone down because there is a surplus too. In Rajputana they use gur, but in the Punjab so even in religious ceremonies and even chamars and other low class people use sugar now, where they used to cook rice with gur before.

Mr. Kishan.—In the Punjab at any rate sugar is rapidly replacing gur. When I commenced service 30 years ago in the villages it was difficult to find sugar but now wherever you go, you get misri and sugar. Naturally with tea it has found its way into the villages.

Dr. Jain.—Is there any considerable consumption of sugarcandy?

Mr. Kishan.—Not very much.

Dr. Jain.—Is sugarcandy a cottage industry in the Punjab?

Mr. Kishan.—No.

Mr. Macpherson.—When we say sugar is being used more and more in the villages, I do not mean that it is used for every purpose. For tea they

use sugar and for ceremonial occasions where they previously used gur they use sugar now, but I think in their own diet they still prefer sugar. In some of the central districts they put tea leaves, gur or sugar, milk and boil them and make a strong decoction which the family takes.

Mr. Kishan.—Since the soldiers returned from the last war they have taken more and more to tea and along with it sugar has found its way into the villages.

(5) Evidence of Sardar BEANT SINGH, Deputy Registrar of Co-operative Societies, Punjab, recorded at Lahore on Monday, the 23rd August, 1937.

President.—Have the Co-operative Department done anything in organising cane growing societies or cane supply societies or anything of that sort? Have they given any assistance to the grower or to the gur manufacturer?

Mr. Singh.—We have done nothing in the form of organised assistance to these people. All that we have done is to issue loans for the purchase of seed through co-operative societies. We had in view the formation of societies round about factories in Phagwara, Sonapat, Bhalwal and Gujranwalla. For that we required some staff—some inspectors and some sub-inspectors. We made our demand in connection with the same and did some propaganda. People were ready to form societies but Government were not able to give us money.

President.—Was that proposed from the excise duty?

Mr. Singh.—Yes. The object was to organise these cane-growers and to persuade them to cultivate improved types of cane.

President.—In the United Provinces that sort of work was done with the help of a grant to the province from the excise duty. You don't get anything.

Mr. Singh.—No, we did not get anything. We were promised first and we formulated some proposals but we were not given any money. They thought, perhaps that the sugar industry was in a state of infancy in the province and there was no experience. After the failure of the Sonapat factory, they did not consider it worth while spending money any more. Probably the excise duty drawn from the factories in the Punjab was also not much.

President.—What assistance has been given to gur making or open pan factories?

Mr. Singh.—Only some loans. Some Central Banks lent money for buying machinery.

President.—Centrifugals you mean?

Mr. Singh.—Yes. Some of them got it free of interest and some of them out of common funds to serve as demonstration. These centrifugals were purchased and they only worked for one year. Then the price of sugar fell. The molasses did not fetch any price. All these centrifugals were put up for sale. None of them is working at present. There were fifteen of them which could be purchased at any price. There was a slight rise in the price of gur and again this year the price has fallen. Consequently the area under sugarcane in the Punjab has contracted very much.

President.—Has any assistance been given by your Department to gur making?

Mr. Singh.—Nothing except loans to individual members to purchase sugar mills or sugar pans (boiling pans). That is the only help given and nothing more.

President.—I gather that the amount too is not considerable.

Mr. Singh.—No. They thought that they did not require much financial assistance. Sugarcane crushing mill does not require much capital. Five or six of them can join together and purchase a mill. It does not require much capital.

President.—Have you any scheme in contemplation at all?

Mr. Singh.—That is the only scheme. There is no scheme to organise them for the manufacture of sugar. If the mills in Sonapat, Phagwara or

Bhalwal continue to work, then there is a proposal to organise the cultivators for the cultivation of better varieties of cane with the help of loans.

President.—They call cane development societies in the United Provinces.

Mr. Singh.—Yes.

President.—That has been definitely decided?

Mr. Singh.—Not definitely decided yet

President.—The Co-operative Department, after Sonapat experience, has not done very much.

Mr. Singh.—No.

President.—In the United Provinces the Co-operative Department is definitely organising these societies and they are playing a very important part. Apparently the industry is different here.

Mr. Singh.—Yes, the conditions are different.

Dr. Jain.—I have no questions to ask you. But would you like to say anything yourself?

Mr. Singh.—The cultivator in the Punjab is very progressive. These people are introducing these selected canes of their own accord under the direction of the Co-operative Department. We have better farming societies and we are advising them to take to all these better varieties and adopt those methods that were advocated by the Agricultural Department. Every year the acreage under improved varieties has been increasing and all the old varieties have been largely given up all over the Punjab. The Coimbatore varieties have been cultivated and they are now aiming at gur making. That is simpler and in some places gur is so fine that it fetches the price of refined sugar particularly at Hoshiarpur, Jullundur, etc.

President.—Are there any particular names?

Mr. Singh.—No. It is called after the place in which it is made. The gur tract is between the Beas and Sutlej, also Ravi and Beas.

Dr. Jain.—Is that preferred to sugar?

Mr. Singh.—Yes, in some villages. Even in towns it is bought at the same price as sugar. It has got a special taste.

Dr. Jain.—Has it got more nutritive value?

Mr. Singh.—People say so. It tastes better. It is sold in packets now more and more.

President.—A good deal of gur is also imported from the United Provinces.

Mr. Singh.—Not for eating purposes. It is only imported by refineries.

President.—I understand that they have all closed down.

Mr. Singh.—Yes.

President.—Does the Amritsar refinery work this year?

Mr. Singh.—No.

Dr. Jain.—Is Pindi gur better than Jullundur gur?

Mr. Singh.—Peshawar gur is better.

Dr. Jain.—Is that the best in Northern India?

Mr. Singh.—Not now. So long as it was made from Pundia cane they thought that it was superior to any made in the Punjab. Since the introduction of the Coimbatore cane, the quality of gur is not the same as it used to be when it was made from Pundia cane.

President.—How long would it keep?

Mr. Singh.—It keeps for full one year, I mean the Pundia gur. The Coimbatore cane gur keeps well so long as there is no rain. During the rainy season its colour changes and the taste also changes.

President.—Do you think that it is the fault of the cane or due to the method of cultivation?

Mr. Singh.—I don't think there has been time to judge that. I should say that it is the prejudice of the cultivators.

President.—We have been told in some parts of India that where they use ammonium sulphate as manure the quality of gur deteriorates.

Mr. Singh.—Yes, that is also our information. I don't think that ammonium sulphate is used very much in the Punjab.

President.—Can you tell us whether the average cultivator borrows much for the cultivation of cane?

Mr. Singh.—I don't think he borrows much. Cane is not sown on a very extensive scale. It is only one acre out of 15 acres that is under sugarcane. For that he uses last year's crop. He does not require any special equipment.

President.—The reason why I am asking this question is that in calculating the cost of cane, interest on working capital may have to be taken into account. So, we would rather like to know whether in your opinion the general practice is to borrow cash.

Mr. Singh.—I don't think so: at any rate nothing as compared with other crops.

President.—That confirms what we have been told so far as this province is concerned. The cultivator may borrow money for the purchase of cane seeds, for manure if artificial manure is bought, for payment of rent, and so on but you do not think that he borrows.

Mr. Singh.—I personally think that in these districts people grow cane not so much for the sake of money. I am myself a cultivator. I don't think really sugarcane is a money crop here. Every second year at least it is destroyed to some extent by frost. Out of every three years two years are wasted. More or less it is mostly raised just to keep them busy and to give them work during the winter months. It serves as fodder to the cattle.

President.—Is a good deal of it fed to the cattle?

Mr. Singh.—Not only the tops but sometimes the whole cane will be used for this purpose.

President.—This is the only province where cane is fed to the cattle on an extensive scale.

Mr. Singh.—I know of villages where the whole sugarcane has been devoted to fodder. Not a single cane has been known to be crushed. A little quantity is used for chewing by children.

President.—Is a good deal of cane chewed in this province?

Mr. Singh.—A good deal. It is also eaten by jackals. It is a crop that is very much wasted in the field.

President.—Coimbatore canes are harder to chew.

Mr. Singh.—Some of them are not. Co. 290 is quite good.

President.—Co 213 is rather hard.

Mr. Singh.—Yes.

GOVERNMENT OF THE UNITED PROVINCES.

(1) Evidence of Sir WILLIAM STAMPE, Kt., Chief Engineer, Hydro-Electric Branch, recorded at Lucknow on Wednesday, the 1st September, 1937.

President.—There is one point which I would like to get cleared up. The Tariff Board propose to write a brief description—somewhat popular account—of each province. Of course, provinces vary and even parts of provinces and as regards the United Provinces for a popular account we were inclined—at least I was rather inclined—to divide the province into Western, Central and Eastern areas. Would that be in your opinion a fair division?

Sir William.—Yes, I think it would be. I thought that the division of the province into two parts would do but as they differ physically perhaps it would be better to divide the province into three divisions.

President.—With regard to Southern Divisions we should say they are not of much importance from the sugar producing point of view. Allahabad, Jhansi, Benares and Agra—these four Southern Divisions are not of much importance from the sugar point of view.

Sir William.—Absolutely negligible.

President.—I think there are only two factories in the Allahabad Division.

Sir William.—May I say one thing in this connection! At the present moment we have prepared a project which will, I hope, be placed before the Council in March next, if Government approve—it has been sent to Government already—for electric irrigation facilities in the south-east of the province and that will have the effect of bringing a certain amount of sugarcane under cultivation. Compared with the total it is so negligible that you need hardly mention it.

President.—We can mention it. That would be in the Benares Division, would it not?

Sir William.—It will affect both the Allahabad and Benares Divisions.

President.—What about Jhansi?

Sir William.—Nothing can be done. The soil is unsuitable; from the point of view of the climate also it is altogether unsuitable.

President.—Taking the descriptive paragraph, I had a talk with Mr. Kharegat this morning and he agreed that that would be a fairly popular division. So, in asking you questions can we take these areas in succession?

Sir William.—Yes, certainly. We have classified our own data into Eastern and Western but I can sub-divide it for you again.

President.—We still have an open mind. We may limit it to Eastern and Western.

Sir William.—I think the division of the province into Central Eastern and Western areas is better because the eastern part is entirely unirrigated and I do not come into the picture at all. I come in only with reference to Central and Western areas. I cannot answer questions about the Eastern part of the province, where there are no canals at all.

President.—Still about one-third of the crop is irrigated somehow.

Sir William.—Of course it does not come within the purview of the official irrigation because we have no canals. Still, I can tell you something.

President.—It is well irrigation.

Sir William.—Yes, it may also be capable of tube well irrigation. If I am given an opportunity I can tell the Board something. There are quite a number of tube wells already in that area.

President.—That is interesting. I think you can touch on it when you refer to it. Would you just give a brief description of these three divisions we have agreed upon beginning from the west?

Sir William.—The "West", of course, I know best because I spent my whole service in that area. From an irrigation point of view the west is very well served. On the western border dividing us from the Punjab we have the river Jumna. Our oldest and most profitable canal—the Eastern Jumna canal—takes off from Saharanpur and follows the left (east) bank of the Jumna down to Delhi. It is bordered by the Delhi Meerut road on the south, by the Hindon river on the east and the Jumna on the west. That tract is the Eastern Jumna canal tract which has probably the most intensive cultivation for sugarcane and has probably the highest intensive cultivation of any four canal systems I should think. I believe the old eastern Jumna canal dates back to the Moghul times. The next major river is the Ganges which, as the Board knows, leaves the hills at Hardwar and passes centrally through the province; from which we take off the Upper Ganges canal at Hardwar which runs between the Ganges and the Jumna. The upper Ganges tract is probably the largest, and, as regards intensive sugarcane cultivation, the second most developed tract. About 200 miles south, it runs into what is known as the lower Ganges canal which takes the remainder of the water out of the river at Narora and flows down to Allahabad where the Jumna and the Ganges meet. Between them these canals practically command the whole tract between the two major rivers except certain patches for which there is not enough water. We have recently developed the latter for tube well irrigation. The bulk of the upper tract between the Jumna and the Ganges, hitherto not commanded by river water, is now protected by tube wells as far south as Aligarh which is about 200 miles from Hardwar. We now have most of that area developed for sugarcane cultivation. I have given the figures in my note and in my answers to questions. Perhaps I need not quote them. But it is important to note that the tube wells have made possible the irrigation of the portions of the north central tract hitherto uncommanded by canals. Then passing eastward

President.—May I interrupt for a moment? What is the nature of the soil in that tract?

Sir William.—Speaking broadly, culturable and fertile, I should call it. It varies from good loam to light loam and in certain parts sandy loam. It is probably the richest soil in the province.

President.—Would you describe it as alluvial?

Sir William.—Yes, I should call it generally very fertile alluvial soil.

President.—That would meet the case.

Sir William.—It is the valley of the two rivers. There is no rock in it at all. Then passing eastward, on the east bank of the Ganges, that is the left bank, there was hitherto little or no canal irrigation until you came to the Sarda canal. Lately by means of the hydro-electric tube well scheme we have developed intensively three districts east of the Ganges river, viz., Bijnor, Moradabad and Budaun, which have been covered by a net working tube wells. There are 1,000 tube wells in that area and these command between them (1,000 acres each) roughly a million acres of which it is proposed that 120,000 acres will be irrigated for sugarcane. That is additional to the canal and tube well facilities on the west of the sugars.

President.—Has it been completed now?

Sir William.—It is completed. I saw the last well two days ago. The slump has delayed the development of the area very badly. Perhaps it is just as well. That the people could not develop cane here as fast as we intended to! Coming next to the Ram Ganga river, that takes out of the hills above Moradabad and there is a small canal system on that which commands about 100,000 acres of which 8,000 is under cane. That is comparatively a small system. Moving eastwards we come to a set of canals known as the Rohilkhand canal which takes off from various small rivers in

Western Rohilkhand just below Naini Tal. It is mainly Tarai land, has a high rainfall and is damp. Then we come to the great system known as the Sarda canal zone which takes off the river near Philibit. It is a canal with a discharge of 10,000 cusecs which works right away down to Barabanki in the east and as far down south as Unao near Cawnpore.

President.—Does it irrigate part of both Western and Central tracts?

Sir William.—The Sarda canal really commands the northern part of the central tract. Beyond that the next important river is the Ghogra of which the Sarda is a tributary. On that we have started an experimental canal which is operated by steam generated electricity which is the first of its kind. We generate 2,500 k.w. and lift 180 cusecs from the river by electric pumps. It is purely an experimental canal in the Fyzabad district. I mention it here because of its potential importance. This to my mind may lead to irrigative development of the Gonda Gorakhpur area north of the river. I mention the possibility of these electric tube wells with a definite purpose. There are many, at present operated by oil engines. We know that it is impossible for the ordinary cultivator—a poor man—to work an oil engine driven tube well. Unless you have some central agency for producing electricity on a large scale at cheap rates, you can only provide the tube well for the zamindar which is not the class which require State benefit. We want to benefit the poor cultivator. To do this you have to produce electricity on a very large scale and the only economic way you can do this in the central tract is by steam. I was therefore anxious that Government should try one of these experiments before I left the department, and it is going to work very shortly—that is the Fyzabad steam electric pumping canal. This is only the first stage of the Fyzabad scheme. The second stage, which the previous Government refused to sanction outright is a 60 lakhs scheme to embrace the bulk of the Gorakhpur and Baraich and Gonda districts. As the department gains experience, we can add generating plant and boilers. It is thus an experiment capable of expansion and as such I suggest to this Board that it has an important value because similar scheme can be promoted elsewhere. The nearer you go to the coalfields the cheaper the power will be: (I mention this here because you may be considering Bihar) and the closer the price will approximate to that of hydro-electricity. As we move eastwards, freight is obviously noticed and eventually we finish up close to the coalfields which will make it possible to pump from the lower Ganges, lower Sarda and other eastern rivers at cheap rates. That is why I attach importance to this experiment. While on this subject I might refer to the Chandausi station on the Gaungra Grid. It is about four times the size of the Fyzabad station. It has been constructed in 10 months and during the recent drought in the Ganges Grid area it supplied 6,000 k.w. which is sufficient for 750 tube wells. It enabled us to operate the tube well system with a semi-closed canal. Such plants are of importance not only as individual stations but also in combination with water power. The development of such power projects means that large areas of land that are at present looked on as impossible for sugarcane can be made sugar producing. If climatic conditions are favourable and irrigation conditions unsuitable, the latter can be improved by means of steam station or hydro stations. I might add that the east central tract where the Fyzabad canal is has to my mind an important sugarcane value. It is at present without scientific artificial irrigation at all. At present, simply by means of wells, jhils and tanks, 5 or 6 per cent. of the culturable part of the district is being irrigated for cane. In our project estimates we raised this proportion from 5 per cent. to 8 per cent. We hope to have a considerable increase of cane as a result of proper artificial irrigation. It is likely that if you can develop Fyzabad district in this way, you can develop Gonda and Gorakhpur on similar lines not from rivers but from tube wells as the subsoil conditions are favourable for tube wells. There are 50 or 60 tube wells operated already by oil engines I understand which can be converted to electricity and expanded. As I have not been east of Fyzabad my evidence will not I fear be of any value. Going eastwards, there are

Ballia and other districts which I have not explored and which are I believe capable of sugarcane cultivation if water is provided cheaply.

President.—What is the nature of the soil? You have given us a description of the soil between the Ganges and Jumna.

Sir William.—The soil in the central area is slightly heavier because it is further down the valley. There is a larger proportion of what we call *usar*. With the exception of that the remainder of the tract is very fertile. I was surprised at the fertility of the Fyzabad district. The density of the population is high—I understand it is only 100 per mile less than that of Belgium—or roughly 700 head per square mile. It must have better crop producing facilities and that is where I think an electric scheme can benefit the country by lowering the cost of production.

President.—We have heard a good deal of *that* soil?

Sir William.—I am afraid I do not know it. We have a soil called *domat* to which I think it corresponds. It is a very good soil. Turning to the south-east, that is the southern corner of the central section, you come to the Allahabad and Benares Divisions. There we have a new scheme known as the "Eastern Grid Project" which is before Government. This project if found favourable a further recommendation will bring several hundred thousand acres under irrigation and will provide cheap power in the small towns of the Allahabad and Benares districts. The estimated price of power is less than that of the Ganges grid so that the financial prospects of the scheme are hopeful. On the other hand the purchasing power of the people is probably less than half that of the west, so that until this power rises as a result of cheap irrigation it may be difficult to sell power even at lower prices than in the east. The effects of irrigation are rapid and I believe that as the purchasing power of the people rises they will be able to make use of electricity. An interesting point in the scheme is that it can be developed in stages. Eventually in the Vindhya hills to the south of this central section of the province vast quantities of water power which is at present going to waste every year can be economically developed, at a lower capital cost per k.w. and probably half the cost per unit.

President.—Is that area suitable for sugarcane cultivation?

Sir William.—I think we have allowed only 3 per cent. or 4 per cent. for sugarcane. Most of the people say we would get nothing but Dr. Higginbottom believes that he will get double the amount of cane that we have estimated.

President.—We are actually going to Allahabad to meet Mr. Higginbottom.

Sir William.—If you ask him what he thinks of the scheme he will tell you all he knows about it. He has not seen the latest developments but I am posting a note to him to-day. That is just a rough description.

President.—It is very clear.

Sir William.—I should like to represent the views of the cultivator more than those of the manufacturer. Being the head of the Irrigation Department we deal with millions of cultivators and Government can, I consider, deal adequately with the white sugar companies. The strong point I would like to make is that far too much consideration has been given to sugar and not nearly enough consideration has been given to gur. We can quote figures to show that somewhere between 75 and 80 per cent. of the cane grown in the United Provinces is turned into gur or country made sugar. If the subject were dealt with on democratic lines, the gur producer would thus have 4 votes to the 1 vote of the sugar manufacturer. I hope that Government will alter its policy, because hitherto the question has been mainly looked at from the point of view of white sugar instead of that of the gur man.

President.—This Tariff Board is giving very particular attention to the question of gur and in our report there will be one or two chapters devoted to gur.

Sir William.—I had the impression that the terms of reference to this Board were to examine the question of increase or decrease in sugar tariff.

President.—The Indian Sugar Mills Association in their representation say that the interest of the cultivator should come in first.

Sir William.—They often show their interest in a stranger way, if I may say so!

President.—We shall need some average figures of cost of cultivation on the different canal areas.

Sir William.—The irrigation rate on the Jumna Ganges and Sarda canal tracts which comprise 95 per cent. of the total is Rs. 10 per acre. That is the flow rate per year for the crop and Rs. 4 per acre lift where the cultivator lifts it himself.

President.—Is there much lift?

Sir William.—I should say about 15 per cent.

President.—We cannot go into all the details.

Sir William.—I should ignore it, because it doesn't really count. Take it at Rs. 10.

President.—On the tube wells?

Sir William.—The great point that you should emphasise here is the volumetric system. The cultivator takes as much water as he needs. He is himself the judge as to the number of waterings he require. He pays on the average Rs. 3-14-0, or pay Rs. 4 per acre for each watering consisting of 110,000 gallons. This is in the hot weather April to September. In the cold weather the cost is cheaper.

President.—How many waterings does he require?

Sir William.—It is entirely climatic. The advantage of this volumetric system is this. In the east where it rains more frequently, that is in Moradabad, Bijnor and Budaon they have taken on the average only two waterings. Their sugarcane has thus cost them Rs. 8 an acre. On the Western area they had rainfall this year in March. That saved them one sowing watering. They had one or sometimes two waterings in May and another in June. They thus give possibly two and a half waterings up to the break of the monsoon. Since then they have had an average of one watering, so that up to date their sugarcane in the west has cost them Rs. 12 to Rs. 15 per acre in irrigation.

President.—Rainfall is deficient in that area.

Sir William.—Somewhat deficient. In very dry areas they may have to pay Rs. 16 to Rs. 20 for sugarcane.

President.—Regarding tube wells, is the subsoil supply such that even if there were one or two bad years, it will still be sufficient?

Sir William.—This has been a very important problem. We had to examine it very carefully. When Lord Hailey was Governor, he didn't believe in the scheme at first. He frankly distrusted it until a few months before he left and then he allowed us to proceed with caution. We built 500 wells. When Sir Harry Haig came, he allowed us to go forward with the scheme subject to "safeguards". The first point raised was the question of the stability of the subsoil supply and then we appointed the best Geological Committee that could be secured in India. Their report has been published.

President.—We may take Rs. 10 as the average cost of irrigation under canals and under tube wells it ranges on the average from Rs. 8 to Rs. 16.

Sir William.—Rs. 8 to Rs. 10 in the east and Rs. 12 to Rs. 16 in the west. That is based on actual rainfall statistics.

President.—That is taking our three divisions.

Sir William.—I only spoke about the Ganges canal and tube well areas. In the Central Division the rate is the same (Rs. 10), but there are no tube wells. There are only tube wells in the Western Division.

President.—Have you made investigations into the cost of producing sugarcane and the cost of producing gur?

Sir William.—I can give no opinion on the question of cane from direct observation, but I have consulted Chaudhuri Muktar Singh, Lala Sri Ram's Farm Manager at Daurala.

President.—We met him in Daurala.

Sir William.—He is in a position to give you the actual cost of producing cane. He has done it both privately on his own farm and on a very big scale at the factory farm (1,200 acres) for which we electrified 16 or 17 tube wells.

President.—We are more concerned with the cost of producing cane by the ordinary small cultivator having one or two or three acres.

Sir William.—I have tried as much as any layman could. I have been baffled at every stage by the fact that I do not know what price to put on the cultivator's own labour. I consider that the Agricultural Department's figures may be misleading on this ground. They may put the whole family to weeding. They may weed all day. How are you going to price it?

President.—The Imperial Council found the same difficulty in their investigation.

Sir William.—I should say it costs 3.25 annas a maund. That is my opinion.

President.—What would you put the cost of transport at? Have you considered that?

Sir William.—We built a steam tramway which you might have seen. I was very anxious to get the system tried out. We borrowed Rs. 4 lakhs and built the railway working near Daurala. Its object was to halve the cost of moving cane over a distance of 24 miles. We made exhaustive enquiries as to the cost of carting by stopping carts on the roads and asking over 1,000 cartmen. Taking the average we found the cost to be one pie per maund per mile. That is the carting cost on pucca roads per maund. Our rate is equivalent to half of that, but we have been hampered by the vast amount of gate cane. As the amount of gate cane decreases, the outer places will come into their own, but I do not think, on my experience of that factory, that the time has yet arrived for the transport of cane over a long distance by light railways.

President.—What do you call long distance?

Sir William.—Between 6 to 18 miles we reckon as our zone of transport. Minimum is 6 and maximum 18.

President.—In Bombay Deccan all the factories have their own tramway system.

Sir William.—Do they?

President.—Yes.

Sir William.—I think if you had the zoning system it would work well.

President.—They cultivate their own cane.

Sir William.—Yes, it is very different when you start buying cane from others.

President.—You have used the word zoning. The Board is interested in that question. Have you any views on that?

Sir William.—My own view is that it is a theoretical desideratum which might work. If the factories had been there first and the cane grew up *ad hoc*, that would be all right, but I don't think it can work where the factories have come and have planted themselves down without due consideration either for the growing facilities at the time, or as they would become. They have been entirely changed in our eastern areas, because of the tube wells which have an enormous area of cane. As I pointed out there are few factories there. I raised this point at the United Provinces meeting of June 22nd, against zoning. Unless factories can establish themselves east of the Ganges, I submit these people will be left with their cane. So I consider zoning is inapplicable under the conditions now prevailing in the west United Provinces. I cannot speak about the Central Sarda area or the Gorakhpur

area. In general factories will not import cane from distant areas when they can meet their needs with local cane.

President.—For obvious reasons they would prefer gate cane.

Sir William.—You cannot impose a distant zone on the factory.

Mr. Rahimtoola.—I think you have dealt fully with regard to the various tracts of sugarcane, but I would just like to ask a few questions about costs. You have given us the cost as 3.25 annas per maund for an ordinary cultivator.

Sir William.—Yes.

Mr. Rahimtoola.—This is exclusive of the labour charges.

Sir William.—Not entirely. That is exclusive of family labour.

Mr. Rahimtoola.—That means cultivator's family labour.

Sir William.—That would have to be added. I think that it is impossible to say how much it is because one can never tell how many of these family people work and how much they get. I tried to calculate once and I found that of the people working two of them were nephews and two were boys and they got nothing at all.

Mr. Rahimtoola.—I only want to get at the facts. For our purposes of calculation we will have to arrive at a fair price to the grower. Therefore we want to know how you have arrived at the price which you just now gave us as an indication of the cost to the grower.

Sir William.—I should say that 3.25 annas contains the average amount of labour that he puts in. If you put a value on it, that would be about the price.

Mr. Rahimtoola.—Including all labour?

Sir William.—That is my opinion.

Mr. Rahimtoola.—What have you calculated approximately as the wage per man, woman and child?

Sir William.—I calculated that it would be 5 annas for a man, 3½ annas for a woman and 2 annas for children which is rather over the mark, but that depends again on the season.

Mr. Rahimtoola.—This labour is generally for weeding, ploughing, manuring, etc.

Sir William.—Ploughing, carting manure to the field, taking it from the cart and spreading it in the field, weeding and watering.

President.—Is the method of cultivation in this area mainly what is generally known as the flat system as against the trenching system?

Sir William.—I should say one-third or less is trenching and two-thirds flat.

President.—Is the trenching system extending?

Sir William.—Yes, under the influence of the Agricultural Department in the demonstration tracts.

President.—Trenching is preferable, is it not?

Sir William.—I have been told it is. I only know that big zamindars are running their farms on the trenching system. They will not do unnecessary work, so I presume it is necessary.

President.—Possibly different considerations apply to the non-irrigated area.

Sir William.—As they would have to conserve water they might trench all the more.

President.—I think in Bihar they actually trench less.

Mr. Rahimtoola.—Have you included in this the cost of irrigation?

Sir William.—That is including canal irrigation.

Mr. Rahimtoola.—Have you included any interest that the cultivator has to pay for his borrowings?

Sir William.—I did not put that in, because I found it very difficult to ascertain that figure. Some of these agricultural banks make it easy. These prices include normally the amount that he has to pay on his advances. What they generally do is to take advances from khandaris and operate on that just like a Bank account. I am not sure that they charge interest. They take so much crop at the end of the season. It would of course put the price up if he has to borrow and pays interest.

Mr. Rahimtoola.—If he takes the cane to the factory, then a certain amount of interest has to be allowed.

Sir William.—Then the price of cane is affected. I have always argued against the minimum price. Those considerations are very difficult to evaluate.

Mr. Rahimtoola.—But you will agree that in the interests of the cane-grower some minimum price is necessary.

Sir William.—Yes, if you can enforce it.

Mr. Rahimtoola.—It can be enforced by legislation.

Sir William.—Then, the situation is created as it happened this year. In many cases factories promised to take cane. It was laid down under a promise that they would take cane from certain areas. They afterwards found that they could get plenty of gata cane and so they turned round and said that they would not take it. At that time the bullock driven crushing plants (Rohus) had been allotted for the season. They could not produce these crushers at short notice as they were all hired out. The result was that the grower was left with his cane standing in the field.

Mr. Rahimtoola.—The factories' point of view was that the situation was entirely changed due to the imposition of the excise duty.

Sir William.—I don't think that that is true. I do think that even with that extra duty the factories could have kept their agreements with the cultivators, but they did not. They used this argument as a sort of lever and got the Government to reduce the price.

Mr. Rahimtoola.—Do you know how many factories made profit?

Sir William.—I know Daurala made very heavy profits.

Mr. Rahimtoola.—For 1936-37?

Sir William.—Yes, I know it has.

Mr. Rahimtoola.—Do you attribute it to the fact that the factory got cane cheaper than the price fixed by the Government.

Sir William.—The duty and the price of cane were changed at the last minute and that enabled them to work on big profits till the end of the season.

Mr. Rahimtoola.—If the price had remained stationary and if they had to pay the high excise duty, do you think that they would have made profits?

Sir William.—I do think so. Allowing for the credits and debits—lower price on the one hand and higher duty on the other—I think they might have made big profits. Some of them said so.

Mr. Rahimtoola.—The overwhelming evidence is to the contrary. So we want something more than a mere statement. It is a very important point from the Board's point of view when they are asked to fix the fair selling price for cane.

Sir William.—I cannot say definitely that they made profits except that they openly talk about the profit made at Daurala.

Dr. Jain.—Daurala may be an exception.

Sir William.—It is an extremely well run factory.

Dr. Jain.—You don't like to generalise from that.

President.—Arising out of that question, are there malpractices by the factories or factory contractors by which the cultivator suffers?

Sir William.—Taking it on the whole, I should say they are tolerably fair. Some of them are bad, their servants were very bad, but they are getting better. The cultivators are aware of their powers.

Mr. Rahimtoola.—What percentage of the area is under tube wells and what percentage under canals?

President.—Can you give us for the western area?

Sir William.—Almost exactly one to five. That will change slightly in favour of tube wells later on. It will go up when the tube wells are fully developed.

Mr. Rahimtoola.—The tube well rate is the actual rate charged by Government for using the water.

Sir William.—That is the price of the water. I have given you the charge per acre.

Mr. Rahimtoola.—It is about Rs. 4.

Sir William.—It is not bought that way. It is bought at the rate of 3,550 gallons for 2 annas 3 pies.

Mr. Rahimtoola.—You have calculated on the basis of an acre.

Sir William.—We have taken 110,000 gallons for each acre.

Mr. Rahimtoola.—The cultivator has to draw the water by himself.

Sir William.—He buys it at the well in terms of electric units.

Mr. Rahimtoola.—How does he get water?

Sir William.—At each tube well there are usually three channels commanding the tracts, called A, B and C. If a cultivator is on A, he goes to the operator and says "I have 3 acres and I want 333,000 gallons" or 10 hours supply at the meter when those 10 hours are up, the pump is stopped.

Mr. Rahimtoola.—Does the cultivator know that?

Sir William.—He usually calculates in hours. He has got hold of the word "unit". He knows exactly what a unit is in terms of water. An acre needs 27 units. He buys 27 units and he knows exactly where he is.

Mr. Rahimtoola.—Is there no difficulty?

Sir William.—Sometimes something "passes" but not very much at present. We are trying to prevent it.

Mr. Rahimtoola.—Two or three people may want water at the same time.

Sir William.—In such cases we have an A, B, and C Roster. At every well there is a roster or time table.

Mr. Rahimtoola.—Is this in addition to rain water?

Sir William.—Yes, this requirement is based on the actual rainfall figures for the last 30 years. The total water required for the crop during the hot weather period is 27 inches and we deduct the average rainfall that has fallen in the period. The rest is supplied by the tube well.

Dr. Jain.—You have given 3.25 annas as the cost of cultivation. Is that the average for the canal area?

Sir William.—Yes, as far as I have been able to compute.

Dr. Jain.—Does it differ from area to area?

Sir William.—Labour is 20 to 25 per cent. cheaper in the east than in the west.

Dr. Jain.—What be the average for the two areas?

Sir William.—3.5 annas in the west and 3 annas in the east, I mean central. There is no irrigation in the east according to the President's division.

President.—Perhaps you would now like to elaborate your views on gun?

Sir William.—I won't repeat what I have called the pessimistic view mentioned in this note. I submit that if the gur question can be satisfactorily solved, we do the most good to the sugarcane cultivator because obviously it is on gur where most of the cane goes. Last year we bought on our experimental account 12 crushers mostly Indian made—Kirloskar Bros.—which crush 25 maunds an hour each. The difficulty has been to arrange a system under which these may be operated. We held conferences in the last three months in three districts, *viz.*, Budoan, Bijnor and Moradabad. At these meetings several hundred cultivators were present. What they themselves recommended to me were village societies. We shall buy the crusher and let it out to them. Government will provide not only the crusher but also the mistri or operator mechanic to keep it in order. He will visit them periodically. These crushers will be operated on the off peak load principle that they will take current at night when there will be no demand for it, at cheaper rates. The principle thus is that Government will own the crusher and let it out to the villagers in groups providing an operator to see that it is properly mechanically worked. The groups of cultivators—we may call them co-operative societies—will have to work the crusher between them for a minimum of 1,200 hours in the season. That is an approximate computation. Anything less than 1,200 hours which is approximately the length of the season (calculated at the rate of 12 hours a day for 100 days) will not be sufficient to cover the overhead charges. The yearly charge of interest and depreciation has to be earned in a short season hence the plant must be intensively worked during that period; otherwise we cannot get the money back. We have worked these experimentally and intend to publish a report during the coming cold weather.

President.—If you could send us an advance copy of the report or a note on that, it would be helpful.

Sir William.—I shall send you a copy of our note which we sent to the last Government.

President.—That will give us the figures.

Sir William.—Yes.

President.—When you speak of gur, are you strictly speaking of gur or are you thinking of making sugar by the open pan process on a co-operative basis?

Sir William.—I tried deshi sugar making by the open pan plant and it was not a success, but various private zamindars have succeeded. We spent two lakhs of rupees on a small sugar factory in Bijnor district which failed to cover even our working expenses. We bought a 60-ton vacuum pan factory with crushers and made white sugar at about Rs. 8-4-0 per maund. When the price fell below that we went out of business. The average price of cane was then As. 5-3 per maund. It was an attempt to see whether the zamindars would be likely to make a success of such plants.

President.—I am talking of open pan.

Sir William.—In my opinion an open pan factory cannot be made to pay with sugar at its present price.

President.—What about khandsars? Is there any future for them?

Sir William.—Several men whom we know have khandsari systems in Rohilkhand and they seem to be thriving.

President.—We have been told that the khandsari industry has decreased from 200,000 to half that figure.

Sir William.—That is probably correct. People who want sugar want white sugar; they do not want khandsari sugar. The factories are bringing their prices down and undercutting khandsari sugar.

Mr. Rahimtoola.—On page 4 you have given us the figure of consumption of gur.

Sir William.—I have got a graph here (explained with the help of the graph). What we have done in the graph is this. We had the price of gur plotted from year to year for the last 20 years against the sugarcane irrigated in United Provinces.

Mr. Rahimtoola.—What is the percentage of sugarcane in the western tract compared to the whole of the United Provinces?

Sir William.—25 per cent.

Mr. Rahimtoola.—Sir William, you are taking a very keen interest in the cane-growers. At what price do you think they would be induced to sell to the factory?

Sir William.—They will be satisfied with 4½ annas, but they will be very happy if they got 5 annas.

Mr. Rahimtoola.—At present, according to you, about 10 to 25 per cent. of cane is being utilised by the factories, therefore, if there was a good price for gur and if according to you the department is making efforts to reduce the cost of production of gur, then people would rather make gur than sell the cane to factories, so that the future of the sugar industry is rather gloomy unless they pay a fair price for the cane?

Sir William.—A mistake has been made so far in that there have not been enough statistical data to show the relation between the price of sugar and gur.

Mr. Rahimtoola.—We have been told that the cultivator sells cane to the factory according to the price which he is able to obtain for gur.

Sir William.—That is partly true. If the price of gur goes up in Meerut the factory will not get any sugarcane at all, and that made Lala Sri Ram start a farm of his own at Damala because he was determined to have a reserve of cane in his back garden so to speak.

Mr. Rahimtoola.—What price you think it would be attractive for the cultivator in order to induce him to sell his cane to the factory rather than convert it into gur?

Sir William.—Our cultivator is a queer chap. He does not look far enough. He is often defeated by the fact that if the factory shuts down in January or February then he cannot make gur and that is the reason why in my opinion the Government crushing system will be helpful. That would ensure him making a certain amount of gur. The Industries Department should organise gur plants of the deshi type so that you won't have the unfortunate catastrophe you had this year of factories refusing to take cane late in the season.

Mr. Rahimtoola.—Do you favour the scheme put forward the other day that factories should take 75 per cent. of the cane?

Sir William.—I asked what would happen if they did not take it and they did not answer the question. They are not bound by statute and I don't think you can force them to take the cane if they shut down. I know what their maximum costs are; I know it cannot exceed Rs. 1-8-0 per maund of sugar I mean the manufacturing charges excluding cane and excluding interest and overhead charges. I am sure you can get at their costs.

Mr. Rahimtoola.—The cost of cane is about 60 per cent. of the cost of production of sugar.

Sir William.—That we can check. You have the evidence of the cultivators and therefore you are in a position to judge the veracity of the figures given by the manufacturers.

Mr. Rahimtoola.—Would you consider As. 4-6 to 5 annas a fair average to take for the grower?

Sir William.—I would say that if they get As. 4-6 on the average without any reduction for mileage they will be very willing to supply it. I think he would be very happy if he were guaranteed 5 annas at the gate. That will save him the trouble of making gur. That is my experience.

Dr. Jain.—There is only one other point in regard to gur. Do you think there is a possibility of exporting gur?

Sir William.—I have not studied that, but who is going to do it and where?

Dr. Jain.—To England for refining sugar.

Sir William.—I have never seen sugar going abroad so I have never thought of gur.

Dr. Jain.—You had a scheme for getting funds out of the sugar excise duty?

Sir William.—We did get something. The Agricultural Department and ourselves started a sort of mutual co-operation for better agriculture all over the tube well area. That money came out of the sugar excise duty. It was allotted by the Government of India to the local Government and we got some of that. I will give you an instance of how our schemes are treated. I asked the late Government to let us buy 12 gur plants but that item was cut out of the last budget.

**(2) Evidence of Mr. P. B. RICHARDS, Director of Agriculture,
United Provinces, recorded at Lucknow on Wednesday,
the 1st September, 1937.**

President.—Mr. Richards, how long have you been the Director of Agriculture?

Mr. Richards.—About two years in all.

President.—Have you specialised particularly in sugarcane?

Mr. Richards.—No. My substantive post is that of Entomologist but as such I have had a good deal to do with cane; and as the senior research officer in the department and as officiating Director I have taken care to know what is going on in research work.

President.—We are particularly interested in this side of the matter. As a preliminary the Tariff Board will probably have a short descriptive paragraph for each province and as far as possible divide up the provinces according to differences in conditions and so on.

Mr. Richards.—On climatic and subsoil water conditions we should regard as distinct sugar areas the north-western tract, that is the upper part of the Ganges and Jumna doab; the Rohilkhand area as far as Sitapur, which includes Bavar and Tarai submontane tracts; and the eastern area which includes Gorakhpur and adjacent cane-growing districts. This seems to be the natural grouping, from the point of view of rainfall and irrigation, of the districts in which sugarcane is grown extensively.

President.—Roughly speaking the proportion of irrigated to unirrigated is 2 to 1?

Mr. Richards.—Yes, but that of course does not mean irrigated by canal. Much of the irrigation is from wells.

President.—We come next to the important question of cost of cultivation and yield per acre. In answer to Question 4 you have given us some figures. Can you give us some details of the costs?

Mr. Richards.—It is difficult to get a figure which really represents the cost of cultivation. If you take only out of pocket expenses it is very small but if you calculate the up-keep and interest on working capital and labour, at what figure are you going to put that? Page 15 of the Bulletin issued by the Agricultural Department contains some detailed costs. Those are the actual farm expenses at the Shahjahanpur Research Farm allowing supervision charges at 10 per cent. The total expenditure for one acre of sugarcane is shown as Rs. 173 on an yield of 800 to 1,000 maunds. That is when sown in trenches; sown on the flat the cost is slightly less. At the bottom of page 15 we have given figures for average cost of cultivation on flat to an ordinary cultivator in Rohilkhand which is put at Rs. 70. That does not include cutting the crop, but merely the crop standing on the field. The details of cost of cultivation of sugarcane per acre obtained from some villages in the Imperial Council of Agricultural Research and Indian Central Cotton Committee's joint enquiry give totals of Rs. 105-15-0, Rs. 111, Rs. 78, Rs. 114, Rs. 96, Rs. 77, Rs. 80, Rs. 142, Rs. 82 and Rs. 133 in the districts of Gorakhpur, Philibhit and Moradabad and the yield varies between 210 and 400 maunds per acre. The lowest cost of production of cane was 4 annas 11 pies and the highest was 6 annas 3 pies.

President.—Does that allow for the cost of transport?

Mr. Richards.—That includes transport and marketing.

President.—What do they allow for that?

Mr. Richards.—Rs. 14 to Rs. 28; cartage is generally estimated to be one pie per maund per mile.

President.—It doesn't give these details;

Mr. Richards.—No. They will probably be available in the Report of the Enquiry when it comes out.

President.—Do you think that on these figures any reliance can be placed?

Mr. Richards.—I think they may present a comparative picture based on a uniform method of estimating costs of one province as against another. There are a lot of calculated items which do not enter into the cultivator's consideration, but are required to make up a cost account.

President.—Have you allowed for interest on working capital?

Mr. Richards.—Yes and also depreciation. I have with me another set of figures from the cost of cultivation enquiry which I did not include in my written evidence. They show that at the time the enquiry was made in the Meerut Circle the average cost of production per maund was 5 annas 7 pies. That is probably under canal irrigation. There may be a little under tube well irrigation. For the Bareilly Circle the average cost is 3 annas 7 pies. For Gorakhpur Circle the average cost is 4 annas 5 pies. I have another set of figures for Bareilly where the cost is given as 3 annas. The variation in cost in individual villages is from 2 annas 9 pies, which is the lowest figure given, to 6 annas 11 pies in one village. These are on the same basis of calculation.

President.—Do you know whether these figures include the cost of transport?

Mr. Richards.—They do.

President.—There are two methods of cultivation, I take it, the flat system and the trenching system.

Mr. Richards.—Yes.

President.—In what proportion are they in the Province?

Mr. Richards.—Trenching is of comparatively recent introduction, and the proportion is therefore not great.

President.—Sir William is going ahead in the areas in which he is concerned.

Mr. Richards.—There has been steady progress from the data of the last three years at our farm at Muzaffarnagar, there is no difference in outturn between the flat system and trenching so long as the spacing is the same. In any new development we are not now encouraging the trenching system.

President.—It has been suggested to us that the cost of cultivation is rather higher on the west and tends to decrease the further east you go speaking broadly.

Mr. Richards.—That is so. The cost of cultivation per acre is markedly higher on the west. That is not only a matter of standard of cultivation, but also a matter of irrigation.

President.—Is the yield higher?

Mr. Richards.—Yes. Where cultivation is good, the yield is higher in the west of the province.

President.—Broadly speaking the cost of cultivation is more in the west and the yield higher.

Mr. Richards.—Yes.

President.—Speaking generally I believe it is correct to say that the western area is much more liable to frost than the eastern or central.

Mr. Richards.—Yes. Portions of the central area are also liable to frost.

President.—Could you tell us something about the position in regard to ratooning in the province?

Mr. Richards.—Up to the present we have had no separate records made by the Revenue Department of ratoon cane and plant cane. Ratooning has definitely increased in my opinion during the last two years. That is natural because with the price of cane dropping against his expenditure

on the crop, he hopes to get something back in the long run. There are some growers who look after ratoon well and they get a good yield out of ratoon. The majority of the growers, however, especially in view of the fall in price, tend to leave ratoon to chance and I gather from the Chief Engineer, Western Canals that that has been much more so this year than before. Even good cultivators in Moradabad and Meerut have not generally taken the trouble of cultivating and manuring ratoon, and as far as possible they have not to give water.

President.—On the Bombay side you know the factories cultivate a good deal of their own cane.

Mr. Richards.—Yes.

President.—And they are rather inclined to take the two crops together the plant crop and one ratoon and strike an average. That is another way of arriving at the cost of cultivation.

President.—Would it be fair to take the plant and ratoon together and divide it by two?

Mr. Richards.—If one were ratooning as a general practice, that would be correct.

President.—Is the extent of ratooning so much as to justify that line of approach?

Mr. Richards.—The yields that we have got for ratooning are given on page 22 of the bulletin. There are occasion definitely when ratooning gives a man bigger profit than the plant crop; especially in the first year. It is not a policy which we encourage, because of the risk of next damage to the new cane crops.

President.—In regard to the plant crop in some parts of India we have been told that some allowance ought to be made for the residual manure, presuming another crop is grown after cane crop. In fact on the Bombay side we were told with the growing of cotton crop following a plant crop, the yield is double without extra expenditure.

Mr. Richards.—Yes. There must be some residual value if the plant cane has been heavily manured, and if no ratoon is allowed. After heavy manuring for cane, if one grows cotton the effect on growth is often very marked, sometimes it is more vigorous than is desirable.

President.—Conditions in Bombay and United Provinces are different. As you are no doubt aware the practice in Bombay is that they go in for heavy manuring and therefore the residual manure is much more valuable.

Mr. Richards.—In my opinion heavy manuring is neither practicable nor desirable in the United Provinces. The optimum is somewhere in the neighbourhood of 80 to 100 lbs. nitrogen an acre. Heavy nitrogen manuring tends to lower the percentage of sucrose.

President.—In answer to Question 5 you say: "I consider annas four per maund, or half the value of the sugar produced per maund whichever is greater, would be a fair price".

Mr. Richards.—I put 3½ annas as the minimum. In my answer to Question 4 I have given the cost of cultivation and the yields as provided by my Deputy Directors. Personally I think those yields are above the actual averages obtained, but even taking the value of the average crop produced, the cost of cultivation on an average for irrigated crop is Rs. 71. The value of crop is Rs. 108. That leaves a balance of Rs. 37 which is not an exorbitant return. With unirrigated cane the average cost of cultivation as given by my staff is Rs. 58 and the yield is 320 maunds. At the rate of 4 annas it comes to Rs. 80 leaving a profit of Rs. 22. If cane is delivered at the factory at 4 annas, much of the profit will disappear. Actually at these prices I am quite convinced with the same labour and with the same manure the cultivator will do better with many other crops. If the price falls below 4 annas—no matter what the price is—there will always be a certain amount of cane in the province. Even

though it shows the cultivator no profit, it gives his animals rest while the land is doing something. The bullock power and man power are thus available for other cultivation. That is one very important factor in the growing of cane in the United Provinces. He has to grow cane even when he knows that it doesn't pay him.

President.—That is for the cultivator who works himself and works his family.

Mr. Richards.—Yes and his own bullocks.

President.—You favour a graduated scale of minimum prices for standard varieties of cane.

Mr. Richards.—We haven't got that worked out.

President.—Please see the last sentence in your reply to Question 5. My meaning appears to have been that this graduated scale had not yet been worked out in detail. I am definitely in favour of a graded scale for varieties of lower or higher factory recovery than the standard canes for this area.

Mr. Richards.—Our standard cane has been Co. 213 which under very favourable circumstances will go up to 18 per cent. sucrose in juice for a brief period in April and then it drops rapidly. An additional one per cent. sucrose in juice means a great deal to the factory. As we are now developing a number of canes which are during the period at which they are at their best very superior to Co. 213—from November up to middle of May—it certainly does appear that a factory which is prepared to pay 4 annas for Co. 213 should be very happy to get the cultivator to grow the other canes and gain in sucrose content.

President.—The factories raise objection on the ground that it would be very difficult to distinguish between different varieties of cane.

Mr. Richards.—That is generally speaking not so. It would be difficult for a raw hand to distinguish but in the case of most canes it is perfectly easy for anybody who has had some experience to distinguish one from the other. There is some difficulty in respect of Co. 331 and Co. 213 and complaint has actually been made about them. It is better that this question is faced. I do not look upon this sort of objection as being of any consequence inasmuch as one visualises that the factories will ultimately organise their own supply of cane. If they do so, and even then this difficulty arises, there must be something wrong with the organisation for purchase and supply. I don't think that there can be any difficulty when the cane supply is better organised.

President.—The Tariff Board have to consider the position in the next 8 years, that is up till 1946. Do you think that in that period there is a reasonable probability for considerable improvement in the quality as well as the quantity of cane so as to bring about a reduction in the cost of production?

Mr. Richards.—I should think that within that time, taking the average of the seasons we may be able, by organising the cane supply, to increase the recovery by about one half to three quarters per cent. better than it is now. That will bring our recovery figure to 10½ per cent. There is no likelihood with the type of cane that we have of being able very materially to increase the sucrose content. There are some standard canes which at the peak have about 18 per cent. to 19 per cent. sucrose in juice and there are some new canes having just over 22 per cent. sucrose in juice which would give a recovery of more than 11 per cent., but I don't anticipate that in general. As to the cheapening of the cost of cane, that is a matter of concentrating cane development on the areas which are most suitable for growing cane and can produce either a high yield with costly cultivation or a low yield at the lowest cost possible, to the factories. If cane is concentrated in an area not more than 12 miles round the factory with an average of 6 miles from the gate, by development it may be possible to raise the average yield to 500 or 600 maunds. It will perhaps

then be possible to produce at about 3 annas per maund. Even that will mean 3½ annas at the gate.

President.—Roughly it will be 1½ annas cheaper.

Mr. Richards.—Yes. It is only possible by growing all the cane we require on a very much smaller area in which cane can be developed to the best advantage.

President.—By factory zones you mean?

Mr. Richards.—Not necessarily. I mean conditions of soil, climate, irrigation, etc. In Moradabad, even now on good cultivation a yield of 1,100 maunds is obtained.

President.—Speaking of soil, is there much difference, broadly speaking, between the western, eastern and central areas?

Mr. Richards.—The western area is generally better for sugarcane. In the east it is much more a matter of quality of cultivators. I do not see any reason why the east should not be made as suitable as the west.

President.—The cultivators in the west are generally better.

Mr. Richards.—Yes.

President.—They are more experienced, are they not?

Mr. Richards.—Yes, for generations. I have failed to see any possibility of being able to produce cane for 2 annas. We have produced cane for 2 annas on a very highly manured area at the Muzaffarnagar farm. The cultivator cannot possibly get that.

President.—Have you any experience of Bihar at all?

Mr. Richards.—No.

President.—One last question: your standard cane may be taken to be Co. 213. What further improvements can you have on Co. 213.

Mr. Richards.—You will find a list of our standard canes in Appendix B, page 104 (shown) of the bulletin.

President.—Of course, we have seen the farm.

Mr. Richards.—On page 102, you can see the results of our trials and our standard yield for 1932-33 and 1935-36. The best canes are those shown in italics. There are a lot of them. Some are extremely good and undoubtedly will replace many canes which we are now growing. The sucrose and purity figures for some of the canes in Muzaffarnagar are given. Taking the standard cane Co. 213 at its best, the sucrose percentage is 18.17 with a purity of 87.8. For Co. 411, the sucrose percentage is 18.9 with a purity of 90.3 and as regards Co. 313, the sucrose percentage is 20.28 with a purity of 89.5. There are a number of canes which give us a sucrose content of 18 per cent. between February and May. Co. 385 which is a very good cane gives us a sucrose content of 18.16 per cent. on 22nd February at which time Co. 213 gives us only 15.68. Co. 385 gave us a sucrose percentage of 14 on the 2nd November. There are some better early varieties. 508 which is under trial this year is a very promising cane from the point of view of sucrose. It started with a sucrose content of 13.2 per cent. and a purity of 85 per cent. and by 16th November the sucrose percentage was 18.94 with a purity of 91 per cent. On the 10th May sucrose was 20.38 per cent. and purity 91 per cent. The yield is unfortunately not very good being only 586 maunds. Even so, as late as 26th May, the figures are 22 per cent. sucrose and purity 92.9 per cent. If that cane proves as good as it looks and if the yield goes up, it will replace probably a number of varieties. At present it has a yield of below 600 maunds. If the factory wants to start crushing with this cane, it must be prepared to pay the cultivator sufficiently more to encourage him to grow it irrespective of the low yield.

President.—The factories complain that such a cane is not good from the factory point of view. It may be good from the cultivator's point of view.

Mr. Richards.—Yes. We have in view the drawing up of plans for the development of particular canes suitable for particular areas which may

give maximum sucrose for each month in the crushing season. For that we propose one small committee for each of the three important tracts to consider the data, both ours and the factories', in regard to the performance of cane and to suggest the proportion they want. We hope to be able, through the help of factories and staff provided by Government, to organise cane-growing. Along with that in my opinion must come the question of paying something more than the minimum price. I think that our minimum price should be based on the best cane and there should be a reduction on that for other canes which do not come up to that standard. That is my view.

President.—As you probably know, in Java owing to the introduction of POJ 2878 there is almost a revolution in three years in the cost of production in the factories. Do you think such a wide change is possible in India?

Mr. Richards.—I do not see any very great likelihood with the hybrid canes we have to deal with. That is a class of cane which is hardly expected to thrive in a climate where we have a very hot summer and severe winter. Perhaps in other areas where the conditions are ideal for noble cane, but I see no chance for noble canes in Northern India; we cannot grow that.

Mr. Rahimtoola.—On pages 15 and 16 of your bulletin, you will notice at the end of the statement of costs that you have given, you have calculated the price of 5 annas a maund and have stated that the profit for the cultivator in the Shahajahanpur area is Rs. 124 and for the other areas it is Rs. 70. It works out to 2½ annas per maund with an yield of 850 maunds. That means you have taken practically double the price. Is it in view of the poor yield or the profit that he gets from other crops?

Mr. Richards.—Actually this bulletin was prepared at the beginning of 1936 when nobody imagined that sugarcane was going to drop to below 5 annas. I have roughly calculated that instead of showing a profit of Rs. 70 on 450 maunds, 4 annas shows a profit of Rs. 41-14-0, As. 3-9 shows Rs. 34-14-0, As. 3-6 shows Rs. 27-14-0 which is much nearer what the cultivator is getting.

Mr. Rahimtoola.—I wanted to know whether in the statement you have calculated the profit which the cultivator gets on other crops.

Mr. Richards.—You must remember that sugarcane is on the land for two rabi seasons, and this is taking the two crops together.

Mr. Rahimtoola.—Shall we say Rs. 80 a year taking the two crops together?

Mr. Richards.—This profit is obtained on his sugarcane which stands on the land a whole year. The land has to lie fallow or be under green manure during the previous kharif season. During the previous rabi in any event it must lie fallow.

Mr. Rahimtoola.—We are now examining the question from the manufacturers point of view. The sugarcane cultivator has got two alternatives; either he turns the cane into gur or instead of growing cane he grows another crop. When you have calculated the profits have you taken into consideration these two factors or have you taken it independently?

Mr. Richards.—He takes that into consideration himself; that is why our sugarcane area is down by 2½ lakhs this year. He is growing other crops instead. He grows wheat; profit for what is Rs. 18 after the wheat he grows cotton; that is Rs. 9 and after his cotton he grows peas for which he gets Rs. 10. That is Rs. 37. That is against a profit of Rs. 14-14-0 if he gets 4 annas per maund of cane which he is not getting now.

Mr. Rahimtoola.—But this year is an abnormal one. The price of cane was lowered because the price of sugar went down. The Board is now considering what should be the minimum price of cane paid to the cultivator taking into consideration the cost of cultivation.

Mr. Richards.—4 annas. Let us take another series. Let us say he grows rice, that gives Rs. 31, and gram Rs. 13, or a total of Rs. 44. That is better than cane.

Mr. Rahimtoola.—At what price you think the cultivator would be able to part with his cane to the factory so as to secure a continuous supply?

Mr. Richards.—4 annas.

Mr. Rahimtoola.—Delivered at factory?

Mr. Richards.—I put the minimum at As. 3-6 on the field; 4 annas would give a fair return.

Dr. Jain.—Is that for Rohilkhand?

Mr. Richards.—I am speaking of the province as a whole.

Mr. Rahimtoola.—It is considerably cheaper in Gorakhpur because there is no irrigation system.

Dr. Jain.—Would you advocate one price for the whole area?

Mr. Richards.—Definitely one price for the whole area otherwise it will be grossly unfair to some of the factories.

President.—Was there any trouble because the price in Bihar was not the same as in United Provinces?

Mr. Richards.—There was in this province also. I see no possibility of being able to arrange a variable minimum price.

Dr. Jain.—Not even with the zoning system in operation?

Mr. Richards.—No, because even so the cost of raw material to the factory would be different in different places. My objection to having different prices within the province is this, that some factories would obtain their raw material at a cheaper rate than others and would thus have an unfair advantage in competition.

(A question appears to have been omitted here to the effect that the fixation of minimum prices applied only to the United Provinces and Bihar sugar tract, and other Provinces and Indian States might fix lower rates or no minimum rates at all.)

My answer continues "I have little fear of the effect of that upon the general price of sugar. I understand that on cane price the Governments of the United Provinces and Bihar see eye to eye and generally speaking you may rely on their having uniformity of rates, it does not very much matter what at present factories in the rest of India do".

Dr. Jain.—It strikes me that the same price for the whole of United Provinces would mean different profits to the cultivator: some may get a bigger profit and some may get less. And there may be even a tendency, for some cultivators to move to areas where the profit is bigger.

Mr. Richards.—As long as the price is adequate and the cultivator gets his money back, I do not think he would worry very much about that.

Mr. Rahimtoola.—With regard to this area I suppose 50 per cent. is Co. 213.

Mr. Richards.—I should think 70 per cent. is a very approximate estimate and I should put down 213 as very much less. I don't think these figures are of very great value.

Mr. Rahimtoola.—In your report you have stated that 213 is tolerant to mosaic the attack being small in the beginning.

Mr. Richards.—Co. 213 was issued in 1920-21. That was the first of the Co. canes that were issued and naturally it has spread all over the country and where it has been badly looked after and care has not been taken to have mosaic free seed cane, it has been attacked by mosaic, so much so that three years ago it was considered likely that it would have to be scrapped, but by good selection the mosaic trouble has been averted. It will take some time to replace it by better canes.

Mr. Rahimtoola.—Why have Sahajahanpur canes not been mentioned: are they still in the experimental stage?

Mr. Richards.—They have not yet been issued in large quantities.

Mr. Rahimtoola.—87 per cent. of the cane is under improved varieties. Do you still have any deshi canes?

Mr. Richards.—Yes.

Mr. Rahimtoola.—Is it Pundya?

Mr. Richards.—I can't tell you. I am afraid that is rather beyond me to give the names of Deshi canes.

Mr. Rahimtoola.—It is well-known in other parts of India.

Mr. Richards.—I have to refer you to the Economic Botanist for that.

Mr. Rahimtoola.—You probably do not know.

Mr. Richards.—I do not know. I can supply you with the names of Deshi varieties.

Mr. Rahimtoola.—I want to have some information about Pundya. Why is the interest so much as 37½ per cent.?

Mr. Richards.—It is made up on the same basis. It is made up by the Economic Botanist from data which he obtained from the cultivators.

Mr. Rahimtoola.—Is it not this a relevant item to be considered?

Mr. Richards.—If you tack on the additional items which appeared in the cost of cultivation.

Mr. Rahimtoola.—These three last items come under miscellaneous.

Mr. Richards.—Everything would disappear. This is not an Economic Enquiry Publication.

Mr. Rahimtoola.—What is the charge for cartage?

Mr. Richards.—½ anna per maund.

Mr. Rahimtoola.—Then the total comes to more than 6 annas.

Mr. Richards.—If you include all that, there will be nothing left for him. The total cost of cultivation will be many times more than the value of his crop.

Mr. Rahimtoola.—When the other provinces consider those charges as legitimate how can you omit them in the United Provinces.

Mr. Richards.—If these figures are to be relied upon.

Mr. Rahimtoola.—It is for you to say whether we can rely upon these figures.

Mr. Richards.—These are the figures of the cost of cultivation enquiry.

President.—Are you satisfied with the amount of money you are getting for research work generally on sugarcane?

Mr. Richards.—No.

President.—The Tariff Board may possibly have to make some recommendations to the Government of India. It is no good saying that more money ought to be spent on sugarcane. That carries your case nowhere. Can you indicate the lines on which more money ought to be spent by the Provinces?

Mr. Richards.—For research or for development?

President.—For both.

Mr. Richards.—We have no research centre for the east of the province. We have, as you know, a farm at Muzaffarnagar and one at Shahjahanpur which has been going on for 18 years. The conditions there are different from the conditions in the east. We have no possibility of investigating the cane development, the cane improvement programme there. That is one of our first needs.

President.—In that matter I understand the conditions in Bihar and the east of the province are similar. Is Pusa not helpful?

Mr. Richards.—No.

President.—You want a farm for research in the east?

Mr. Richards.—Yes. We want much greater facilities for testing our new canes actually under cultivators' conditions. We make our test under standard conditions, conditions of high cultivation, much better conditions than the cultivators'. We ought to have provision for a very wide range of scattered block trials possibly villagewise which require finance.

President.—Do you make any use of factories in the testing of cane?

Mr. Richards.—Most of the factories haven't got their own farms. There are a few who have, and I recently gave an undertaking that I would supply them with the same canes that are tested in our final yield trials. They will not only be helpful in making parallel tests of new varieties under trial; but it is anticipated that they will supply their extraction and recovery figures obtained from actual crushing tests with a sufficient quantity of cane sufficient for say half a day's crushing so that we may try out the extraction value of all our new canes under factory conditions. A few acres would be enough to provide actual factory extraction figures and to provide a final criterion for deciding to issue. Beyond that I don't think factories can help us a great deal. They can help us in extraction figures. Those that have farms can help us by duplicating our tests on new canes with a high standard of manuring. So far as general research work is concerned, I think at Shahjahanpur and Muzaffarnagar we are tackling the problems fairly fully. We won't duplicate the work. Again entomologically speaking we require additional investigating staff. We want at least one more entomologist for research work specifically on cane. At Muzaffarnagar we are doing very good work. Much of the work which the entomologist is doing there, will of course be common for the whole area. What will not be common probably is the final aim of that work, which is to discover biological resistance factors in cane, to be able to breed canes by cross-breeding which give rise to natural resistance to some at least of our pests. For that reason we want to be able to examine our cane under the local climatic conditions. There is, I believe, a provision coming forward for that next year from the Imperial Council from the Sugar Excise Fund. For general development we want a lot of money. I do not know whether you know of the special scheme which we have in our province operating from 1935 for the development of improved varieties of cane in selected factory zones.

President.—We have heard from the Registrar.

Mr. Richards.—We are doing half the work. Rs. 6,000 come from the Excise Fund and Rs. 3,000 by contribution from the factory. That is only nibbling at the whole problem. This applies only to twenty-two factories and works only for about 20 to 25 per cent. of the cane requirement of such factories. What I feel is that a very considerable proportion of the excise fund ought to be definitely set aside for more research and development.

President.—It is no good saying in a general way that more money should be found. We want definite lines on which development should take place.

Mr. Richards.—I have given you some. I propose that we should row have two half development and half research zones for the eastern tract for unirrigated and well-irrigated areas respectively for which no work is done. In those areas we should try out our canes under different ways of management; and along with it, what is of equal importance, alternative rotations which will have to be introduced for the border-line fields where cane will disappear and we must be ready to supply with something else. That ought to be done not only for that area but also for other cane tracts of the province. Similarly for gur development. If factories are going to develop 100 per cent. gate cane in the factory zones, I would be justified in saying that that ought to come out of the excise.

President.—What is your experience of the Cane Development Societies?

Mr. Richards.—They are new. The oldest of them is less than 2 years old and I have no doubt that they are working very well.

President.—I understand that you have not been able to get into the marketing stage.

Mr. Richards.—Not on our new cane. We have in the east of the province, to satisfy immediate demands of the mills and also to give our staff a preliminary try-out in organising marketing. We have marketed a fair quantity of the old improved cane not developed by us under the zone scheme. We will be getting into the market this year. I have every confidence that the supply associations will succeed now that we are now proposing to make the terms much more reasonable, and more satisfactory, to the factories.

President.—You seem to have a good deal to say on the subject.

Mr. Richards.—What they want to do is to get out of the sales organisation.

President.—They want the amount to be reduced.

Mr. Richards.—They wanted to keep supply out of the hands of the Co-operative Societies. We have promised to give them a bigger representation on the managing Board and I think they will now come in all right.

President.—It has been suggested to us that not much investigation has been made in regard to insect pests. In that respect research is rather comparatively backward.

Mr. Richards.—I have been clamouring for additional staff for years. It was proposed three years ago at my instigation primarily that we should have a chain of research stations, entomological stations, right through the sugarcane area in India, working on co-ordinated lines, tackling the problem from all angles according to local conditions. For the United Provinces we want two additional sub-stations and I hope they are coming next year. It is a most serious problem, in the east of the province according to figures which I have.

President.—We have received Begg Sutherland's figures.

Mr. Richards.—The earlier we start on this the better it will be.

President.—Have you anything else?

Mr. Richards.—I think that the work which is going on at Shahjahanpur can be amplified with great advantage. If there is any possibility of augmenting staff particularly chemists, it would be extremely useful. We have had no soil survey of the province and we very badly want one, and additional chemists will be very valuable indeed. The development of the whole sugarcane area will take all the staff we can provide.

President.—That is something definite to go on. We have heard a good deal about the malpractices of factories. We do not want to go into that question in any great detail. We only want your opinion whether the malpractices are very prevalent.

Mr. Richards.—I have no personal experience whatsoever. I can only go on what I learn from my staff who are moving about. A very large number of factories are underweighing.

President.—The underweighment will reflect on the recovery.

Mr. Richards.—There is undoubtedly a lot of malpractices in respect of cart cane going to the factory.

President.—This morning we were discussing this matter. We might divide the factories into three classes, viz., factories which do their best for the grower, factories who deliberately underweigh cane and factories who are somewhat lax and give their subordinates a free hand.

Mr. Richards.—The Chief Engineer, Western Canals, has asked me to tell you that he knows the western area and that all the factories except two in that area are dishonest. There are only two who will come under the first category. How many of the remainder fall under second and third

categories I could not tell you. (I request that this should be omitted from any published record.)

President.—I am not asking you any questions regarding answers which are full enough already. We would like your views on zoning.

Mr. Richards.—My views are entirely in accord with the opinion of the Sugar Committee that zoning should be definitely established. We should have had zoning 4 years ago but for the fact that many factories were dead against it and Government did not care to go against their wishes. It will be difficult to adjust in some parts of our area because of the nearness of factories.

President.—Have you gone into the question of open pans? Do you make sugar by the open pan system?

Mr. Richards.—Personally I do not know much about it. You have, I think, received a bulletin. I don't think I can add anything of value to that. This is the latest copy of the bulletin (shown).

President.—Do you think that there is any future for the open pan system? We shall go into the khandsari industry afterwards. Or could we take them together?

Mr. Richards.—With the introduction of high yielding canes and better recovery they may be able to get on. Personally I don't think there is very much more than in gur.

President.—What would be the position with regard to gur? Will the gur industry revive?

Mr. Richards.—About one-sixth of our cane is consumed by factories. With even protection, the factories take only a small quantity. The remaining five-sixths is converted to gur.

President.—What proportion do you set aside for seeds and chewing?

Mr. Richards.—Sowing will be one-eighth of the crop. Chewing will be 3 to 4 per cent.

President.—On the main question of gur, the improved varieties of cane in one way or another may increase the quantity. Do you consider that that will depress prices?

Mr. Richards.—Our policy if we can bring it into effect is that cane shown be grown where it can be grown more profitably than any other crop. That means according to present prices that cane can only be grown profitably by the cultivator if he gets an outturn of 500 maunds. Our aim will be to concentrate our cane on a smaller area and only grow so much as is required for meeting the estimated demand and utilise the other land for other crops. That is one reason why I want additions to our staff. I want to find out the best paying alternative crops to cut out cane in other places.

President.—The preliminary forecast indicates a decrease in the area of 12 per cent.

Mr. Richards.—2½ lakhs out of 24 lakhs.

President.—Is that due to the reduction in the price of sugarcane to the factories at the end of the season or is that due to the fall in the price of gur which has been fairly general in the last year?

Mr. Richards.—I think that the failure of the factories to take cane is very largely responsible. With the increase in area under sugarcane, there has been no general tendency towards a fall in the price of gur. Last year production may almost have reached the limit. This year one does not know. I do not know what the total is for India.

President.—The indications are that in other provinces except United Provinces and Bihar there has not been any decrease.

Mr. Richards.—Last year there was a considerable increase.

President.—In the Punjab there has been a decrease of 5 per cent.

Mr. Richards.—If other provinces have increased their area, it should be more.

President.—I don't think so.

Mr. Richards.—The decrease figures are based on estimates and the recorded figures are those of the irrigated areas and they so far show an increase.

President.—It has been suggested to us that the reason may be that whereas in previous years factories had to pay more than the minimum rate at the end of the season, 1936-37 is the first time when the price of cane dropped at the end of the season.

Mr. Richards.—That is so.

President.—We will get reliable cane forecasts in the middle of October?

Mr. Richards.—Yes. Actually these forecasts are issued by me on the figures supplied by the Land Records. We calculate our gur at a maund of gur to 11 maunds of cane; last year it was as much as 1 maund to 7½ to maunds of cane, and my feeling is that 1:9 is probably nearer the mark. Standard yields for which condition factors operate are derived from very inadequate bases and whether or not there is a possibility of a 25 per cent. margin of error I do not know. As a comparison between one year and another our condition factor figures are quite good, but for basic data I would not guarantee the estimates to be within 25 per cent.

Dr. Jain.—Have you any suggestions for the improvement of these production statistics and statistics of prices?

Mr. Richards.—Mr. Allen started a system of sampling which should give us reasonably accurate figures when conducted on a sufficient area. This is taking fields at random and taking sample cuts by a regular system of randomisation and getting fair samples for average fields and so getting the standard yield from actual samples taken over a wide range. We have further to take into consideration what is the percentage of plant cane and how much is ratoon and what are the relative yields and sucrose content of plant and ratoon cane. The Board of Revenue has now undertaken to show the returns of cane under three heads—plant cane, first and subsequent ratoon, so from next year we will know precisely what acreage we have got under these heads. On top of that, we expect to have the results of these crop cutting experiments giving average figures district-wise for the yield in each category which should be very close to the actual, and then our condition factor will operate on that. But it will take some years before we can apply this sufficiently to be able to give a reasonably accurate estimate.

President.—I gather you think that the last excise duty fell on the grower?

Mr. Richards.—Definitely.

(3) Evidence of Mr. VISHNU SAHAY, I.C.S., Registrar of Co-operative Societies, United Provinces, Lucknow, recorded at Lucknow on Wednesday, the 1st September, 1937.

President.—Could you tell us in broad lines how the Co-operative Department comes in the matter of sugarcane business?

Mr. Sahay.—There are a number of Co-operative Societies for the sale of sugarcane to factories and in the last two years there has been in existence for about 20 factories an organisation subsidised out of the Government of India grant for the development of sugarcane and its marketing through co-operative better farming and marketing societies, that is how we are concerned.

President.—Is any co-operative factory working?

Mr. Sahay.—Yes.

President.—Those are the main lines on which the Co-operative Department come in.

Mr. Sahay.—Yes.

President.—I understand in regard to these Cane Development Societies some are run by you and some by the Director of Agriculture.

Mr. Sahay.—Yes I have got 10 Societies and he has 11 Societies.

President.—Which is your area?

Mr. Sahay.—Gorakhpur, Basti, Gonda and Biswan.

President.—We are rather considering the United Provinces in three areas, the Western area Meerut and Rohilkhand divisions, the Central Fyzabad and Lucknow divisions and the Eastern Gorakhpur division.

Mr. Sahay.—I have got the eastern portion and one factory in the Central Division. That is the Biswan factory.

President.—How are these Cane Development Societies getting on?

Mr. Sahay.—The programme was to develop 2,000 to 2,500 acres in the course of three years. In the first year about 200 acres were developed round about each factory and in the second year that rose up to 1,000 acres. The question of marketing didn't arise, because the seed grown on that limited area was reserved for the development of the remaining area. The question of marketing will arise now. It is, I think generally agreed that the cane grown is of better quality and certainly the yield is very much higher. That is patent even to the naked eye. There is however going to be trouble about co-operative marketing. The fact is that it is not very popular with the factories particularly with the Eastern Range with which I deal.

President.—Why is it not popular with the factories?

Mr. Sahay.—The problem in the west of the province is slightly different from the problem in the east. In the west of the province the factories get a large percentage of their cane from outside the home area. In the east it is mostly gate cane. There is very little railborne cane. Gate cane is bound to go to the factories with such large production as last year and the factories do not feel the need for any organisation coming in between them and the grower. They feel—I think that is really the reason—they have not the same hold over the grower if there is a Society in between. There was a dispute about commission which was settled by mutual discussion two days ago.

President.—How are the Societies flourishing?

Mr. Sahay.—They have a precarious existence. The grower is in a weak position. He has a perishable commodity and he cannot keep it for long. They will succeed here and there with factories who haven't got

sufficient cane round about their places. Where the cane has to be transported to a distant place, the Co-operative Society will continue to function successfully or the Society will continue to work as in the case of Dehra Dun where it has a sort of natural zone and the society is consequently strong.

President.—As you know we had just been to Dehra Dun and met the Society people there. We also saw your Inspector there. That is the strongest Society.

Mr. Sahay.—Yes, it doesn't need help. It needs only curbing from me.

President.—All other Societies are precarious.

Mr. Sahay.—Yes.

President.—You said that the canegrowers are generally in a precarious position. Is not that a reason for encouraging these Societies?

Mr. Sahay.—I think so.

President.—Do you propose to increase the number of Societies?

Mr. Sahay.—Yes. Last year we handled about 5 to 6 per cent. of the cane supplied to factories. This year it is going to be nearly 10 per cent.

President.—You have given us a long note in answer to Question 15 on the difficulties of cane-growers in the cultivation of cane and the various ways in which the cultivator is cheated. I see the number of ways in which he is cheated comes to as many as 20. Are these malpractices very common in your opinion?

Mr. Sahay.—With some factories yes.

President.—Factories vary.

Mr. Sahay.—Yes very much indeed in this respect.

President.—Do some factories treat growers fairly?

Mr. Sahay.—In the matter of weighment yes.

President.—Speaking generally.

Mr. Sahay.—It is not a question of fair treatment or of his getting one pice more or one pice less. The important thing is waiting. He has to wait three days sometimes. By that he nearly losses an anna in addition to the amount of suffering he has to undergo in the cold weather. That is a fery important point.

President.—How far has the issue of passes and so on developed? Is there any improvement in that respect?

Mr. Sahay.—In many Societies yes. In one Society where they expanded business more than their resources warranted, there was deterioration in the early part of the season and I had to depute some of the Government staff to supervise and then things improved.

President.—I don't think you quite caught my question. I was talking about the delay in carting.

Mr. Sahay.—You mean for factories in general?

President.—Yes. Is there any improvement?

Mr. Sahay.—Barring four or five factories I am not aware of any efforts made by them.

President.—In your eastern area some factories are adopting a system of issuing passes to carts on particular days and so on. On the other hand we have been told that there is great danger in these passes being sold for one thing or another.

Mr. Sahay.—I don't think factories will ever be able, barring one or two factories, to regulate supplies properly. The cultivator won't trust them.

President.—If one factory could do it, why not another?

Mr. Sahay.—May I state the answer which is contained in our replies?

Dr. Jain.—Is that not an argument against Co-operative Societies?

Mr. Sahay.—There is that danger.

Dr. Jain.—There are definite complaints. You admitted there was some truth.

Mr. Sahay.—We had a meeting two days ago and the factory owner started saying that there were gross complaints and ended up with asking for more Societies. That was in order to bargain for a lower commission.

President.—That is at the bottom of the whole thing.

Mr. Sahay.—Clearly.

President.—The Biswan Society have not sent in their reply to the questionnaire especially figures of production.

Mr. Sahay.—I was told so yesterday.

President.—Could you obtain them?

Mr. Sahay.—I shall obtain them. The management has been superseded.

President.—You can send us figures of production, number of working days and so on; in fact all the statistics asked for in the questionnaire.

Mr. Sahay.—Yes.

President.—Do you think there is any future for these Co-operative Factories judging by your experience of Biswan?

Mr. Sahay.—That is to say would I like to have another Co-operative Sugar Factory?

President.—Yes.

Mr. Sahay.—No.

President.—Do you think that it has been a failure?

Mr. Sahay.—Yes.

President.—Why has it failed? Can you give us your opinion on that?

Mr. Sahay.—Mismanagement largely I think.

Mr. Rahimtoola.—What is the amount of money that you get? You have spent Rs. 37,905 so far. Is that all the amount you spend annually?

Mr. Sahay.—That figure is of no importance, because the total grant is between the Director of Agriculture's budget and mine. Only I spend that money. The amount spent by the Director of Agriculture has to be added.

Mr. Rahimtoola.—Do you get a grant from the Government of India? What portion of that grant is allotted to your department. Do you get any money for the development of cane?

Mr. Sahay.—It is a joint scheme. It is a scheme run jointly by the two departments.

Mr. Rahimtoola.—Not for your department only.

Mr. Sahay.—No.

Mr. Rahimtoola.—Do you get any money from your own Government?

Mr. Sahay.—No. We got Rs. 10,000 three years ago, but we don't get any money regularly.

Mr. Rahimtoola.—How does your department help the canegrower? Usually I am told that the Co-operative Societies help the growers by financing them.

Mr. Sahay.—In two ways: (1) the Co-operative Society earns as profits the commission which it gets from factories. (2) There is money lent out to the Member as advances for sugarcane known as Dadni.

Mr. Rahimtoola.—Where does the money come from?

Mr. Sahay.—Borrowed from the Co-operative Banks. The department does only the work of supervision. Co-operative Societies are independent bodies.

Mr. Rahimtoola.—And the Canegrowers' Societies are also independent.

Mr. Sahay.—My duty is confined to registration, inspection and supervision.

Mr. Rahimtoola.—These Canegrowers' Societies who supply cane to the factories, are they giving satisfaction?

Mr. Sahay.—To whom?

Mr. Rahimtoola.—To the factories.

Mr. Sahay.—No. By the growers very much so.

Mr. Rahimtoola.—Do they get cane outside the Association cheaper than they get from the Association?

Mr. Sahay.—The price is the same. The question of price doesn't arise. They all get the Government minimum price.

Mr. Rahimtoola.—What is the reason for not preferring Canegrowers' Association?

Mr. Sahay.—In the home zone?

Mr. Rahimtoola.—Yes.

Mr. Sahay.—The commission for one thing. Secondly suppose I had a factory and wanted to underweigh the cane, I would not like to have a co-operative organisation making noise.

Mr. Rahimtoola.—All the difficulties pointed out by you would not arise if they purchased through an organisation.

Mr. Sahay.—They would arise only to a limited extent. The Association would be there to safeguard the interests of the growers.

Mr. Rahimtoola.—What is the percentage of commission which is usually charged?

Mr. Sahay.—It used to be a pice per maund. It has come down now to 2 pies or 1½ pies. It is a matter of bargaining.

Mr. Rahimtoola.—It is not a fixed rate.

Mr. Sahay.—No. The factory bargains with the Society. The Society goes to the factory and asks how much it wants and at what time. The factory will say that it wants 9 lakhs of maunds, so much in March, so much in April and so on. The society will start with 3 pies as commission and the factory will say 'no' and so on.

Mr. Rahimtoola.—There will be no difficulty in supplying the required quantity to the factory.

Mr. Sahay.—Usually there is no difficulty, but it is possible that there may be difficulty.

Mr. Rahimtoola.—What happens then? Is the Association or the Society liable for damages?

Mr. Sahay.—Yes.

Mr. Rahimtoola.—Have there been any failures?

Mr. Sahay.—There have been occasional failures—one or two.

Mr. Rahimtoola.—And the Society has been able to meet them.

Mr. Sahay.—No one has sued them for damages. The factory also breaks the contract. It also says that it will take 2 lakhs of maunds but actually takes delivery of 1 lakh of maunds.

Mr. Rahimtoola.—The agreement is a mere formality.

Mr. Sahay.—Yes. But they do not quarrel.

Dr. Jain.—Because they both make mistakes.

Mr. Sahay.—They both make noise but they do not take the matter to court.

Dr. Jain.—There have been complaints against non-members' cane being forced on the factory?

Mr. Sahay.—I would not like to swear that all the one crore of maunds of cane passing through the societies belonged to members. But I would say that 99 per cent. of the cane would be members'. As they are dealing with hundreds of thousands of growers, two or three may sneak in and it may be impossible to prevent them.

Mr. Rahimtoola.—Is there any difficulty experienced by growers in hiring carts?

Mr. Sahay.—In what sense?

Mr. Rahimtoola.—Some have no carts of their own and they must make some provision by which supply should be made to the factory. You have stated that there is difficulty in hiring carts.

Mr. Sahay.—Sometimes.

Mr. Rahimtoola.—What is the amount they pay per hired cart?

Mr. Sahay.—I have got some figures. The cost of transport for 12 miles in Gorakhpur is 1 anna to 1 anna 6 pies per maund of cane.

Mr. Rahimtoola.—Is that the hired cart rate?

Mr. Sahay.—Yes.

Mr. Rahimtoola.—Suppose a man has got his own cart. What does it cost him to take his cane to the factory?

Mr. Sahay.—That I have not worked out.

Mr. Rahimtoola.—The rates given here are for the hired carts only.

Mr. Sahay.—Yes. I made a rough calculation on enquiry in Basti and I gathered that it came to an anna.

Mr. Rahimtoola.—This is about half an anna more.

Mr. Sahay.—Yes.

Dr. Jain.—In answer to question 11, you talk of the improved methods of cultivation, proper spacing, intensive cultivation, additional manuring and so on. What are the improved varieties which you are growing there?

Mr. Sahay.—There is a very long list, not based on my personal knowledge. It is my Assistant who works this scheme Co.313, Co.341, Co.350, and many others are grown.

Dr. Jain.—Which is the main variety—the most popular variety?

Mr. Sahay.—We take the advice of the Agricultural Department.

Dr. Jain.—Same as the Agricultural Department.

Mr. Sahay.—There is no difference whatsoever.

Dr. Jain.—As regards yield, has any increased yield been obtained through the efforts of the Co-operative Societies?

Mr. Sahay.—The yield is reported to have increased considerably by the assistance given under the cane development scheme.

Dr. Jain.—By how much?

Mr. Sahay.—I could not tell you off-hand.

Dr. Jain.—You say that "part of the cost of the scheme is paid by the factory benefited by it". I want to know a little more about it.

Mr. Sahay.—Rs. 3,000 a year is paid by the factory and the rest about Rs. 6,000 by Government.

Dr. Jain.—And the factories, you say, are represented on the Directorate of the Society. What exactly is the constitution?

Mr. Sahay.—2 representatives of factories, 4 representatives of cane-growers and 4 Government officials.

Dr. Jain.—Have there been any complaints about this constitution?

Mr. Sahay.—Yes, two days ago for the first time.

Dr. Jain.—Have you revised it?

Mr. Sahay.—I shall revise it. The question is not of any practical importance whatsoever. The canegrowers have 4 representatives at present.

Dr. Jain.—What is the nature of the complaint? Do they want more canegrowers?

Mr. Sahay.—They want more representation for factories.

Dr. Jain.—And less representation for Government?

Mr. Sahay.—They have full confidence in Government officers. They do not like canegrowers to be there. At first they left the matter entirely to the Government servants concerned, but that would not have been possible under a co-operative organisation. One of them modified it to a claim of equal representation. There is no universal demand for it.

Dr. Jain.—Have you any schemes for the utilisation of sugar excise fund?

Mr. Sahay.—Quite a lot.

Dr. Jain.—Do you feel that there is any scheme which you are not able to proceed with because of lack of funds; in other words do you really feel more need for money and if so for what kind of work?

Mr. Sahay.—For the same kind of work. There are two kinds of co-operative societies, those that are subsidised out of this grant and those that are standing on their own legs, receiving no subsidy from Government. The second class of societies are doing very little for growing improved varieties. They are not; for instance, buying any improved seeds or arranging for better manure and things of that kind. They ought to do that. They can only do so if they receive some sort of help from Government. They may be given a qualified agricultural inspector and subsidy for seed and manure.

President.—Is it really then that they require some staff more than anything else?

Mr. Sahay.—Some staff and subsidy.

Dr. Jain.—Have you any figures of cost of cultivation?

Mr. Sahay.—I have some figures.

Dr. Jain.—Can you give separate figures for separate areas?

Mr. Sahay.—I have no personal knowledge, but I have been given some figures.

Dr. Jain.—By whom?

Mr. Sahay.—By one of the Assistant Registrars.

Dr. Jain.—What is the source of information?

Mr. Sahay.—Local enquiry at Daurala. When I came here I came across this bulletin issued by the Department of Agriculture where certain figures are quoted. I take it that you have seen it (shown).

Dr. Jain.—No.

President.—Is this area irrigated or unirrigated?

Mr. Sahay.—Partly irrigated and largely unirrigated. For the irrigated area the cost is as follows:—

	Rs. A.	
Ploughing	5 0	when cane is taken off; otherwise if after fallow, it is Rs. 10.
Cost of seed	15 0	
Manure	10 0	(10 to 15 carts)
Artificial manure	4 10	
Irrigation	11 4	

Dr. Jain.—What sort of irrigation?

Mr. Sahay.—By baling water from a well.

	Rs. A.
Hangs (4. times)	10 0
Hoeing	3 0
Miscellaneous	2 0
Rent	10 0
Harvesting	1 4
TOTAL	63 2

The average yield may be taken as 300 maunds per acre.

Dr. Jain.—It is just a little over 3 annas per maund.

Mr. Sahay.—Yes.

Dr. Jain.—What about cartage?

Mr. Sahay.—1 anna to 1 anna 6 pies for cartage. Therefore the minimum price must be 4 annas 3 pies.

Dr. Jain.—Is any watching done here?

Mr. Sahay.—Perhaps it has been left to his family.

Dr. Jain.—What about the interest on working capital?

Mr. Sahay.—That has been included. I have sent a note on the interest factor.

Dr. Jain.—Have you any idea as to the amount which these people borrow for cultivation?

Mr. Sahay.—You cannot separate the amount borrowed by any cultivator for the purpose of sowing sugarcane. The thing is mixed up with the rest of his borrowings. Nobody in the world, it seems to me, can separate that. I have made a mention of that in my note.

President.—What is the average borrowing rate?

Mr. Sahay.—24 per cent.

President.—From the ordinary moneylender. What about the co-operative society?

Mr. Sahay.—The borrowing rate is much less. It is only 9 per cent. The co-operative societies are dealing with a fraction of the cultivators.

Dr. Jain.—Don't you think that it has come down?

Mr. Sahay.—I am afraid not. On that point I collected statistics from about 500 cultivators.

Dr. Jain.—In which area?

Mr. Sahay.—In the Gorakhpur area.

Dr. Jain.—This may not be the rate prevailing in other areas.

Mr. Sahay.—37½ per cent. in the Meerut area.

President.—We understood from Mr. D. R. Narang that he had convincing proof that a number of men in charge of co-operative societies were corrupt.

Mr. Sahay.—He might have said so before the Board, but he did not say that when I went to Basti in March. There have been instances of some of them being corrupt but these men have been dismissed. It is getting less and less. It is only a question of superior supervision.

Dr. Jain.—That reminds me of the suggestion about the appointment of superior officers of Government, and the answer was that the District Magistrate was already there.

President.—How many factories have you had dealings with?

Mr. Sahay.—About 10 or 11.

President.—Are there societies run by the Director of Agriculture on the same lines as yours?

Mr. Sahay.—Yes.

President.—You consult together and work on the same lines?

Mr. Sahay.—Yes. The staff below us consist of one agricultural man and one co-operative man.

President.—Why is it that the work is divided between the two officers?

Mr. Sahay.—Because the work is partly agricultural and partly co-operative marketing.

President.—I still don't see why these experiments should be placed under the control of two different officers?

Mr. Sahay.—Because it is too much for one man.

President.—What is the staff employed by each of these 21 societies?

Mr. Sahay.—One inspector, 3 field men and 9 kamdars.

President.—How do growers like the co-operative factory?

Mr. Sahay.—I do not think it is of much advantage to them now. But when it was first started conditions were different. There were no sugarcane rules, no excise duty, and no regulations for the protection of the grower.

(4) Evidence of Mr. J. NIGAM, I.C.S., Director of Industries,
United Provinces, recorded at Cawnpore on Tuesday,
the 7th September, 1937.

President.—Mr. Nigam, how long have you been Director of Industries?

Mr. Nigam.—I took over in the last week of April.

President.—What exactly is your concern with the sugar industry?

Mr. Nigam.—Just as with any other industry now that the sugar section of the Technological Institute has been taken over by the Imperial Council of Agricultural Research.

President.—Do you, for instance, take special interest in open pans?

Mr. Nigam.—At the moment the department is doing nothing specially for the open pans.

President.—I see the department sanctioned a certain number of loans; one was an advance to the Lucknow Sugar Mills.

Mr. Nigam.—That was in 1922.

President.—Has that been repaid?

Mr. Nigam.—I do not think it has been repaid, at least most of it, but I would like to verify it before I can give you any definite information.

President.—And another loan of Rs. 1,20,000 to Sri Mahalakshmi Sugar Corporation?

Mr. Nigam.—Most of it has been repaid also.

President.—That was given in 1924?

Mr. Nigam.—Most of it has been repaid also but I shall verify.

President.—And some land was acquired for sullage?

Mr. Nigam.—That was not actually required; the matter is under consideration of Government.

President.—Does labour come under you?

Mr. Nigam.—It does.

President.—I would like to hear what you have got to say about labour conditions.

Mr. Nigam.—Generally speaking, so far as sanitation and ventilation are concerned conditions are satisfactory.

President.—I take it the factories are regularly inspected by your department?

Mr. Nigam.—Yes.

Dr. Jain.—How often?

Mr. Nigam.—I can't say this has been very frequent as unfortunately we have not got a very big staff, but it is done at least once a year and there are less complaints now with regard to the disposal of effluents from factories.

Dr. Jain.—But still a large number of factories are what may be called considerably offensive?

Mr. Nigam.—We are recommending the use of deodorising chemicals and that is being taken up. Arrangements for drinking water are satisfactory and the sugar factories are taking a lead in the construction of quarters for their workers, but so far as the number of accidents is concerned, I am afraid they are on the increase. For example, in 1936 the total number of fatal accidents was 88 and of these sugar factories were responsible for 22.

President.—What kind of accidents?

Mr. Nigam.—A man falling down and getting burns and scars and so on.

Dr. Jain.—I do not quite understand why there should be more accidents in sugar factories than in other factories?

Mr. Nigam.—It is difficult to give an explanation but that is what the figures indicate.

Dr. Jain.—You have already told us something about the labour conditions in sugar as compared to other industries. How do labour conditions compare, say, with cotton in Cawnpore and other places?

Mr. Nigam.—There are less complaints in sugar than we have in cotton mills.

Dr. Jain.—About housing you say they are better.

Mr. Nigam.—They do more in the matter of good housing conditions for their workers than other mills.

Dr. Jain.—One complaint of labour is that they are employed during the crushing season and then turned out.

Mr. Nigam.—That is so. I have referred to that in my answer to question 26.

Dr. Jain.—Is this complaint on the decrease?

Mr. Nigam.—I do not think so.

Dr. Jain.—Do you think wages are satisfactory for skilled and unskilled labour?

Mr. Nigam.—That is a very difficult question to answer, but as compared to other places I think there is very much to be said.

Dr. Jain.—The complaint in regard to unskilled labour is that they are paid less than they ought to be, but with regard to skilled labour the actual complaint is about the employment for a part of the season only.

Mr. Nigam.—That is so.

President.—In answer to question 42 you say "a list of open pan and khandsaris in the United Provinces which is enclosed". I do not quite follow what your list represents.

Mr. Nigam.—These are the places where white sugar is made.

President.—Do you mean to say these are factories which come under the Factory Act?

Mr. Nigam.—These are registered as factories.

President.—Are all these working?

Mr. Nigam.—They were supposed to be working at the time I made my enquiries. This part of the information is derived from the Sugar Technologist.

President.—Don't you have to inspect these?

Mr. Nigam.—The Inspector of Factories inspects these and he reports that all these factories are registered.

President.—Registered as factories employing more than 19 persons?

Mr. Nigam.—Yes.

President.—Would you draw any distinction between open pan and khandsars?

Mr. Nigam.—Not very much.

President.—We were discussing the matter with Mr. Srivastava yesterday and we arrived at some sort of distinction, that factories may be described as open pan factories where there is mechanical motive power for crushing and also for centrifuging and khandsaris in which only mechanical operation is practised.

Mr. Nigam.—I am afraid this distinction has not been observed.

President.—You have given a list of 44. Has that number decreased in recent years.

Mr. Nigam.—That is my impression.

President.—We have been told that a good many of these factories after the imposition of the excise duty split up, as far as possible in two components in order to avoid the duty.

Mr. Nigam.—That is what has happened.

President.—There must have been a reduction in the number of registered factories for that reason?

Mr. Nigam.—Yes.

President.—Have you got any figures?

Mr. Nigam.—I can make enquiries and give you figure.

President.—If you could give us some information as to whether the number of registered factories has decreased during the last few years kindly make a note of that.

Mr. Nigam.—I will.

Mr. Rahimtoola.—I suppose the factories of which you have given a list were all working on the 30th June of this year, that is to say they were all working even after the excise duty came into force?

Mr. Nigam.—Yes.

Mr. Rahimtoola.—So that the decrease you have to take into consideration will be decreased before that period.

President.—Give it for seven years.

Mr. Nigam.—Yes.

President.—Your impression is that 44 worked last season. Perhaps you would verify that.

Mr. Nigam.—I will verify that.

Mr. Rahimtoola.—Are there no khandsari concerns using the khanchi method?

Mr. Nigam.—I do not think so. All are using centrifugals.

President.—In the course of our tour we inspected some of the khandsari concerns in Moradabad and it struck us that the conditions in which sugar was made were to say the least very insanitary. If they come under the factory act they have to stick to some sanitary rules?

Mr. Nigam.—We gave a warning last year. I agree with the impression you have formed that the conditions under which khandsari sugar is made is very unsatisfactory.

President.—Can anything be done?

Mr. Nigam.—The only thing to do is to enforce the provisions of the law more strictly, but unfortunately we have not got adequate staff to do that.

President.—In answer to question 43 you give an estimate of the cost of manufacture per maund of cane crushed. I suppose for estimates of cost of manufacture we may rely on Mr. Srivastava's figures?

Mr. Nigam.—Yes, that would be more reliable.

President.—In your opinion the industry has a very gloomy future?

Mr. Nigam.—That is my impression.

President.—Supposing these factories were exempt from excise duty, say up to a limit of 50 men, do you think the industry can survive then?

Mr. Nigam.—It will give them an impetus. Khan Bahadur Hadi has been working on this a great deal and he has the impression that if the excise duty were removed it would be possible to revive the open pan industry and he showed me a lot of statistics.

President.—What are the possibilities of starting industries which use a considerable quantity of sugar as raw material?

Mr. Nigam.—I don't think there is any very great possibility at the present moment. I am investigating into the question further, but I can't give you anything more than what I have already given you.

President.—Would you consider the possibility of manufacture of syrups, fruit canning and that kind of thing?

Mr. Nigam.—At the present moment the scope for it is not very great.

President.—You are not responsible for any of these statistics?

Mr. Nigam.—No. I just made enquiries. I cannot guarantee to their accuracy.

President.—Acreage figures are done by the Agricultural Department and you are not responsible for preparing these statistics.

Mr. Nigam.—No.

President.—So we need not ask you any questions about that.

Mr. Rahimtoola.—In answer to question No. 14 (a), you have put the cane crushed in factories at 18 per cent. I suppose you have derived that percentage by taking the actual cane crushed in vacuum-pan factories.

Mr. Nigam.—Yes.

Mr. Rahimtoola.—What about the open pan? Did you adopt the same method?

Mr. Nigam.—I am afraid these estimates are not very accurate. There is no very great system involved in collecting.

Mr. Rahimtoola.—You don't think that these are very reliable?

Mr. Nigam.—No.

Mr. Rahimtoola.—In answer to question No. 23 you say a number of technical scholarships have been given.

Mr. Nigam.—Yes.

Mr. Rahimtoola.—What is the procedure? Do you select students by some sort of test?

Mr. Nigam.—We advertise saying that the United Provinces Government is going to give so many scholarships and the applicants come up. We suggest a certain number of industries in the advertisement itself and the applicants come up either for one of these industries or for something of their own.

Mr. Rahimtoola.—Do you follow them up? What happens to them? Are they employed by factories?

Mr. Nigam.—We keep a register and try to keep our information as up-to-date as possible.

Mr. Rahimtoola.—What percentage would you say are generally absorbed by the factories in India?

Mr. Nigam.—So far as these are concerned, most people are employed.

Dr. Jain.—What is Mr. H. K. P. Varma doing who studied about the utilisation of molasses?

Mr. Nigam.—I am afraid I can't tell you, as I have not made individual enquiries.

Dr. Jain.—Are all of them employed?

Mr. Nigam.—Most of them are employed.

Dr. Jain.—None of them is unemployed.

Mr. Nigam.—No.

Dr. Jain.—To your definite knowledge?

Mr. Nigam.—There is a register maintained in the Industries Department and we keep on writing to these people from time to time.

Dr. Jain.—Are these employed for the whole year round?

Mr. Nigam.—Not necessarily the whole year round. When I say most of them are employed, there is no general complaint on their behalf that they are idle for want of work.

Mr. Rahimtoola.—In answer to question 30 you say sweetmeat makers exist in the United Provinces.

Mr. Nigam.—Halwai.

Mr. Rahimtoola.—Do they not make other sweets? They may not be making according to the modern method, but still they must be manufacturing various kinds of sweets.

Mr. Nigam.—Yes.

Mr. Rahimtoola.—What about lozenges.

Mr. Nigam.—Not much here.

Mr. Rahimtoola.—Did you get the figures given in answer to question 43 from Mr. Srivastava or were these obtained from an independent source?

Mr. Nigam.—This figure was obtained from two sources. One was from Mr. Srivastava and the other is the Technological Institute, Sugar Section, formerly belonging to the Technical Institute.

Mr. Rahimtoola.—Are these recent figures?

Mr. Nigam.—The Sugar Section was only transferred last year. It was part of the Technological Institute, United Provinces.

Mr. Rahimtoola.—Is it your opinion that the khandsari sugar has a special market of its own?

Mr. Nigam.—It has at present a special market.

Mr. Rahimtoola.—Is it due to religious susceptibilities?

Mr. Nigam.—That is what I have said. There are certain classes of people who would like to have the sugar made in this country and they believe that it is the genuine sugar.

Mr. Rahimtoola.—What would you put down as the normal consumption?

Mr. Nigam.—I couldn't give you an answer at once.

Mr. Rahimtoola.—In the next sentence you say this Industry has a gloomy future.

Mr. Nigam.—This sentiment is not likely to last very long.

Mr. Rahimtoola.—Whatever the price there is always a buyer.

Mr. Nigam.—That sentiment is not based on reason. With further propaganda it is not likely to last very long. It is just a sentiment without any ground for it.

Mr. Rahimtoola.—In answer to question 47 you say: "The cane-grower has been affected more by over-production than the levy of the additional duty". By that you mean additional excise duty.

Mr. Nigam.—Yes.

Mr. Rahimtoola.—What do you mean by over-production? Have you got any statistics? Have you ascertained the production of sugar?

Mr. Nigam.—When I used the word over-production, I used it in a general sense. The quantity manufactured being more or less equal to the quantity consumed there is likelihood of an over-production. It might be modified. I don't mean that there is actual over-production. There is a general belief that there is over-production.

Mr. Rahimtoola.—You have not gone into the matter in greater detail.

Mr. Nigam.—No. Some figures I have studied personally. I don't think there is any ground for stating definitely that there is over-production. Some time ago there was a general belief that there was over-production.

President.—The belief was sufficient to send down prices.

Mr. Nigam.—Yes the belief had its effect.

Dr. Jain.—You say the statistics of gur outturn are unsatisfactory.

Mr. Nigam.—They are.

Dr. Jain.—Has anything been done to improve them?

Mr. Nigam.—That is a matter for the Agricultural Department.

GOVERNMENT OF BIHAR.

Evidence of Messrs. S. LALL, Secretary, Education Department, S. M. DHAR, Director of Industries, N. BAKSHI, Registrar, Co-operative Societies, D. R. SETHI, Director of Agriculture, and L. C. KHANNA recorded at Patna on Saturday, the 11th September, 1937.

President.—Gentlemen, you are here to give evidence on behalf of the Government of Bihar?

Mr. Lall.—On questions of policy only, but on most of the details the evidence will be the evidence of the heads of the departments which are in touch with the industry.

President.—I may say that the answers given to our questions are so elaborate and full that the Board will probably not require to go through most of the questions again. The object of our questions is really to elucidate any doubtful points and to raise any new points that have occurred to us since. One of the most important matters that arises for the consideration of the Board is the cost of cultivation of cane by the average cultivator.

Mr. Lall.—That has been a problem which has been puzzling Government and everybody. We have different versions. The cultivators claim that nothing less than 8 annas would pay them; others say it is 6 annas while others say 4 annas. The Imperial Council of Agricultural Research ordered an enquiry into the cost of cultivation. I will ask Mr. Sethi to give you the results.

Mr. Sethi.—The cost of cultivation of sugarcane enquiry was carried out for three years, 1934, 1935, 1936 on the results of a large number of holdings in six villages in North Bihar where most of the industry is situated for which the cost of cultivation came to 3 annas 3 pies per maund, for plant cane.

President.—On the fields?

Mr. Sethi.—Yes. This figure includes cultivator's own labour charges, his family labour and also interest on his borrowings and allows for a very small depreciation on any immovable property that he may have. So we have taken into consideration every possible item which enters into the cost of production of the crop; we have also taken into consideration the rotation that he practises and the loss which he incurs from insect, fungus diseases or from floods, etc., which reduce the yield. And our figure for North Bihar came to 3 annas 3 pies per maund for plant cane. The figure for ratoon is 2 annas 5 pies. In the case of South Bihar where cane is grown under irrigated conditions.

President.—What is the estimated yield in North Bihar?

Mr. Sethi.—It varies from 240 to 270 maunds per acre; the average is 250. In the case of South Bihar where cane is grown on heavy land under irrigated condition, the cost of plant cane comes to 2 annas 10 pies as against 3 annas 3 pies in North Bihar. The average yield works out to 403 maunds.

President.—Am I right in thinking that the lower cost is due to higher yield?

Mr. Sethi.—Exactly, and in spite of the fact that the cultivator in South Bihar has to pay extra rate for irrigation.

Dr. Jain.—What is the range of variation?

Mr. Sethi.—From 327 maunds to 577 maunds. In the case of ratoon the cost is 1 anna 5 pies and the average yield is 286: variation from 177 to 525 maunds.

President.—There is one item in costing which I gather is not taken into consideration and that is what may be called insurance against abnormal season. The previous Tariff Board allowed 3 pies or some such figure on that account, not for ordinary fluctuations from year to year but for abnormal seasons owing to serious deficiency or excess of rainfall and so on.

Mr. Sethi.—As it happens during this particular enquiry in one particular year, 1934-35, we had serious floods, we had also the after effects of the earthquake and the yields were very seriously affected, and, therefore, I think when the whole thing is statistically worked out the data they would have supplied would give a fairly accurate figure even allowing for those abnormal conditions. In that year the cost of cultivation in North Bihar was the highest at 3 annas 8 pies, whereas in the subsequent years the cost of cultivation in the second year came down to 3 annas 2½ pies and the next year to 3 annas.

President.—In the course of our enquiry we have been obtaining evidence from as many cultivators as possible and we shall probably compare those results with the figures supplied by large scale cultivators who employ hired labour. That is one line of investigation. The second is, from factories who grow their own cane, to find out what their costs are and lastly, the results obtained on agricultural farms. We shall probably use these for purposes of comparison. We note you have given very interesting figures of cost on agricultural farms.

Mr. Sethi.—With your permission I would like to make the point clear. The figures that I have given are figures from agricultural farms which are run as commercial concerns. These farms belong to an Estate which is under the Court of Wards at present and one of the conditions of starting these farms was that they should be run on commercial lines. One has been running for seven years now and I have got detailed figures for these seven years as to the cost of production of cane. We have produced cane at as low a price as 1 anna 10 pies per maund taking into consideration all overhead charges, rent, depreciation, etc. In one year, during the earthquake year, when conditions were abnormal the yields were low and the costs went up and our figure came to 3 annas.

President.—In working out the averages would you really include that year?

Mr. Sethi.—I think so because there are years when floods and pests do a great deal of damage and those would be comparable to that particular year.

President.—Would not damage done by earthquake be more than that?

Mr. Sethi.—It would be, but every field was not affected. In this case we have got seven years figure.

President.—It was an abnormal year; would you not allow for an abnormal year?

Mr. Lall.—Three years is not enough to give you a good average.

President.—Would you be inclined to exclude that abnormal year and take an average based on the other six?

Mr. Lall.—If we exclude that year the cost would come to very much less.

President.—On the other hand that might be taken as allowing for some insurance. I do not know how often you would expect an abnormal year in a cycle.

Mr. Lall.—Once in seven years. Our weather cycle is seven years.

President.—That fits in. We will consider that point as to whether that should be included or not. You don't think that the cost in that year would

be so abnormal as to exclude it altogether? Would the loss by drought and serious flood be approximately equal to that by earthquake?

Mr. Lall.—It would be. The difference is so little between the average price and the price in that year, 2.54 annas against 3 annas, that the .46 anna may be taken as compensating for a bad year in the weather cycle.

Mr. Sethi.—We have taken the actual conditions and where there is stripping we have calculated the cost of fodder. In North Bihar when the cane is stripped, in return for labour the labourer takes the green tops as wages and we have taken the value of these tops on the value of fodder in those localities.

President.—Stripping if done comparatively early is an asset, but if it is done late in the season it is a liability?

Mr. Sethi.—That is correct.

President.—So it is rather difficult to apportion it?

Mr. Sethi.—That is right.

President.—Is interest on working capital included in that?

Mr. Sethi.—Yes, both in the case of the farm as well as in the case of the cultivator's own field.

Dr. Jain.—What average have you taken?

Mr. Sethi.—I have not got the detailed figures with me but I shall be glad to supply them.

President.—We should like to have figures on the same basis as the Imperial Council of Agricultural Research.

Mr. Sethi.—Yes.

President.—Have you allowed for depreciation.

Mr. Sethi.—Yes.

President.—On implements and stock?

Mr. Sethi.—On everything.

President.—On the question of transport of cane, that raises a good many issues as to what should be taken as the cost of transport. The previous Tariff Board took the figure of 1 anna 6 pies which also included insurance. We should not take insurance; if that has to be taken we shall take it separately. Therefore we would like to arrive at some average figure for cost of transport. Of course that is a difficult matter as it depends on how far cane is transported. I am speaking for the moment of gate cane.

Mr. Lall.—From the interior to the weighbridge there may be a long lead, as long as to the gate.

President.—It may be. Generally speaking we have been told that the lead to the weighbridge and to the railway stations must be rather less than if the cane goes direct to the factory.

Mr. Dhar.—It does not follow necessarily.

President.—Sometimes gate cane comes up from a distance of 20 miles. Conditions in Bihar may be different from what they are elsewhere. However your contention is that there is not very much difference between rail cane and gate cane in respect to the lead.

Mr. Dhar.—I have taken the average of 8 miles as the lead. It works roughly to about 1½ pies per maund per mile, or one anna from the field to the weighbridge. This is what is charged to the grower. There are other factors such as railway charges and so on which the manufacturer pays.

President.—The manufacturer pays rail charges and so on from the weighbridge to the mill?

Mr. Lall.—In some districts it is higher and it goes up to 2 annas in some cases.

President.—We generally distinguish between gate cane and rail cane for the purposes of our investigation.

Mr. Dhar.—Everywhere there is a weighbridge, and the cost of transport to the weighbridge or even at the gate roughly works out to one anna per maund.

President.—What is the general condition of communications in Bihar?

Mr. Lall.—Generally very poor indeed.

President.—Is it a fact that carts are not allowed on metalled roads?

Mr. Dhar.—It is so in North Bihar. District Board bye-laws prevent carts from going on the pucca roads.

President.—What about South Bihar?

Mr. Lall.—There is no restriction.

Mr. Dhar.—The problem does not arise so intensively here because we have no intensive location of sugar factories as we have in North Bihar. Road conditions are quite different here.

President.—One fact which struck us was the absence of lateral communications in South Bihar.

Mr. Dhar.—It is worse than North Bihar. In Bihar generally we have very soft earth and the Kucha roads are all full of dust.

President.—It struck us that the metalled roads in South Bihar are rather better than in North Bihar.

Mr. Lall.—There are no metalled roads.

Mr. Dhar.—Except one main road and even that they have not been able to maintain.

President.—Communications are generally worse in North Bihar than South Bihar?

Mr. Dhar.—Yes, because there is flood havoc almost every year.

President.—Is cane transported in any other way, say, by water to any extent?

Mr. Lall.—The Rohtas factory have got a ropeway. I think they also tried lorries. They transport their cane from a distance of 30 miles to the factory. So far as waterways are concerned, Rohtas factory are still transporting by canal from a distance of about 18 miles quite a large quantity of cane. There are also tramways.

President.—What is the view of the Local Government about tramways? Do they encourage?

Mr. Lall.—They do encourage.

President.—Are they in favour of it?

Mr. Lall.—They help to acquire land.

Mr. Dhar.—I do not know their recent policy. We did encourage them at first on condition that they maintained the whole width of the road and they took it over from the District Board and they ran their tramway in one portion and they had to maintain the other portion for other traffic.

Mr. Lall.—The trouble has been with the District Board and not with the Government. The Lohat Factory complained that their tramways are alongside the road and that the District Board charges are so exorbitant that it didn't pay them to maintain it.

Mr. Dhar.—As far as Darbhanga was concerned I found they were against it. On this question of tramways, I find you are examining the Chairman of the District Board of Mozuffurpur, Mr. Chandareswar Prasad Narayan Sinha; he will be the best person to explain the position.

Dr. Jain.—Is he here?

Mr. Lall.—He is a member of the Assembly. He might give you some information as to the difficulties between the Board and individual factories. He has had some experience. I think he would give you some information on that point.

President.—Do the factories bear the charge of transport by tramways?

Mr. Lall.—The cost of transport is theirs. When once cane is delivered at the weighbridge, the factory has to bear the cost of transport.

Mr. Dhar.—We have not allowed for that in our general calculations for the reason that they are compensated by getting fresher canes and they are saved the dryage and they don't go very far. We have not dealt with the transport from the weighbridge to the mill, but it will be dealt with in the cost of manufacture.

Dr. Jain.—Mr. Sethi, you have given us the cost of cultivation for plant cane as 2 annas 10 pies and the average yield as 403 maunds for South Bihar.

Mr. Sethi.—Yes.

Dr. Jain.—In the reply to the questionnaire by the Local Government it is said that the average yield for North Bihar is 250 maunds and for South Bihar 350 maunds.

Mr. Sethi.—That figure is taken for the purpose of our forecast.

Mr. Lall.—In all our statistics that figure has been taken.

Dr. Jain.—In North Bihar the two figures tally, but in regard to South Bihar there is a difference of nearly 50 maunds.

Mr. Lall.—Our figures are the figures which are taken whenever we prepare our crop statistics.

Dr. Jain.—Do I understand 403 maunds is the more correct figure?

Mr. Sethi.—Yes so far as this particular area is concerned.

Mr. Lall.—It depends upon the amount of sampling done.

Mr. Sethi.—50 holdings in six villages in one district.

Mr. Lall.—As a matter of fact I have got one comment to make on those figures of the cost of cultivation. In my opinion it is not enough.

Mr. Sethi.—This question was very thoroughly discussed by the Imperial Council and the Statisticians were very clear on this point that the figures they fixed on were the figures from which they could accurately work statistically the data required.

Mr. Lall.—I doubt it.

Mr. Sethi.—That is the opinion of Statisticians. The figure of 350 maunds for South Bihar is an accurate figure to take.

Dr. Jain.—How was the sampling done?

Mr. Sethi.—We went into the village and selected 50 holdings. It was done for 3 years.

Dr. Jain.—Was it a question of whoever agreed to give information?

Mr. Sethi.—Yes.

President.—That is not scientific.

Mr. Sethi.—The random sampling of the holding was not scientific.

President.—The system is all right.

Mr. Sethi.—Yes so far as details are concerned. We didn't change the holding from year to year.

President.—I am thinking of the way in which you selected the holdings.

Mr. Sethi.—You cannot force a man if he doesn't want to give his holding.

President.—Did it vary very much from the scientific random sampling which you would otherwise have worked?

Mr. Sethi.—It would, because when you are doing random sampling, you pick up 3, 6, 9 and stick to that.

President.—That is what ought to be done.

Mr. Sethi.—In this particular case the man says: "No, I refuse to submit my holding to you for the next three years".

President.—Could you not take like this—3, 6, 9 etc.?

Mr. Sethi.—Yes in some cases, but there were certain cases in which the man refused.

President.—What would be the percentage?

Mr. Sethi.—I am sorry I could not tell you. The yield of 350 maunds is not very far off. Take for instance last year. The average for these 6 villages is as follows:—540, 340, 466, 314 and 431. So for our statistical purposes 350 maunds yield that we have taken is a fairly representative yield for the whole year in South Bihar where there are 150,000 acres under cane.

Mr. Baksi.—On a point of information how was the land selected?

Mr. Sethi.—We went to the village and decided on the question of holdings. To work out an actual average we have to take the whole area of different classes of land, but in practice that is an impossibility.

Mr. Khanna.—Year before last the Imperial Council took up the question of soil survey and this very difficulty cropped up as to what was the random sampling to be taken in conducting soil surveys, whether we should take soil samples for about 50 or 20 miles, it was thought that the best thing would be to limit the distance to 50 miles in the first instance and then see for two or three years the result obtained and later on if experience suggests either to modify in favour of a very much narrower distance or of a longer distance for samples of soils. Similarly with regard to this enquiry if it were entirely to be random sampling, one would have to take not 50, but 5,000 holdings, but in the enquiry it was found that to begin with we could take perhaps a smaller number of holdings, work out the costs and compare the costs so obtained with the average costs of a cultivator for the last 10 years either as reported by Governments or other local bodies. If those figures compare favourably, we could take these as representative. That work is being done by the Imperial Agricultural Council.

President.—No doubt the Imperial Council have expressed the value of such surveys.

Mr. Sethi.—The figures have been worked out statistically by the Imperial Council's Statisticians.

President.—Perhaps we might now pass on to the question of fair price. The previous Tariff Board taking 8 annas as the fair price for the sugar producing belt thought that it might fall to 6 annas. Actually I don't think since the last Tariff Board reported, the average price paid by factories has reached 6 annas.

Mr. Lall.—I don't think it has been reached.

President.—Except at the end of the season they pay a little more. In certain cases Re. 1 has been paid.

Mr. Lall.—12 annas.

President.—But I am now talking about averages. 4 annas 3 pies a maund would be a fair price.

Mr. Lall.—Not less than that. I am not yet satisfied as to the cost of cultivation and I am still waiting to see further figures about the cost of cultivation. I don't think anything less than 4 annas 3 pies would really meet the cost of cultivation.

President.—That is the very minimum.

Mr. Lall.—I should say that it is even low. To that figure has to be added the cost of cartage.

Mr. Dhar.—In other words less than 5 annas does not really fully compensate the grower.

President.—In the field.

Mr. Dhar.—5 annas plus one anna would be a fair price. 5 annas might just compensate, but less than that it would not.

Mr. Sethi.—Basing my figures on the figures of cultivation that I have, I consider that 4 annas 6 pies clear on the field is the absolute minimum price that he ought to get. That is the minimum price and not the fair price. I consider there is a big difference between the minimum price and the fair price. Fair price is the price that he ought to obtain on the basis of sugar recovery out of cane. Minimum price is the price which will give him a fair margin of profit over the cost of cultivation. I consider that 4 annas 6 pies per maund clear on his field is the bare minimum price.

Dr. Jain.—Bare margin of profit. It will just compensate him for the labour etc. and not allow him any profit.

Mr. Sethi.—In my cost of cultivation I have taken his labour into consideration. If I take 3 annas 6 pies as the cost of cultivation and 4 annas 6 pies as the minimum price, that allows him one anna a maund for a crop which keeps him engaged from 14 to 18 months. He has really lost two crops. This allows him on the basis of 250 maunds a profit of something like Rs. 15-10-0 over a period of 12 to 14 months. That I think is a very low profit on a crop on which he has got to spend a lot of money.

President.—While on this question of cost of cultivation there is one point I have omitted and that is the average cost of irrigation. That applies mainly to South Bihar. The canal rates seem to vary a good deal, but one has to take some sort of an average. In Mr. Sethi's note he has given Rs. 7-8 on some canals, Rs. 12 on another canal and on another canal only Rs. 5.

Mr. Sethi.—Yes.

Mr. Lall.—Didn't you get a separate answer that was given by the Industries Department?

President.—I find a little difficulty in following the answers given by the other department. Mr. Sethi's note is very plain. The note they have given is rather difficult to understand.

Mr. Sethi.—May I explain the difference between the particulars that have been given by the department and the figures that I have quoted?

President.—Yes.

Mr. Sethi.—The canal that really counts in the case of sugarcane is the Sone Canal in whose case I have said that the rates are Rs. 12-0-0 per season. Now these rates are divided into two parts. There is what they call the monsoon rate which is a permanent liability of Rs. 3-8-0 an acre. It is really the irrigation charge for irrigating rice. When a cultivator takes lease for sugarcane and does not want to pay for particular irrigation during the off season, he has to pay that Rs. 3-8-0 for which he gets no benefit. In addition he has to pay Rs. 7-8-0 to Rs. 8-8-0 for the off season irrigation which is really the sugarcane season irrigation so that the rates go up to Rs. 12. If he wants to escape the kharif season irrigation charges which are really for paddy then for off season irrigation he has got to pay for each irrigation. The rate per irrigation for water from the canals varies from Rs. 1-14-0 to Rs. 2-8-0. When he gives four irrigations, he may have to pay Rs. 10. In order to ensure that he gets the hot weather irrigation cheaper, he usually pays the full rate, but the hot weather irrigation alone according to the Irrigation Department for sugarcane is Rs. 7-18-0 on an average.

President.—It has been a little difficult to follow their answer.

Mr. Sethi.—In the case of the Tribeni canal they charge only Rs. 5.

President.—Is that an important sugarcane growing area?

Mr. Sethi.—That is the north-west portion of the Champaran District. The canal irrigation has not been developed there, but they want to develop that. Cane can be grown there successfully as it has been done in practically all over North Bihar.

President.—We have to assume some average irrigation rate. The most convenient system would probably be to take the average of the most important canals on which sugarcane is actually grown. That will probably be the fairest way of doing this. What about the other canals?

Mr. Sethi.—The other canal is the Dhaka canal. That has got very small irrigation.

President.—Some canal is important.

Mr. Sethi.—That is the most important.

President.—Rs. 12 would be a fair figure to take.

Mr. Sethi.—Yes.

President.—I do not know in the statistical enquiry conducted by the Imperial Council what they took for irrigation.

Mr. Sethi.—We took the actual irrigation charge that was paid. In South Bihar it comes to Rs. 11-8-0 to Rs. 12.

President.—In North Bihar, most of the crop is mainly unirrigated.

Mr. Sethi.—Yes.

President.—Though a man may sometimes use water from a well.

Mr. Sethi.—In the south of the Saran District a good deal of cane is grown under well irrigation.

President.—And that is fairly extensive.

Mr. Sethi.—The cost as I have said, when using bullock labour, works out to Rs. 11-11-6.

President.—Is the bulk of the crop grown without well irrigation?

Mr. Sethi.—The major portion of the crop is without irrigation.

President.—May we take North Bihar as mainly unirrigated?

Mr. Sethi.—Exactly.

President.—Is it more or less similar to the adjoining area in United Provinces viz., Gorakhpur?

Mr. Sethi.—Only part of it. South Gorakhpur is irrigated where they have heavy soil.

President.—Actually the proportion is about two-thirds unirrigated and one-third irrigated.

Mr. Sethi.—In the area bordering on Terai where the soil is light they do not irrigate.

President.—As I mentioned Gorakhpur I should like to ask you a very important point. Of course, we have to compare province with province and principally United Provinces with Bihar. The other day we were examining Messrs. Begg Sutherland and Company who have factories in both areas. In the course of the examination it came out that the cost of cane in Bihar factories was higher than the cost of cane in United Provinces factories and the reason assigned by the representatives of the Begg Sutherland group was that the Bihar cane was more diseased than the United Provinces cane and therefore the sucrose content was on an average less. The recovery rate was less. We know that the recovery rate in Bihar is somewhat less than in the United Provinces.

Mr. Sethi.—We have worked out the incidence of disease on cane in two ways. Dr. Haldane of Messrs. Begg Sutherland and Company works out that the loss to Bihar amounts to 80 lakhs a year. On the other hand we have been keeping fairly comprehensive data at our research stations annually and we find that the loss works out to 14.6 lakhs on weight of cane

and 15 lakhs on sucrose. But this is a point to which I would not like to commit myself definitely at all because we have not really worked out the incidence of disease in any detail. We hope, now that we shall have a small Entomological staff, to be able to carry out a detailed survey of the incidence of pests on cane to find out the exact loss. So far as recovery is concerned, I submit that it is not due to the cane that the percentage of recovery in Bihar is less. The cane in Bihar is equally as good in its sucrose content as any in the United Provinces. It may be that the average recovery of factories in Bihar is not good.

President.—They rather attributed to the greater prevalence of disease in Bihar as compared with Gorakhpur for instance.

Mr. Sethi.—I am not prepared to accept that opinion because I consider that the incidence of disease in Saran and Gorakhpur is about the same.

President.—Dr. Haldane's figures rather support the conclusion that the percentage of loss in Gorakhpur is rather less than in Bihar.

Mr. Sethi.—It depends on how Dr. Haldane sampled the cane in Marhowrah or how he gave instructions to his staff to sample the cane as it came along in carts. If one of the joints is affected, the whole cane is not affected. Of course if the whole cane is affected, it is certainly useless. But if one of the joints is affected, it is not going to seriously affect the recovery of sugar and it is quite possible with the factories in the United Provinces either the sampling was wrong or the conclusion of the man who was sampling was wrong. As you know, statistics are such that you can draw any conclusion you like from them.

President.—I find that the average recovery rate for North Bihar is less than that for the Eastern United Provinces.

Mr. Khanna.—Where we consider the comparison between parts bordering on United Provinces and parts which belong to United Provinces we must consider the irrigated and unirrigated cane.

President.—The comparison is between Eastern United Provinces and part of Bihar.

Mr. Khanna.—In the case of unirrigated areas (where cane is irrigated only to a small extent) we find that it is not so much to the incidence that we attribute the low recovery. It is due in the first place to the loss of moisture due to dryage because of the light soils which do not retain much of moisture towards the latter stages of the cane crushing season and in the second place to the high fibre content of the cane. If we make a comparison between irrigated and unirrigated cane, during the month of April, the difference in loss may amount to 12 per cent. in purity alone.

President.—We are taking for comparison Gorakhpur which is mainly unirrigated.

Mr. Dhar.—I have an important factor to urge, in connection with recovery, from the administrative point of view.

Mr. Lall.—Is the crushing season of the same duration?

President.—It is the average for the whole season.

Mr. Dhar.—I have got something to say from the sugarcane administration point of view which has an important bearing on this question. We have eight inspectors, to see that the raiyats are not cheated. The figure of recovery will go up or down according to the extent to which you get the false or correct weight.

President.—The recovery rates are averaged.

Mr. Dhar.—They are taking extra cane and showing better recovery. We have got 8 inspectors and they have also 8 inspectors for twice the number of factories.

President.—They are cheating more you mean?

Mr. Dhar.—Yes, and therefore their recovery is more.

Mr. Lall.—They have admitted that.

Mr. Dhar.—I can prove on these figures with me. I have figures for four factories which are clearly cheating and which have been included in Mr. Srivastava's calculations.

President.—These recovery rates have to be accepted with a grain of salt in some cases.

Mr. Dhar.—In our case the increase in recovery is .2 per cent. whereas in the case of the United Provinces it is .5 per cent.

President.—Begg Sutherland's who have factories in both areas are definitely of that opinion. I may say that their dividends also support that conclusion.

Mr. Dhar.—Yes, if more cane can be got for the same price.

President.—Begg Sutherland's are exempted from this charge. Every one agrees that the Begg Sutherland group is one of the few honourable exceptions.

Mr. Dhar.—I am not quite prepared to say that. There are various ways by which the raiyats are cheated. There is one thing which we have been discussing, viz., dryage or loss in transit. To get over this, they make the purchasing agent responsible for the loss due to dryage in transit. The purchasing agent has to deliver at the mill the same weight of cane which he is supposed to have bought from the grower. There is loss due to dryage in transit and that loss is borne by the grower. These remarks apply also to Begg Sutherland group to a certain extent when they deal through a purchasing agent.

President.—Begg Sutherland's run their factories on similar lines in the two provinces and they have made the comparison.

Mr. Sethi.—So far as the losses due to insect pests are concerned I am prepared to accept the statement of Messrs. Begg Sutherland and Company that the losses are great. There is no doubt about that. But what is the extent of the loss I am not prepared to say anything on that point at present but it is true that the incidence of pests on cane crop is definitely on the increase.

President.—Another suggestion has been made that there may be something in the question of land tenure. The raiyats in the United Provinces have a greater incentive to better cultivation under their system of land tenure.

Mr. Lall.—Here we have zamindari system. I think in the Gorakhpur area also they have the same system.

President.—Only in part of it. The majority of the Gorakhpur area I think is on 30 years settlement.

Mr. Lall.—Assuming that Gorakhpur is not permanently settled, I do not know whether the system of land tenure has anything to do with the method of cultivation. The only difference is that the zamindar's rent to Government is fixed for ever, but the zamindar cannot enhance the rent of the raiyat except under conditions laid down in the Act. Once a settled raiyat occupies a land, he acquires occupancy right. The landlord cannot do anything against the law. I don't think that tenancy system has anything much to do with the method of cultivation, but I am not a revenue expert. If you want evidence on that point, you would have to ask a revenue expert.

President.—I don't think that it is a point which we need pursue further.

In answer to question 7, you have given us some remarks on the question of overproduction. The factories started late and the crushing season went on for a long time. There was a large surplus and so on. Can you give us an estimate of what the surplus was?

Mr. Dhar.—I can send it later. (This was supplied later in the day.)

President.—Would it be 35 per cent.?

Mr. Sethi.—That is fairly accurate.

President.—Is it the same for North and South Bihar?

Mr. Sethi.—Yes.

President.—I gather that in South Bihar the question of cane being left standing did not arise.

Mr. Sethi.—It was left standing in parts of Shahabad district

Mr. Lall.—The Dehri factory came to the rescue of the growers. It continued crushing for a pretty long time and that took off a good bit of the surplus cane.

Mr. Sethi.—According to my estimate the total estimate of the surplus was 27 lakhs of maunds.

President.—How was that distributed between North and South Bihar.

Mr. Sethi.—North Bihar carried something like 21 and South Bihar 6 lakhs.

President.—Is that in proportion to the acreage?

Mr. Sethi.—Yes. There was particularly in one area in Bhagalpur and Purnea between 5 to 6 lakhs of maunds.

Mr. Dhar.—The estimate of surplus according to the Collector of Muzaffarpur is 30 lakhs of maunds: 9 to 10 lakhs in Darbhanga which includes a part of Bhagalpur. The total is much more than that.

Mr. Lall.—As a matter of fact the factories crushed 28 per cent. more than they did last year.

Mr. Dhar.—Many of them removed their cane and started growing other crops.

President.—The same difficulty arose in United Provinces.

Mr. Lall.—We have really no accurate figures.

Mr. Sethi.—On the 14th April it was reported to the Commissioner that in the Tirhut Division there was a surplus of some 14 lakhs of maunds.

President.—With a reduction in acreage of 30 to 35 per cent. is there likely to be a surplus of cane in the coming season?

Mr. Lall.—It depends on when the factories start their crushing and how long they work. I am told that the factories are thinking of starting late this year. And then it depends also on the minimum price that is fixed. If the minimum fixed is high they will stop early and it is very difficult to say whether there will be a surplus or shortage. If conditions are normal—last year was not normal and the year before last there was a shortage of cane—if there is a high minimum price and if the factories start crushing late, it may be that all the cane crop may not be taken. Gur prices have remained very low and the growers will try to sell to factories. That was the trouble in South Bihar. There should have been no surplus at all; but the growers gave up making gur and they all rushed to the factories and that was the reason why there was a heavy surplus.

President.—Is there any gur manufactured in North Bihar?

Mr. Lall.—Only in very small quantities.

Mr. Dhar.—With the present sugar prices and the excise duty, the margin to the manufacturers is so little that there is danger of their starting late this year in order to get high recovery, and if they do so there will again be some trouble.

President.—All this rather leads to the very important question of zoning I do not know how far you can talk on that subject. Is the matter under consideration?

Mr. Lall.—On this question of zoning I can give you information about what we have done so far.

President.—It has been suggested that by the successive reduction in the price of cane actually the factories did pretty well?

Mr. Lall.—I think they did.

President.—That actually the reduction in the price of cane compensated them for the extra exercise duty.

Mr. Lall.—The extra excise duty was borne by the grower.

Mr. Dhar.—I would qualify that slightly. With the increase in the excise duty prices did not go up; that being so the factories had very little margin and therefore ultimately we had to reduce the price of cane otherwise factories could not possibly have been able to work and we distributed the loss in that way between the factory and the grower.

Mr. Lall.—Mr. Dalmia's factory at Rohtas probably incurred a loss towards the end as they wanted to close down but continued crushing at the instance of Government. A special appeal was made to them and they agreed to carry on for another fortnight. All factories did not keep on crushing. Some went on crushing only till they found that they could not make any profit. The Rohtas factory and some others continued very late.

Mr. Dhar.—If we had not given this reduction and the factories had closed after the normal period, we would have lost a couple of crores of maunds of sugarcane. We were suffering from another disadvantage. At that time our prices were higher than in United Provinces and 30 lakhs maunds of cane which goes there stopped going there.

President.—Let us pass on to the question of zoning.

Mr. Lall.—I will tell you what the tentative proposals are. These proposals are under discussion with the United Provinces Government. The whole trouble is that at present we find that factories have been encouraging cane cultivation all over, not necessarily near the factories but far away, and they are going further and further afield because they think that if they get cane grown on virgin soil they will get better cane and better recovery. This process has continued to such an extent that there will be a surplus and the growers will be hard hit. To get over this the only thing to do is to have some sort of planning for cane cultivation. This will be to the benefit of the industry as a whole. There are three ways in which planning can be done; the first method of planning would be to take over the whole marketing of cane by some agency which would be either Government or a board run by Government, consisting of Government representatives, representatives of growers and sugar factories. No purchases will be made by a factory except through the marketing board. This method was adopted in Bihar and worked with very great success during the earthquake. A number of factories were badly damaged and could not crush and there was a large quantity of surplus cane. Government set up a marketing board which took over the surplus and by this means the price which the grower got was a little over 4 annas. We know that if the marketing board had not been established the cane grower would have had to sell his cane at 2 annas a maund. The second method is by zoning and the third method is by compulsory bonding. The first method would mean a very heavy cost to the industry. We will have to organise a complete staff for all factories and take charge of a very big organization. There may be complaints against government servants just as there are complaints against the factory staff. I think most of the factories would not rely on Government staff and they would have corresponding staff of their own to check what the government staff was doing. This would mean a certain amount of duplication of staff and heavier cost to factories. So the first method is not considered feasible. As to the second and third alternatives, the second is certainly more difficult to work. As regards the third alternative there is one important objection with compulsory bonding you are leaving the factory to bond with any grower it chooses and there is danger of corruption. Therefore if you really want to protect the grower you have to fall back upon the second alternative, namely, zoning. This was considered necessary long ago. The previous Tariff Board considered the possibility of zoning. The objection to it is that you are leaving the grower at the mercy of a single factory. The answer to this main objection is that even if you do not have zoning you are as a matter of fact leaving the grower at the mercy of the factory because what these factories are doing is to have

a private "gentleman's agreement" among themselves which amounts to zoning. They fix areas for themselves by agreement and undertake not to go into each other's zones. We have had complaints from growers that if one factory stops crushing the other factory refuses to take their cane saying, "we have come to an agreement with this company not to go beyond a particular border".

Mr. Dhar.—There was one area which was developed by one factory and then suddenly came to a sort of zoning arrangement and the factory which took over said "we won't take your cane, we have got cane in another zone" and in this way we lost about 5 lakhs maunds of cane last year.

Mr. Lall.—In the earlier stages of the industry zoning by private agreement was very rare—only Begg Sutherland and Octavius Steel did it—but it is spreading very rapidly. Every factory has zoning and the growers are being left at the mercy of the single factory. From the agricultural point of view, as Mr. Sethi says, the grower can get a very much higher yield provided he has more money to invest on his land, if he can manure it and get proper seed. Formerly sugar factories used to give advances but with the expansion of the sugar industry and expansion of sugar cultivation they are not doing so because they do not know that they are going to get the cane and they are not certain whether they will take it. If factories were encouraged to get zones, they would try to take cane from that zone and will try to develop that zone so that they may not have to go further afield: most of the cane would be gate cane and that would prevent unnecessary loss in railway traffic. If we are going to have zoning we must see that the grower is adequately protected. The protection to the grower is that we must make sure that every bit of cane that the grower grows within the zone is taken by the factory. If we can't guarantee that all his cane will be taken and give the grower the right to sell whatever he has, he will be helpless because he will not be able to sell to other factories.

President.—We were told by one honest cultivator in the Punjab that "we try to pass off diseased cane to factories because they try to do us"!

Dr. Jain.—In United Provinces it was the other way: they said that the cultivator hardly cheated. What about Bihar?

Mr. Lall.—We say that in Bihar if the cultivator is cheating he is more sinned against than sinning. They are too weak against the mills.

Mr. Dhar.—There is what they call "home convention" by which the railways help the factories in forming zones.

Mr. Lall.—The railways referred the matter to us last year and the reply that we gave was that they should not have "home convention" without the approval of the district sugarcane committee. We have got to see what protection we can give to the grower. The first point that arises is, should we give the factories 75 per cent. zone as was suggested by the Sugar Committee or a smaller percentage. In Bihar we have not got any accurate survey of cane areas and it would be rather risky to take 75 per cent.: we have thought that it would be better that a smaller percentage, viz., 50, at least for some years will be necessary. The factory has to give an estimate of its cane requirements for the following season before the planting season commences, say about October. That estimate will have to be checked and then that factory will be given a zone for its requirement. In some area it may not be possible to give a zone as there are too many factories close to each other. If we give a zone at 50 per cent. of its requirements then we require a factory to maintain a register of all growers within that zone. In this register they will have to enter the names, etc., of all growers and members of cane-growers' co-operative societies within the zone. If they do not register their names the grower or the co-operative society will have the right to go to the Collector who can order the factory to enter the name in the register. If co-operative societies are formed within the zone the factory must buy cane from that society.

President.—Do the two things go together. The Co-operative Societies and the zone, are they indispensable?

Mr. Lall.—Not indispensable. We hope that the Cane-growers' Co-operative Societies will succeed but on this Mr. Baksi will give you more information. They are certainly promising but we cannot be too sure how far they will develop. If they don't succeed, the factories can go to individual growers. At present there is a tendency on the part of factories not to have anything to do with Co-operative Societies. It is very easy for them to say that these Co-operative Societies are unbusinesslike. But when you are organising supply from raiyats to the factory on such a large scale some mistakes are bound to occur. Even the best agents make blunders. That cannot therefore be a reason for not dealing with Co-operative Societies.

Mr. Baksi.—Except in one area there is no complaint—not a single one. Infact we have got very good chits from Managers of Octavius Steel Company, and Begg Sutherland and Company.

President.—When you say the factory have to give their requirements, will the price of cane be fixed at that time?

Mr. Dhar.—No. The price of cane will have to be fixed when the season comes up.

President.—When will that be?

Mr. Dhar.—Just before the commencement in October.

President.—In the course of our enquiries we have been told that in some parts of the country factories enter into agreements with the raiyats for the supply of cane at a definite rate.

Mr. Lall.—Most of the agreements are that they will buy at the minimum rate.

President.—They have a general idea that it depends upon the price of sugar. Are you going to have an absolute minimum based on the cost of cultivation?

Mr. Dhar.—Government have not come to any decision. We are having a joint discussion with the United Provinces to arrive at an absolute minimum and then a scale.

President.—One point that struck us was during the course of our enquiry about the minimum price, that the same price was being paid for good, bad and indifferent cane.

Mr. Lall.—That is a great drawback and nothing extra is provided for the early and late varieties.

President.—There is no incentive to the raiyat to grow better varieties of cane from that point of view.

Mr. Lall.—Provision has been made in the bill for giving a premium for early and late varieties.

President.—Even now there are some factories which give bonus.

Mr. Dhar.—Yes.

Mr. Sethi.—Only from this year. They used to pay an anna premium before the minimum price came in for Co. 214, an early variety. The moment the minimum price came in, they stopped paying premium. They were all anxious to get 299 and 281 grown, but they were not prepared to pay any premium. Early varieties are inherently low yielders. Last year they had no alternative, but to pay a premium to get these varieties grown, otherwise the cultivator refuses to grow them as it doesn't pay him.

President.—We have been told that the practical objection to this bonus system is due to the difficulty in distinguishing the different varieties of cane.

Mr. Sethi.—That point has been mooted in the case of one particular variety which is a late variety, Co. 331. We have not decided whether it should be distributed on a large scale. So far as the early varieties are concerned, there is no difficulty in distinguishing them. When the zone comes—we have details about the land cultivated by each cultivator—it would not be difficult to make arrangements to have the early, mid-season

and late cane in such a manner that the factory gets a regular supply out of the zone of all the varieties for the whole season.

Mr. Lall.—There is one thing about zoning. The factory will have to deal with the grower. It can promote different varieties to suit its own season. Now when they are buying at random, it can't do so.

President.—Another suggestion that has been made to us in regard to the bonus system is this. It is all very well for early varieties, but it is much more difficult in getting the raiyat to bring the late variety without mixing it.

Mr. Sethi.—The industry has not made up its mind with regard to the late varieties. There are certain early varieties such as 313 which carry on fairly late in the season. 213 carries up to 20th April, but the industry has not made up its mind whether they really want a variety which will really carry them right into the middle of May. The research workers are absolutely in the dark whether to work on that line, but we are carrying on in the hope of producing a universally late variety—I am very doubtful about it myself—which will carry the crushing season right into the middle of May.

President.—They are all agreed about the early variety.

Mr. Sethi.—Not only agreed, but they want it and they encourage as much as they can.

President.—Do you think it is really an advantage to extend the crushing season to May?

Mr. Dhar.—If they could get a good recovery, the factories can work for a pretty long time.

President.—It may be unfortunate to the grower, because he will have to keep the crop standing for a very much longer time.

Mr. Sethi.—That is exactly where the bonus comes. Late varieties are inherently heavy yielders and early varieties are inherently low yielders, but the time factor will have to be taken into consideration, because in the one case the cultivator will probably have to keep the cane standing for anything from 4 to 6 weeks longer than the mid-season cane.

President.—There is a definite danger that the raiyats will keep their cane standing after the period of maturity.

Mr. Sethi.—That danger would exist if we have no control over the supply of cane.

President.—Therefore zoning system is necessary for that purpose.

Mr. Sethi.—Yes. With your permission I should like to emphasise the question of the zoning purely from the point of view of protection to the industry. If we visualise that protection will never come off, it does not matter what you do. You can allow the cane to be grown as it is being grown at present, but we hope that protection at some future date would come off and that the sugar industry in India should be able to stand on its own legs and compete with Java sugar and be able to export sugar to other countries. If that is assumed, it is very essential that the agricultural side of the problem which in my opinion is the only problem of the industry should be attended to. Ways and means must be found to increase the yield and to improve the quality of cane. I cannot see how this can be done except through zoning. Each factory area requires anything from 1½ to 1¾ lakhs of rupees every year for manure and better cultivation. I don't think that any agency, whether Government or Co-operative is in a position to advance every year money to the extent of Rs. 40 to 50 lakhs which will enable the cultivators to improve the cane within the next 5 years so as to bring the yield of cane from 250 maunds to 500 maunds per acre.

President.—And double the present yield.

Mr. Sethi.—Yes with an additional cost of Rs. 20 to Rs. 25 an acre.

President.—What difference will that make in the price per maund?

Mr. Sethi.—It will bring down the cost of production from 3 annas 6 pies to roughly 2 annas 5 pies a maund.

Mr. Lall.—There is likely to be a saving in transport.

Mr. Sethi.—Factories are in a position to advance money. It is very easy for them to recover it from the cultivator.

Mr. Lall.—The cultivator will be bound to sell that cane to the factory. Any other factory coming and poaching will be liable to prosecution.

President.—Another factory will come and reap the benefit. Very often the cultivator will not only sell it to another factory but will not repay the advance.

Mr. Sethi.—The factories at present only pay a large sum of money in the shape of commission to the so-called commission agents but also incur a good deal of expenditure on railing their cane from areas which are situated at a distance. If controlled zones are brought in both the commission agent and the expenditure on the railway freight are eliminated to a large extent.

President.—I do not know what the railways think about it.

Mr. Lall.—They may oppose it.

Mr. Dhar.—They are satisfied on the ground that a certain amount of sugar industry is better than no sugar industry.

Mr. Sethi.—The factories would only be too glad, but they are not sure whether another factory next door to them will not come and buy that cane.

President.—In some parts of India this congestion of factories does not exist. We have visited the factories. We know of a factory which gives advances to the extent of Rs. 3 or Rs. 4 lakhs every year and it has had no bad debts and this practice has been going on for 10 or 15 years and during this long period no bad debts have been incurred. It is rather an interesting evidence.

Mr. Baksi.—So far as credit facilities go, Co-operative Societies may not be able to finance them, but if there is an assurance of repayment, there would be no difficulty in raising from private sources even 10 times the capital.

President.—If money is advanced to Co-operative Societies, it will have to be recovered by factories.

Mr. Baksi.—We make our own recoveries.

Mr. Dhar.—Provided we are sure of supplying cane to the factories.

President.—Would you get payment from the factories?

Mr. Baksi.—Yes. While distributing money to the raiyats, we deduct the money due to the Societies. Out of the Government of India grant we made advances and we realised every pie.

Mr. Sethi.—My suggestion was that if zoning didn't come into force, it could not be done. Protection to a Co-operative Society without zoning is also possible.

Mr. Dhar.—By bonding.

Mr. Baksi.—As a matter of fact in North Bihar, even if we hand the bill, through it would not be possible to have a reserved area, or bonding, in the case of several factories in Saran District, at least for some time. The question arises how co-operative organisation is going to be facilitated and protected in such areas.

President.—There comes the question of free area.

Mr. Lall.—We cannot fix a zone which will give the factories their full requirements. Therefore there must be a free area.

Mr. Dhar.—In some area it is not yet possible to have a proper zone. In those cases it is proposed that 70 per cent. of the supply will be bonded. It is an arrangement which will be binding on the parties concerned as an alternative to zoning.

Mr. Lall.—Even in the case of zone we provide for bonding. In a free area you must bond for 50 per cent. If there is a zone the factory must have a definite supply of 65 per cent. If there is no zone, it must have a bonded supply of 70 per cent. so that the amount of kushki cane which is a source of danger will be reduced to 30 or 35 per cent.

Dr. Jain.—Why is it called Kushki cane? Kushki means dry.

Mr. Sethi.—In the one case money passes and in the other it doesn't.

President.—Begg Sutherland gave evidence. We discussed with them this question and wanted to know how they stood with regard to this business. They said "if we are going to have bond cane, we will agree to take, but we will want to know what the price is going to be".

Mr. Dhar.—First class factories are now bonding. In spite of the defects of bonding, they have stuck to them so far.

President.—They will have to bond their cane to November or December for more than a year ahead. No body knows what the price is going to be.

Mr. Lall.—Government will declare an absolute minimum. After all, the scale depends on the price of sugar. So if the absolute minimum is known, then there should be no difficulty.

President.—Messrs. Begg Sutherland and Company raised this point. It is important from the grower's point of view and from the factory's point of view.

Mr. Lall.—An absolute minimum should be declared. It may be lowered after 5 or 6 years, if the cost of cultivation goes down. But it must remain for some period of years.

President.—You have also mentioned the question of Java. Do you think that it would ever be possible to get down to the Java level of cost of cultivation?

Mr. Sethi.—No, for the simple reason that our conditions are quite different from those in Java.

President.—We have been told recently that the cost of production of cane in Java is about one anna a maund.

Mr. Sethi.—That may be so. I am not prepared to question that. Both their season and their climatic conditions are very much more in their favour.

President.—You have raised the point that the sugar industry should be able to stand on its own feet. If Java has been able to produce cane at one anna a maund, how is the industry in India to do it?

Mr. Sethi.—If Java does not sell in ports in India below Rs. 3-8 a maund, I think we can fairly closely reach that figure.

Dr. Jain.—How?

Mr. Sethi.—As the efficiency of factory increases and as the agricultural efficiency also increases, we should be able to produce sugar at Rs. 3-8 ex-factory.

President.—Sugarcane represents 60 per cent. of the cost of sugar. The main onus is on the cane. Taking reasonably efficient factories, there is not so much scope for reduction in cost in the future as there was in the past.

Mr. Sethi.—If you take the original figures, before protection came in, recovery in Bihar was 7 per cent. and the yield of cane used to be about 150 maunds per acre. Soon after protection with the new varieties of cane, the recovery rose to 8·2 or 8·3 per cent. and the yield of cane came to about 220 or 230 maunds per acre. The percentage of recovery is increasing. Last year's average was 9·27 from the same cane. It is true that we cannot recover 11·5 or 12 per cent. as Java does. We have not got the cane to-day. We do not know what the future holds for us. We may find the cane tomorrow. I have got a large number of new seedlings and more will be produced in the years to come.

President.—The average for the last season for all India was 9·4 per cent.

Mr. Lall.—Yes.

President.—You speak about the improvement in yield. What about the improvement in sucrose?

Mr. Khanna.—That will improve with the selection of varieties. Manurial treatment will add one per cent. We have no experiments in progress with the object of increasing the percentage of sucrose but it is possible that we may, by crossing certain types of noble cane with the improved varieties, increase the sucrose percentage to 18 per cent. in juice which will give us a sucrose content of 14 per cent. in cane and will raise the factory recovery ultimately by 2 per cent. I do not say that we will be able to discover that cane tomorrow but I do say that it is within the realm of possibility within the next 5 or 6 years.

President.—Have you any possibilities of discovering a wonder cane like P.O.J. 2878?

Mr. Khanna.—We can go up with the present varieties to 11 per cent. or 11·2 per cent. in the mid-season.

President.—Do you mean all season recovery?

Mr. Khanna.—If we get an early variety which will give a recovery of 10·4 per cent., if we have a mid-season variety giving a recovery of 11·2 per cent. and ultimately if we get a late variety which keeps up the recovery, we will soon have a recovery of 11·2 per cent.

Dr. Jain.—Do you say that you can reduce the price of sugar to Rs. 3-8?

Mr. Khanna.—Yes, it should not be impossible.

Dr. Jain.—How would you distribute that over cane and cost of manufacture?

Mr. Sethi.—That is rather a difficult point. The manufacturers' costs have been anything from 14 annas to Rs. 1-4 including depreciation and interest. I shall not mention the source of my information. That has been given to me confidentially. There are factories in India whose costs of manufacture come to 14 annas a maund.

Mr. Dhar.—I am prepared to challenge that. I am sure some exploitation is going on somewhere.

Dr. Jain.—It is inconceivable that it will be only 14 annas. Let us now get down to the point of cane. With a recovery of 11 per cent. how many maunds of sugarcane would you require?

Mr. Sethi.—9 maunds.

Dr. Jain.—At what price? You say that 5 annas should be the minimum.

Mr. Sethi.—Yes, minimum price. When the cost of production comes down to 2 annas 5 pies a maund, it is only then that this is possible.

Dr. Jain.—What fair price would you take?

Mr. Sethi.—Minimum or fair price? I think it is fair to take 3 annas 5 pies.

Dr. Jain.—How much does it come to?

Mr. Sethi.—Rs. 2.

Dr. Jain.—What is the cost of manufacture?

Mr. Sethi.—14 annas.

Dr. Jain.—That is impossible.

President.—The manufacturing level of efficiency in India is almost equal to the level of efficiency in Java. 14 annas is rather a low figure.

Dr. Jain.—Are you omitting one rupee? It may be Rs. 1-14 instead of merely 14 annas.

Mr. Sethi.—I am stating the figures which have been given to me confidentially. 14 annas to Rs. 1-4 would be the cost of manufacture. That does not include head office charge.

<i>Mr. Khanna.</i> —Manufacturing Department labour charge	A. P.
	1 6-
Engineering Department labour charge	2 0
Stores	2 6
Depreciation, interest, etc.	6 0
	<hr/>
Total	12 0

Dr. Jain.—For Java we had a figure of Rs. 1-6.

Mr. Dhar.—It does not include the cost of transport and brokerage. If these two items are added, it would put up the figure by 9 annas more.

President.—It is no use discussing this. You do say, don't you, that the manufacturers recouped the full extent of the excise duty from the lower price of sugarcane.

Mr. Lall.—Yes.

Dr. Jain.—What is the position of ratooning in Bihar?

Mr. Sethi.—According to the estimates which I have received as compared with last year there has been an increase of 30 to 35 per cent. Because of the larger surplus that was left behind, people allowed it to ratoon but the actual percentage of ratoon to the total area I am afraid I cannot say because we have no figures.

Dr. Jain.—Have you any experience of ratooning? You know there has been a good deal of controversy about the desirability or otherwise of ratooning.

Mr. Sethi.—The controversy is based on personal observations and on no experimental data. Whether ratooning harbours diseases or not and whether one or two years ratooning is good or bad we have no experimental data to say. Nobody has the data. Up till now it is personal observations which have led us to state that ratooning beyond one year is undesirable because it harbours diseases. What is the actual incidence of disease on ratoon we have no data to say. We have no experimental data on which we can base any conclusion.

Dr. Jain.—You mentioned something about the cane marketing Board. I just want to know the position of the Board.

Mr. Lall.—If you mean the Tirhut Marketing Board at the time of the earthquake it consisted of the Commissioner, Tirhut Division, as Chairman, the Director of Industries, Deputy Director of Agriculture, 2 growers' representatives and 3 factories' representatives. I shall just explain how the Marketing Board was able to function. At that time what happened was that 4 or 5 factories were completely damaged. They had their cane staff but they could not buy any cane. So the Cane Marketing Board took over the staff of the damaged factories. They worked for the Board. Then we took over the cane which would otherwise have gone to these factories.

Dr. Jain.—In answer to question 10, about the research out of the excise fund, you say that the Government of India sanctioned your proposal with the exception of the mycological section.

Mr. Lall.—They are going to consider this proposal at a Sugar Committee meeting and will then decide. They have not refused it altogether.

President.—Which do you think is most backward—research into diseases or research into insect pests?

Mr. Sethi.—So far as Bihar is concerned, both are equally bad. We have not done anything so far. I have no special staff whatsoever. So far as the Department is concerned, we have neither entomological nor mycological staff. If we get going with an entomological section, we shall be behind with the mycological work which is equally important.

President.—Begg Sutherland's suggested to us that diseases were worse in Bihar and insect pests were worse in United Provinces.

Mr. Sethi.—I am not prepared to compare the provinces, but I say, speaking for Bihar, I am not prepared to agree with Messrs. Begg Sutherland and Company for the simple reason that the disease in this province is not a primary infection but a secondary infection. Insects attack first and they prepare the ground for the fungoid disease. The insect question is really more important to be tackled first. At the same time there are certain diseases such as top rot which we know is on the increase and should be tackled.

President.—They also definitely say that pyrilla is not so troublesome in the United Provinces as in Bihar.

Mr. Sethi.—Yes.

Dr. Jain.—There is the question of the main difficulties of the cane-growers. The answer has been omitted in your replies to the questionnaire but you have forwarded a reply from the Department of Agriculture.

Mr. Lall.—There is no need for me to repeat the answer which has been given by Mr. Sethi.

Dr. Jain.—They mention one difficulty, viz., want of funds in order to maintain new types of ploughs, etc. Another point which they raise is that there is at present insufficient manuring, in many cases no manuring at all. I wonder what you think of those points.

Mr. Lall.—As regards manuring, if the factories could be induced to give advances as they used to do when they started the industry, I do not see why there should be any difficulty in regard to manuring. That would also enable them to maintain better supplies. That is a strong argument for zoning. It is perfectly true that at present the cultivator gets no advance and therefore has to do without manuring, and without good implements. His out-turn is therefore very poor. If he is given an advance, he can improve his yield.

President.—Some factories do give advances. Begg Sutherland's do give.

Mr. Dhar.—They do not give much in the shape of advances. It is getting less and less.

Dr. Jain.—In answer to question 47 about the excise duty you say that the consumer was practically unaffected.

Mr. Lall.—Yes.

Dr. Jain.—What was the effect on growers?

Mr. Lall.—It certainly hit them. The manufacturers were not hit except towards the very end when some factories went on crushing in order to dispose of the surplus cane as far as possible. In some cases they were hit.

President.—You mean when the recovery rate fell below a certain level.

Mr. Lall.—Yes. In the case of factories which stopped crushing, I do not think they were hit at all.

Dr. Jain.—Lastly as regards protective duties, what is your view with regard to the amount of protection which should be given to the industry. You say in answer to question 48 that protective duties have not worked against the interests of the consumer.

Mr. Lall.—Judging from what I see, if you lower the level of protective duties, you run the risk of going very close to the margin.

Mr. Dhar.—According to the calculations made there is very little margin.

Dr. Jain.—What are your calculations?

Mr. Dhar.—The main points are these. Taking the price of cane I think it is generally held that the grower should get a fair price which is 5 annas. If you allow for transport it comes to 6 annas. That gives you Rs. 4-7-6. Manufacturing costs with an efficient staff will come to Rs. 2-4 per maund. I have allowed 10 per cent. for profit on these figures and not 10 per cent. on the total capital. On these figures the cost comes to Rs. 8-8 f.o.r. factory.

Then to that I have got to add freight to Calcutta about twelve annas, which comes to Rs. 9-4 without middleman's profit. So there is very little margin of profit. I have got a detailed statement. I will let you have that.

President.—The latest information is that about 50 per cent. of the sugar now produced in Indian factories is approximately equal to Java sugar.

Mr. Dhar.—The Java sugar which is coming now and for which you are getting quotation is a special kind of sugar. For that if you make an allowance of 8 annas, for its superior quality, you come down to something like Rs. 9-2 against Rs. 9-4 for our sugar landed at Calcutta. I say there is no margin for the reduction of tariff.

Mr. Lall.—Lowering of the tariff at this stage would really mean serious consequences to the industry.

President.—What is the margin between the Indian and Java sugar in Calcutta?

Mr. Lall.—Not less than 8 annas. If you take off 8 annas from Rs. 9-10, that Rs. 9-2 will leave a fair price to the cultivator otherwise the cultivator has to suffer.

President.—About this question of open pans: open pans have been closing down because they cannot compete with the vacuum pans. Do the open pans in this province pay excise duty?

Mr. Lall.—There is a special excise duty for open pans.

Mr. Rahimtoola.—How many of them are factories under the Factory Act?

Mr. Lall.—These are factories under the Act.

Mr. Rahimtoola.—All of them pay excise duty?

Mr. Lall.—Yes, at a smaller rate.

President.—The suggestion has been made that in order to encourage the production of sugar in out of the way places open pan concerns should be encouraged by remission of the excise duty.

Mr. Lall.—This excise duty on open pan concerns is only a question of emergency this year; but open pan factories have been losing ground.

President.—If you exempt it from the excise duty do you think it will survive?

Mr. Lall.—I have my doubts. The cultivator is not getting even barely 2 annas from the open factory and I do not think he can go on producing at that figure.

President.—If you exempt it from the excise duty it may be necessary to fix a higher minimum price for his cane.

Mr. Lall.—Yes. The cultivator is not getting a fair return from the open pan factories.

President.—I take it you are not in favour of open pan factories.

Mr. Lall.—I would rather like it to be made into gur or let the cane go into the factories.

President.—May I take that as the views of your Government?

Mr. Lall.—Yes. There are very few open pan factories and they have now practically ceased to work and they will all go out.

President.—On the matter of zoning there is one interesting point that arises about the question of the arrangements being made for converting the surplus cane into gur and I would like to know a little more about that.

Mr. Bakshi.—On that point I have, in my note, given the outlines of a scheme which I have drawn up in consultation with the special officers and representatives of cane-growers. The general principles on which that scheme is based may be summarised as follows. Before the tremendous increase in the number of factories took place there were arrangements, practically in every village, for conversion of sugarcane into gur. Every village had a *kolu*, made of wood or iron. Every village was more or less self-supporting so far as the supply of *kolu* and gur went. With the

advent of sugar factories the tenant felt that it was much more paying to sell cane to the factories and as the price of sugar went down more and more the price of gur fell to a figure which did not make it worth while for the tenants to make gur out of sugarcane with the result that at present, there are very few villages with crushing mills, pans and other indigenous machinery for conversion of sugarcane into gur with any rational scheme of production of sugarcane on the estimated basis of consumption, there is sure to be a surplus. If supply of sugarcane is based on forward contract executed before sowing takes place, allowance will have to be made for vicissitudes of the season, and we have to arrange for growing a little more cane, say 10 per cent., than what the cultivator undertakes to supply. On an average, it may work out that about 10 per cent. of surplus will be left. Under existing conditions, the tenants, unorganised as they are, just trust to their luck and leave the cane in the fields till late in the season when they may find that some of the cane cannot be taken by the factories. At that stage, it may be too late to organise the supply of crushing mills and pans; and that for two reasons. In the first place, machinery cannot be supplied so quickly, and, in the second place, by the time the machinery is supplied a good deal of the cane may cease to have the requisite purity, so that if in a rational system of supply, we are going to have a surplus, we must estimate, as far as possible, the quantity of the surplus at the beginning of the season so that we may take necessary steps in time: first we shall enter into negotiations with the factories for the sale of the surplus. Let us assume that we have undertaken to supply a certain quantity but we find, by actual estimate of the cane crop, that there will be a surplus of about 10 or 12 per cent. The estimated surplus can be disposed of either by an increase in the amount of cane taken daily by the factory or by extending the crushing season for a few days. This sort of negotiation is going on between the mills and Co-operative Societies at present. As a result of that negotiation we shall know definitely how much of the surplus will be consumed by the mills and then we shall be able to estimate fairly accurately what will be the surplus that will have to be disposed of in any other way. For that surplus, before the crushing season starts we must have equipment ready for crushing the cane into gur on modern lines on a co-operative basis. It will work out in this way: every villager will know that there will be 10 per cent. more cane than he has agreed to supply to the mill. Individual tenants will have 20, 30 or 100 maunds which it will not be worth while for individual members of cane-growers societies to crush and make into gur. What they will do is that each of the members of the co-operative society will have a Pass Book. They will be credited with the gross quantity of cane which he will bring to the co-operative crushing plant to be made into gur and stored in the co-operative warehouses. This gur will be available for marketing on a co-operative basis by a central organisation in Patna which will be keeping itself in touch with businessmen dealing with gur of a standard grade or grades and help in the disposal of the gur made out of surplus sugarcane. Another point is that on the security of this gur kept in co-operative warehouses we shall be able to advance certain amounts, say, half the estimated price of gur, to the tenants. This is going to be tried this season in the case of a few selected societies. A co-operative union in the Darbhanga district are being supplied with crushers and pans. There are certain other developments: attempts will be made to make various sweets and confectioneries out of gur and market them through schoolboys' co-operative societies and others.

President.—No doubt this is an interesting experiment. But there are two difficulties. The first is that this 10 per cent. margin of yours possibly leaves out of account the people who always make gur. After all the amount of sugarcane used in factories in India is only 18 per cent. and the largest proportion of sugarcane is used for gur.

Mr. Lall.—We are only concerned with Bihar where there is very little gur.

Mr. Bakshi.—By mentioning 10 per cent., I only gave a tentative figure as an illustration. The idea would be not only to cover the estimated margin of safety to enable the society to fulfil its contract but also to provide for the requirements for gur of the villagers. As far as the requirements of gur go, the villager should be made independent of the supply of gur so that the supply of gur would really be whatever can be made out of the estimated surplus *plus* what they will normally require for their own consumption; and cultivation and production of cane will be controlled accordingly. Comprehensive detailed estimates are being made and measurements taken of every cane-growing plot in the possession of every member of cane-growers' co-operative society and every year we shall know which plot in a particular area has been put under which variety of cane. At the end of next year we shall be able to give statistics of what varieties of cane have been grown in which plots by individual members of the cane-growers' co-operative societies.

Mr. Sethi.—At present the statistics are purely imaginary and they shall continue to be imaginary until we carry out proper plot survey of cane areas which means survey practically of all the crops. Until that is done it will be impossible to state what is going to be the surplus of cane in any area which will have to be converted into gur or disposed of otherwise. I have recently made an estimate for a random survey of sugarcane areas distributed over three seasons—and the cost comes to Rs. 1,60,000. I do not know if my Government would be prepared to set apart that money to get a complete plot survey in the three seasons. With the existing information I have, I have been making efforts to arrive at some idea about the controlled zone areas and free zone areas and the indications are, on the basis of having 50 per cent. controlled area and allowing for full development of this area during the next five years, we shall get just enough cane from these areas. I find that, so far as North Bihar is concerned, in a normal year there will be very little cane left over for conversion into gur. The next point which I want to submit to the Board is this. South Bihar is primarily a cane-growing area and the hiring of bullock driven mills and pans is a regular industry here. Firms who manufacture mills and pans have got depôts situated all over the place from where cultivators go and hire mills and pans for a number of days or months. Some of them combine together and do that. If there had been any such possibility in North Bihar, you can rest assured that the industrialists would have captured the market long before. Even if it is assumed that we need mills and pans and some organisation necessary, there is one point that we must always remember and that is that gur is a perishable commodity. The gur when stored by the cultivator is kept very carefully buried in bhusa. I do not know if it is proposed to have large godowns which will first be filled with bhusa. Unless gur is protected when the monsoon comes, gur will go bad, and if it is proposed to sell gur at a time when there is ordinarily no gur available, strict precautions will have to be taken to ensure that the gur doesn't get bad. I don't think that if we bring in the controlled zone scheme and allow the mills to purchase the balance of their requirements from a free zone, there will be a large surplus of cane which will justify our organising the supply of mills and pans on a very large scale particularly in North Bihar.

President.—You have rather anticipated the second objection. I was going to ask the keeping quality of gur on which the Tariff Board have made many investigations.

Mr. Sethi.—In fact we have already very serious complaints from parts of South Bihar. Wherever the cultivator does not store chukki (dry and hard) gur—he generally makes chukkis weighing 15 to 20 seers—away from moisture, the gur becomes neither semi-liquid nor remains solid but something in between. Then the insects attack it and breed in it. I have come across cases where gur was kept in handi and it was

found to be full of insects, so that we will have to take very great precautions against these. Wherever large quantities are stored, there is the possibility of a good proportion of it going bad.

Mr. Bakshi.—As regards the possibilities of markets for gur, I may mention that in places like Jainagar, in the Nadia District in Bengal where watery gur known as Paira Gur containing not more than 30 per cent. solid gur is sold at 6 annas per seer. I come from the district of Faridpur in Eastern Bengal where the gur cake (*patali*) prepared is golden in colour. The Director of Industries has seen samples. When they first come into the market early in the season they are sold at 6 to 8 annas per seer. People are so fond of it that any quantity can be sold and there would be no difficulty in marketing. The price of this gur seldom goes below 3 annas. Any quantity could be sold in Bengal practically at the same price as common sugar. As regards the gur which Bihar produces, I would only invite you to go to the bazaar and see how filthy and insanitary it is. People like gur because it has a flavour and it contains various vitamins. Many people would prefer gur to sugar if only clean looking stuff is prepared and marketed under hygienic conditions.

Mr. Sethi.—I must say that Bihar gur is famous all over Bengal, Orissa, northern parts of Madras and eastern parts of United Provinces.

President.—How does it compare with the Meerut gur?

Mr. Sethi.—Very favourably. It is in no way inferior to Meerut gur.

Dr. Jain.—How does it compare with Pindi gur?

Mr. Sethi.—That is made from Pundya cane. That is better in colour. Our gur is made from coloured cane.

Mr. Bakshi.—It is excellent, better than Bengal and that will probably support my point if we could manufacture it in a satisfactory and scientific manner, there will probably be a better market. Here gur is sometimes sold at 6 pies per seer, never more than an anna. I think if gur could be manufactured under hygienic conditions, there are possibilities of marketing it for a better price. In fact I know some tea garden owners in the Doon where we sell a good deal of Bihar chukki gur. I discussed the scheme with them and they said: that in the Tea Gardens they could control the entry of any gur they liked. If they get cleaner gur, they will certainly not allow filthy gur to come in. I can submit a copy of my detailed scheme.

President.—We are interested in gur but not quite so directly. We have heard something about the part the Co-operative Societies are going to play in this zoning system. Have you anything to add?

Mr. Bakshi.—It seems to me that this is a matter for provision in the proposed law. Unless some statutory recognition is given to the position of Co-operative Societies and certain provisions are made, the problem is not likely to be solved. This argument is based on one very important reasoning and that is this. Even with zoning it will be necessary for the factory to maintain a huge staff, to maintain registers of individual growers and to control the distribution of purjis according to contracts. With that kind of organisation there is nothing to prevent the continuance of the existing purchasing agents, Jamadars and all the paraphernalia, who may appear, on paper, under different names, sometimes with a small pay and with a bonus or commission. Unless the growers are organised in such a way as to have a voice in the production and marketing of sugar-cane, generally their position is not likely to be safeguarded. Whether you have a co-operative organisation or any other organisation, that to my mind is a matter of administrative detail. Probably with an illiterate population as we have and with the existing administrative machinery, the experiment of co-operative organisation may be tried. I cannot speak about the result at present. You can make a provision similar to those contained in the Agricultural Marketing Act in England where whenever 75 per cent. of the producers in an area want to market through the marketing organisation, the law requires that the remaining 25 per cent. will be

bound to market their produce through the same organisation. It is possible for Government to pass order on the same lines in the case of an area where Government are satisfied that Co-operative Organisation has been sufficiently developed so as to be able to supply the requisite varieties of cane at the right time to the mill or mills.

Mr. Dhar.—To safeguard the interests of the growers a suggestion was made against their being cheated at the weighbridges.

Mr. Bakshi.—Cane-growers' Co-operative Societies are not in a position to provide funds for illegal gratifications. I should say that I would make considerable allowances for the factories which maintain a staff for superior supervision, but that doesn't mean that all their staff are above suspicion. In every class we have got corruption in the staff. It is a matter whether the supervision is more or less stringent. It is only in the case of 8 factories, with reliable superior staff, that the inferior staff if caught are severely dealt with.

Mr. Dhar.—There is second class where they have not got the necessary superior staff to control the inferior staff and sometimes they are hand in glove with them. Whenever there is a complaint we can only go on very defective evidence, but we can always be morally convinced of the truth of the allegation. The first class factories are willing to listen to complaints and to remove them wherever possible. The second class factories on the other hand support their men and say that they are honest. We have great difficulty in dealing with that class. The second class factories haven't got the same superior staff and also the same kind of men. It may be because that they want to cut down their cost. There is a third class where they take a share of the amount made by their agents. The other day I looked into the case of a factory which was realising one anna a maund through its middlemen who could not be caught under the Act, because he is not an Agent. He is nothing under the Act. He is buying and selling and just passing off as a middleman. He was taking one anna a maund of which he was passing on two pice to the factory.

President.—What was he taking it for?

Mr. Dhar.—On the ground that there was a lot of overproduction. He would not take the cane unless the grower let off the freight. He was taking about an anna of which 2 pice was going to the factory, one pice to the railway staff and one pice to his pocket, but he was nobody. That the factory was in league with him was admitted by it, but we could not take very strong action because the factory was about to close down. Five lakhs of maunds of cane would have gone to waste if it had closed down. We forced the factory to give a guarantee to carry on and make good to the cultivators.

Mr. Sethi.—There was a new malpractice last year which didn't exist before. Co. 210 is a cane which has been universally accepted till now by the factories. Last year there was plenty of Co. 213. From the middle of March onwards certain factories said that they will not accept Co. 210 which they have been accepting all along. Then the factory people went round the villages and told the growers that instead of burning cane they could dispose it off standing for a consideration. The growers sold the cane and distributed the amount amongst themselves. The factory thus bought cane very cheaply. No minimum price could be applied to this cane as it became the property of the factory.

Dr. Jain.—Can you estimate the extent to which it was done?

Mr. Sethi.—Roughly 2 lakhs of maunds of cane.

Mr. Dhar.—There was the other way where they felt there was no danger of their being caught. They forced the cultivators to book their wagons and send them to the mill. The wagon was arranged through the factory and was supplied to one of the growers and the grower had to book it, so that the factory could not be caught. Talking about corruption, there is generally corruption all round with the result that the grower suffers. There are instances of petty zamindars or money lenders who go out and

lend money and buy the stock at a speculative price. If the money lender anticipates a price of 4 annas he will buy the stock of cane at 2 annas and pocket the difference. Then there are cases of factories giving out purjis through jamadars. If an influential man has only 5 acres of cane, he gets it recorded as 20 acres, and then exploits the petty growers by buying this cane cheap and selling as his own. That is the sort of corruption which prevails even in big factories owned by Messrs. Begg Sutherland and Company and Octavius Steel. Unless we have zoning and the licensing of every man dealing with growers, it is impossible to stop corruption altogether.

Mr. Bakshi.—Zoning alone will not suffice. It is absolutely essential that the area of supply should be demarcated and declared for each weigh-bridge. Otherwise the same thing will happen as happened last season.

Mr. Dhar.—The biggest complaint is that in giving purjis corruption takes place. Whoever pays gets it. That is the commonest form of corruption.

President.—I take it that corruption here is probably much the same as in United Provinces. They mentioned as many as 20. Would you go higher than that?

Mr. Lall.—Every one seems to be agreed that corruption has gone down.

Mr. Dhar.—Corruption has generally gone down. There is no doubt that the Act has done a lot of good. Last year on account of overproduction, it was difficult to control. If we fix a price higher than the economic price, it would be difficult to check.

President.—Last year people who had purjis made a lot of money.

Mr. Dhar.—As regards Messrs. Begg Sutherland's and Octavius Steel, I was not very clear. They start distributing purjis by their superior staff. At that stage corruption does not take place. It takes place earlier. They have Jamadars who go to the villages and prepare a list. The man having 2 acres gets it entered as having 20 acres.

President.—You are not suggesting that they connive at it.

Mr. Dhar.—I suppose they know it.

Mr. Bakshi.—There is no adequate supervision over Jamadars.

President.—I think that no factory can look after their staff completely. All that they can say is that if they find any one guilty, they punish him. I don't say that all their staff are above suspicion.

Mr. Dhar.—There is another point which I want to mention in connection with weighbridges. There has been much tampering with weighbridges and one very scientific method of tampering which I have not been able to solve. These weighbridges are made to a specified degree of sensitiveness and we make an allowance of 2 per cent. error. What they are doing is that they are always getting 2 per cent. extra allowed under the law. I do not know how. Under the law it is a permissible error, but my contention is that if a weighbridge shows error in the same direction, we should compel the factory to set it right.

Mr. Bakshi.—Apart from the range of permissible error, occasionally they give receipts for short weight and they have a confidential note in which they enter the exact quantity of cane. After the requisite quantity is reached, they issue a bogus receipt which they keep themselves and then one of their men gets payment from the superior staff. Another thing is that they always allow the permissible range of error till the 20 maunds limit is reached, and then each time the limit is reached they issue a bogus receipt and on the strength of that receipt, they get payment.

Mr. Dhar.—For ordinary tampering we have started a system of sealing up the machine. There I do not believe the factories are co-operating. They are being cheated. We send out Inspectors who check them.

Mr. Baksi.—In some areas weighing is done by Co-operative Marketing Unions. The weighing is undertaken by the Union of Co-operative Societies and there the evil has been entirely eliminated because the Union maintains the weighbridge like any other purchasing agent in the district and the Union controls the weighing clerk so that we have complete control over the amount of cane supplied by the Co-operative Societies. But in other districts even Co-operative Societies are in the hands of these weighing clerks, controlled by factories.

President.—Let us hear the other side of the picture. How do the raiyats try and cheat the factories?

Mr. Baksi.—One hears that they bribe the weighing clerk and get a little more than the permissible error. That is obvious. Sometimes they pass off stale cane as good cane. They are now becoming more intelligent.

Mr. Dhar.—Last year we had trouble about Co. 210. It is an early ripening variety and some factories did not take delivery until it was late when it became useless. The raiyats mixed it with some other varieties and sold it. There was one point which I mentioned a little while ago and that was that the purchasing agents have to land their cane at the purchased weight at the factory. They are forced thereby to get extra from the raiyats.

President.—Every one knows that there is a certain amount of dryage in transit between the weighbridge and the factory.

Mr. Sethi.—It has happened with us. I have had to send cane from a farm. The factory refused to accept the weight which we had recorded on our weighbridge or at the despatching station. They always take the weight when it is delivered at the factory. They refuse to be responsible for any dryage.

Mr. Baksi.—I do not know whether it will be considered feasible to have more or less fool-proof weighbridges with pointers indicating the weight in Hindi.

Mr. Dhar.—The trouble with weighbridges is that we cannot have a very expensive one.

President.—It is not within the province of the Tariff Board to make any recommendations in that regard. We have to state facts and say to what extent it is prevalent.

Mr. Dhar.—On the whole I think we have been successful to a very great extent. Our Inspectors are given a special training before they are sent out in an Engineering College where they are shown all the trickeries of weighbridges. In actual practice they know exactly what to look for.

President.—As regards these answers, we have already dealt with a good many of the points. In regard to acreage figures, do they exclude Orissa figures?

Mr. Sethi.—Yes.

President.—I presumed they did. As regards your costs of cultivation—North Bihar Table I—you have given the yield on that page.

Mr. Sethi.—I have a detailed statement ready for that.

President.—Giving the costs and the yield?

Mr. Sethi.—Yes, for each area in detail.

President.—Does it give details of costs?

Mr. Sethi.—Yes (handed in).

President.—Do you consider the classification of costs adopted by the Imperial Council to be suitable?

Mr. Sethi.—I think they are very sound. They were thoroughly thrashed out in 3 or 4 meetings before they were adopted. They give very useful information though they cannot be very accurate.

President.—No one can ever get accurate costs of cultivation for any crop in the world. You say that the yield of cane, by better culturable methods and manuring, can be doubled.

Mr. Sethi.—Yes.

President.—What would be the extra cost of doubling the yield?

Mr. Sethi.—Rs. 20 to Rs. 25.

President.—Let us work that out. Give us a figure for the present cost.

Mr. Sethi.—3 annas 6 pies per maund.

President.—Give it per acre.

Mr. Sethi.—The cultivator's figure is Rs. 55.

President.—What is the yield?

Mr. Sethi.—250 maunds.

President.—In order to get 500 maunds what would be his extra expenditure?

Mr. Sethi.—It would be about Rs. 25 extra and the total will be Rs. 80.

President.—How does that work out per maund in each case?

Mr. Sethi.—He will get an extra income of Rs. 62-8-0.

President.—For an extra expenditure of Rs. 25, he will get Rs. 62-8-0.

Mr. Sethi.—Yes.

President.—Can you give us a similar figure for South Bihar?

Mr. Sethi.—The present yield is 400 maunds for Rs. 73-8-0. If his cost is increased to Rs. 90, he will get 600 maunds.

President.—The proportion of increase will not be so great as in North Bihar.

Mr. Sethi.—No.

President.—Would it pay the raiyat to irrigate in North Bihar?

Mr. Sethi.—Definitely. We have very reliable data on that point, for 5 years. It has been now worked out statistically. If we give two irrigations in the stress period—one at the end of April and another in the beginning of May—we get an increased yield of 33 per cent. for the irrigated crop at an increased cost of Rs. 10. That is irrigation from tube-wells run by power driven machinery.

President.—About the alternative cash crops, are they really alternatives to any considerable extent?

Mr. Sethi.—Yes, wheat, tobacco, ohillies, etc. I may mention that in one part of the Muzaffarpur district, namely Hajipur, owing to non-irrigation and serious attack by white ants cane cultivation has gone out and that has been mostly replaced by tobacco.

President.—There has been a reduction in the acreage under cane of 30 to 35 per cent. How has the reduction in the area been replaced?

Mr. Sethi.—That will go chiefly under wheat. That would not reduce the normal area. There was an increase of over 40 per cent. in 1936-37 in the normal area. When the price of wheat is high the cultivator will be happy to grow more wheat.

President.—You are very strong in your note on increasing the facilities for production of cane and demonstration on cane. To what extent can you have use of the factories in this respect?

Mr. Sethi.—I have indicated in my note the help that factories can give us. The duty of the department of Agriculture, as I conceive it, is research followed by bringing home to the cultivators the results of that research. The second point is the matter of improvement of sugarcane, and here the factories can play a great part: there is the question of constant renewal of the seed by new varieties at definite intervals of not less than five years. For that purpose we must have seed nurseries from where certain quantity of seed can flow out to the grower. No Government—at

least not my Government—can afford to acquire land and run 35 seed nurseries that we require in the factory zone. Over 15 factories possessing Zirats can certainly help us to a certain extent by giving us the necessary land and, if necessary, finance the recurring expenditure in these nurseries. After all it is going to help the growers in their areas. At present from the time the seedling is found to the time it is given out as approved cane it takes not less than 7 to 8 years which means that the factory has got to wait for that period before getting any new variety. Factories who have got their own cultivation can help us in this. They can set apart 20 or 30 acres of land and we can carry out field trials simultaneously on these experimental areas in these factories along with the work in the research stations and we can get out the data for the whole province within three years. That will save us 4 years subsidiary testing. These are the directions in which the factories can help us in improving the yield and quality of cane, by financing the cultivator to adopt the improvements done by the department, secondly by providing seed nurseries from where improved varieties free from disease will flow every year and co-operating with the Agricultural department in carrying on research work, carrying out field experiments under controlled conditions, and lastly factories must not import varieties from other places which varieties have been tried and found unsuitable by the department of agriculture.

President.—I will give you the factory point of view. They complain there is too much delay in getting proper trials. They say the agricultural department is very sticky about giving advice; they say they are prepared to test the seeds and if it is a failure they are prepared to bear the loss. They complain that you do not release them early enough.

Mr. Sethi.—The reply to that is that the factories are under the impression that all they need do is to acquire 2,000 acres of cane, put a man on Rs. 60 and the cane will grow. That is where the objection comes. If they have proper staff who can carry out experimental work under our guidance I personally would welcome that co-operation from them, and I would be willing to give them all promising seedlings from our experimental plots to go into their experimental plots, but I am not prepared to hand over a large number of varieties to a factory which has got land and which has got a few tractors but has got a man who does not know the right end from the wrong end of a plough.

President.—I take it one advantage of factory trials is that they can test the cane under factory conditions.

Mr. Sethi.—I would welcome that. It will enable us to carry out mill tests early. This is essential before the varieties can be given out.

Dr. Jain.—What are the lines on which you are working in respect of research?

Mr. Khanna.—Our main line of research is in the direction of production of early and late varieties and mid season varieties. As regards late varieties we have so far placed in the hands of the industry three varieties, namely 299, 313 and 331. There is a certain amount of criticism about 331 because of the reason of the soils which vary so greatly and the climatic condition is so erratic and therefore this variety may have to be held back in certain areas. In South Bihar 331 has given uniformly better results than 213. The second line of work is the improvement in the cultural methods to be able to reduce the cost of production of cane and in that direction the cane that has been irrigated has definitely shown a decreased cost of production. Similarly among the two main types of soil, North Bihar which is light and South Bihar which is heavy clay, we are now on to certain factory areas so that we can definitely state that such and such variety can go in such and such soil condition. What happens is that the factory gets the improved variety but does not know which type of soil it has got to go in. The moment they know that a particular variety is suited to a particular kind of soil, one suited to light soil will go into light soil and that suited to heavy clay soil will only go into that kind

of soil and that one variety will not do for all kinds of soil. In addition to this a certain amount of work has been done on dryage and deterioration in cane after it has been cut. Even the wagons which are utilised for haulage purposes are defective. In open wagons there is loss in dryage. If the railways would agree to sprinkling at the starting station a certain amount of water so that the cane goes covered with moisture, that will reduce the loss by about 24 per cent. Similarly we have been working on different varieties of cane which will suffer lower deterioration than the varieties which we have already in cultivation. We find that out of the three varieties two are definitely better and they can be kept for 3 days in the month of March and for 36 hours in the month of April without deterioration. Along with the varietal improvement, improvement has also been carried on in seed selection and seed germination. Quite a considerable amount of difficulty arises in rain fed tracts because of the difficulty of obtaining adequate amount of moisture for germination purposes. A considerable amount of work is being done on this. Similarly on propping and spacing. The work we are primarily engaged in are varietal, manurial and cultural. The object of the first one is to find early and late varieties. Manurial and cultural work is designed to reduce the cost of cultivation consistent with the increase in the yield.

President.—What do you want money for most urgently from the excise duty?

Mr. Sethi.—In some countries the expenditure on research per acre of sugarcane grown is Rs. 12 per acre.

President.—I do not think that will carry any weight with the Government of India!

Mr. Sethi.—I have put down in my note details of what we require. The main thing is that we want to strengthen our research work and particularly on the disease side. We want to place our research work more or less on a permanent footing, we want seed nurseries for the multiplication of seed and for distribution of this seed and for demonstration and propaganda work we want at least three times the staff we now have, if we are to produce any effect on the cultivators who grow these 400,000 acres of sugarcane in the province.

Mr. Lall.—We would certainly want more money for co-operative organisation of cane-growers and we want to strengthen our staff. We have been spending some of the Government of India grant on our staff. We need to strengthen the staff.

President.—If the zoning system comes in would you expect the factories to some extent to supply?

Mr. Lall.—So far as the agricultural part of it is concerned, the only thing we can expect the factories to do is to finance the cultivator. Their reply is that we already pay the excise and the research part of it must be paid from the excise. But I think most of the factories are taking a reasonable view.

President.—I think you said before that they might put in a certain amount of land.

Mr. Baksi.—Some of the factories have already agreed to my proposal and I think most of them are reasonable. With the development of the zoning system and the co-operative organisation the tendency will be for the factories to be relieved of a good deal of expenditure. The factories will have to maintain a large field staff and several registers to get the details of the cane lands. Where a co-operative organisation comes into being, the factory would be relieved of the necessity to incur a good deal of such expenditure and it can be legitimately expected that they would bear a part of the expenditure of the co-operative societies. My second point is that under existing conditions factories have not been getting the requisite variety of cane at the right time, with co-operative organisations working in conjunction with the Agricultural Department, and based on forward contracts we shall be able to supply the right variety of cane in

its optimum condition, and that will increase the production of sugar by increasing the percentage of recovery and that again will lead to increased profits to the factory.

Mr. Lall.—Every year we have savings and that gives the impression that the local Government have not got schemes on which they can spend the grant. That is not so. The Government of India do not tell us what our allotment is till the year is well advanced and we cannot go to our Finance Department with a scheme till we know about our allotment. When our scheme is drawn up we send it to the Government of India and wait till their sanction is received. In this way there is invariably some delay and a saving in our allotment. By the time our scheme is approved we have lost much valuable time.

Dr. Jain.—Have you any suggestion as to the amount from excise fund which should go into research?

Mr. Lall.—Not less than two annas per rupee. The Government of India promised one anna.

Dr. Jain.—Have your Government any views?

Mr. Lall.—The amount given is inadequate.

Dr. Jain.—They would like it to be raised upwards?

Mr. Sethi.—The research work at present is being financed by the Imperial Council from its own fund and not from the excise duty. My submission is that the research work should be financed from the excise fund, because the Imperial Council cannot be expected to continue financing this research work indefinitely.

Mr. Lall.—The scheme has to be sanctioned by the Government of India, but they have very little control over us. The sanction involves unnecessary delay. It is much better for the Government of India to allot to the Provinces a certain amount and trust them to work their own schemes. Had it been a useful check, I would not object.

President.—There is one small point. Have you tried molasses on these alkaline lands?

Mr. Sethi.—We have been carrying out research work on the use of molasses and press mud cakes as manures. Our results on molasses press cake from sulphitation process are very encouraging, but from carbonation factories we have got definitely depressing results. Therefore when making any recommendation with regard to the use of molasses as manure, we have to distinguish the type of molasses and the type of land on which it has to be used. There is a practical difficulty in the use of molasses. Molasses can't be transported easily.

President.—Various experiments are being made in Cawnpore.

Mr. Sethi.—We know of no practical method of transporting molasses from the factory to the cultivator's field.

President.—We have also seen the experiments made in Bangalore.

Dr. Jain.—Have you thought of the ways for using the molasses?

Mr. Sethi.—There is only one way of using molasses and that is the production of power alcohol.

Dr. Jain.—I should like to know something about the labour conditions in the Sugar Factory in Bihar.

Mr. Dhar.—In the factory itself. I shall take labour in a broad sense. That is really a very important point. Besides being Director of Industries I am responsible for the Employment Bureau. We find smaller factories in, order to reduce their cost of production have started exploiting the cheap labour that is now available. Taking the Sugar Technologists, we have Graduates in Chemistry who were given a full regular course of training in Sugar Technological Institute. These people about 3 years ago were given a start of not less than Rs. 150 and it gradually came down to Rs. 125 and then to Rs. 75. Last year they were paying them only Rs. 50 and they were kept for a few months only. At the end of the season they say to these people that they do not know whether they are going to need them.

Dr. Jain.—Is this practice general?

Mr. Dhar.—It is general except with regard to first class factories as I told you where they are fairly well off. They get a better efficiency for that. The same thing applies to chemists. Chief Chemists who used to get Rs. 500 are now getting Rs. 250. Ordinary Chemists get about Rs. 50. They keep two or three probationers on Rs. 20 and get full work out of them in the season. That is the kind of exploitation that is regularly going on. There is dissatisfaction. Great hardship prevails among mechanics. It is very necessary from the point of view of security of service that there should be more and more employment of people for the whole year instead of this seasonal employment.

Dr. Jain.—What about unskilled labour?

Mr. Dhar.—I think there is no specially high rate. It is about 4 annas. It is lower than the rates at Tata's. My information is 4 to 6 annas.

Dr. Jain.—Can you tell us something about the housing conditions of labour?

Mr. Dhar.—Practically none except in some very big factories which provide some accommodation for the superior staff.

Dr. Jain.—Are there many accidents in these factories?

Mr. Dhar.—I don't think there have been many.

President.—Who is in charge of the factories?

Mr. Dhar.—The Chief Inspector.

President.—He is not under you?

Mr. Dhar.—No.

Mr. Baksi.—Accidents are dealt with under the Workmen's Compensation Act by the District Magistrates.

Mr. Dhar.—This problem of employment is closely connected with the cost of manufacture. I have been asked no questions on the cost of manufacture, but I take it that a fairly efficient factory producing 600 to 700 tons according to my calculations cannot produce sugar at less than Rs. 2-4-0, that is giving fairly decent wages to the regular staff, which of course adds to their efficiency and reduces corruption.

Dr. Jain.—That is an important point. They must have a fair selling price which will allow labour conditions to be satisfactory.

President.—Before proceeding any further you said you had some points to put forward.

Mr. Lall.—The Minister has asked me to put them before you. I have got three points to be put before the Board. The first is that the Ministry feel that the level of protection should not be reduced. The margin is already small and if protection is reduced, mills can exist only by cheating growers and by treating their technical and other labour very badly.

President.—You say the margin is small. As you know the amount of protection is partly made up of the protective duty and partly made up of the surcharge. What do you mean exactly by that? The difference in price between Java and Indian sugar is roughly Rs. 3 a maund.

Mr. Lall.—What we feel is this:

	Rs. A. P.
The price of cane per maund of sugar should be	4 2 6
Cost of manufacture. If the factories are to treat their men properly and pay good wages to their chemists	2 4 0
Profit	0 10 0

Total	7 0 6
Add duty	1 7 6

Total	8 8 0, which is the price ex-sugar factory.

The price of cane has gone down very much lower. There has been a big difference between Indian sugar and Java sugar, because unhealthy competition has been allowed to continue. There has been cutthroat competition at the expense of the grower and of labour. What the Ministry feel is that the Local Government are now going to take stronger measures to prevent corruption and deal with factories severely if they don't treat their growers properly. They are also going to bring pressure on factories to give proper treatment to their labour, technical staff, etc. If they do all that, they feel that Government should not reduce the level of protection. If protection is lowered, we will be running the risk of ruining the industry.

President.—Take Rs. Rs. 8-8-0. Last price quoted for Java sugar is Rs. 9-9-0.

Mr. Lall.—The freight is 12 annas.

President.—The present level of duty should be maintained.

Dr. Jain.—Rs. 9-4-0 per cwt.

Mr. Lall.—Varies from Rs. 9 to Rs. 9-4-0. Freight varies from 9 annas to 12 annas.

Dr. Jain.—The present import duty is Rs. 9-4-0 per cwt. including surcharge whatever it is and Rs. 2 excise duty. Your view is that the level should be Rs. 9-4-0 when the excise is Rs. 2.

Mr. Lall.—I am coming to the excise separately.

Mr. Dhar.—This is worked out on the present excise. The margin is not sufficient. We press for a reduction in the excise.

President.—Do you want to raise the price of Indian sugar by Rs. 2? Its price is somewhere about Rs. 6-6-0.

Mr. Dhar.—We want to increase it by Rs. 2.

Dr. Jain.—Do you think that that will allow for a fair treatment of the cane-grower and also a fair treatment of the labour?

Mr. Lall.—Yes, that was my first point. The second point was that the excise duty was increased without consulting the Local Governments and in the midst of the crushing season which hit the grower very hard and to a certain extent disorganised the industry. The Ministry feel that if the excise duty is continued, it will be impossible for the Government to secure a fair minimum price for the grower. If they insist on a fair minimum price without the removal of the excise, they run the risk of injuring the industry.

President.—Why should it hit the industry so much? Cannot the consumer afford to pay Rs. 8-8-0.

Mr. Dhar.—The price seems to have been determined by demand and supply. When the excise duty was put on, the industry meaning the factory and the grower had to bear the whole burden. Nothing went to the consumer. The general law of supply and demand controls the price.

President.—It might be argued that it was due to the faulty marketing organisation. The price is really too low. There is no real overproduction, but the marketing arrangement is very defective.

Mr. Dhar.—The point is whether the price should rise sufficiently.

President.—You know about the recent Sugar Syndicate.

Mr. Dhar.—I am told it is a very great success.

President.—It has raised the price by nearly 8 annas. It has generally steadied the market.

Mr. Dhar.—It has steadied the market. I do not know whether it has raised the price appreciably.

Dr. Jain.—It has raised the price by 8 annas, but I do not know how long it will continue.

Mr. Dhar.—Until the production is checked it will have no effect. Factories will find that at that price sugar cannot be manufactured. Provided we insist on the full staff it will be very difficult to work when the economic facts are against them. They will probably cut down the season and will try to manufacture only at the peak of the season, that is to say when they get a recovery of 10 per cent. The result of that will be less production of sugar which means less benefit to the grower and possibly the price will go up as a consequence. That will not be to the ultimate good of the cultivator.

Dr. Jain.—What is your third point?

Mr. Lall.—If the industry is to be seen efficiently, some use must be found for molasses and the Ministry feel that the Government of India should allow factories or Provincial Governments to make experiments in the manufacture of power alcohol.

President.—That is a point on which there is unanimity of opinion.

Mr. Lall.—If the industry is to be protected, it must be treated as a protected industry. It is not right that there should be sudden changes. No important change should be made suddenly which would disorganise the industry. It is a wrong policy for Government to behave like the mother who keeps on spanking the baby at one end and feeding it at the other. These are the points which my Minister has authorized me to put before you.

President.—Mr. Baksi, have you any other points which you would like to raise with us?

Mr. Baksi.—I think the ultimate interests of the growers or the industry can never be served unless production of sugar is controlled on the estimated basis of consumption on the one hand—that is as far as the general consuming public is concerned—and on the other, the production of sugarcane in a particular year, or in two successive years, is controlled on the estimated basis of consumption by the factories. That can only be done by forward contracts before the sowing takes place. In that forward contract it is not enough to merely specify the gross quantity of cane, but mention must be made also of the quota of definite varieties, early, mid-season and late, to be supplied to the mills, so that the growers could organise the production on that basis. That to my mind will be very difficult to achieve without an organisation of the growers. It will be impossible for a factory to deal individually with thousands of growers who are unorganised and to control the production of cane of different varieties by individual growers in different villages and to regulate the supply according to the quota required, unless it employs a huge staff at a prohibitive cost. That expenditure, if the factory has to face, would put up the cost of production of sugar to a figure which would upset all calculations. To my mind the growers, inspired by utilitarian motives, are in the best position to organise production and supply on a co-operative basis in the villages, each little unit doing its own work. During the first year or two they will require to be supervised by my staff, but we hope, with increased literacy and with training for a year or two, they should themselves be able to maintain the simple books required in every village.

President.—We have already touched on that point.

Mr. Baksi.—There are certain advantages in getting covered or open wagons as the case may be. The specifications of the wagons are not mentioned in the indent. In the absence manipulations at the proper quarters, which Cane-growers' Co-operative Societies are not in a position to arrange, the wagons sent for these societies are sometimes unsuitable. The result is that sometimes a lot of cane brought at the weighbridge is left behind and sometimes wagons are partly loaded. These inconveniences are causing a good deal of dislocation and we have applied to the District Traffic

Superintendent and other authorities without much success. With the expansion of co-operative societies this problem is going to take a more and more acute turn.

Mr. Dhar.—Besides the difficulties mentioned, I have seen complaints from factories that preferential treatment is given to larger factories who have influence or money.

President.—I don't think we need trouble you about factories.

Mr. Baksi.—My suggestion, as far as Co-operative Societies are concerned, is that in good time, say two or three months, before the crushing season, the Department would be in a position to supply a table showing the day to day requirements of wagons at different stations. It should be possible for all factories to do the same. That statement should be submitted to the railway authorities, who should arrange supply accordingly. If there be any legitimate cause for grievance, proper machinery for prompt redress should be set in motion. As far as my Department is concerned I am prepared to indicate my requirements 2 months ahead. I have worked out a statement through my officers. We are helpless unless the railway people come to our rescue and this is a matter which very vitally affects our cane-growers. They are put to loss if cane is not sent on the same date as it deteriorates. It is not accepted by the factory.

President.—Are there any points which you would like to raise with us?

Mr. Dhar.—As far as I am concerned, I have already mentioned Rs. 2-4-0 as the cost of production. There is a tendency on the part of some people to talk about cost of manufacture in a rather loose way. I have heard people say that sugar can be produced at a very low figure. If that figure is scrutinised it will be seen that certain items have been left out.

President.—Have you seen the forms issued by the Tariff Board?

Mr. Dhar.—I have not.

President.—They are fairly elaborate.

Mr. Dhar.—I have nothing more to say except that I should like to repeat that the problem of the industry is purely agricultural.

Dr. Jain.—Mainly if not purely.

Mr. Sethi.—It is purely an agricultural problem. Unless and until Government and factories realise and help to solve that problem, we shall never get ahead with placing the industry on a sound footing.

President.—You have given us a very clear note on that point and so it is not necessary to go into it again.

GOVERNMENT OF BENGAL.

(1) Evidence of Mr. M. CARBERY, Director of Agriculture, Bengal,
and Mr. H. C. E. PETERSON, Agricultural Engineer,
recorded at Calcutta on Tuesday, the
21st September, 1937.

President.—Are you giving evidence on behalf of the Government of Bengal?

Mr. Carbery.—I am giving evidence in my individual capacity.

President.—And Mr. Peterson is assisting you?

Mr. Carbery.—Yes.

Mr. Rahimtoola.—As representative of the Department of Agriculture?

Mr. Carbery.—Yes.

President.—How long have you been Director?

Mr. Carbery.—About 8 months.

President.—Before that what were you?

Mr. Carbery.—I was Assistant Director of Agriculture and previous to that I was Agricultural Chemist.

President.—What experience have you got of sugarcane in particular?

Mr. Carbery.—It has been under me as chemist.

President.—You have been concerned with it directly?

Mr. Carbery.—Yes, on both the research and propagation side.

President.—First of all, the Tariff Board are going to have a short descriptive paragraph for each province in India from the sugarcane point of view and for our purpose we divide the province. For instance we have divided the United Provinces into western, eastern and central. Could you give us a division for Bengal? You talk merely about the class of soil. That is not quite what we want. We want divisions, if you can give us like north, south, east and west. Take the principal sugarcane growing area.

Mr. Carbery.—They are scattered in blocks. There is no division which I can suggest. It will not signify anything. They are all riverine tracts. The only difference is in soil. In some cases there is a considerable amount of lime and in other places like the Teesta valley there is very little.

President.—There is no really distinct area.

Mr. Carbery.—Not much.

President.—You prefer to take the whole of Bengal as one unit.

Mr. Carbery.—Yes.

President.—What are the principal sugarcane growing tracts?

Mr. Carbery.—The Rajshahi area in the north is a fairly big area. There is the Sitabganj area near Dinajpur. There is also a large area in Mymensingh. There is also a big sugarcane growing tract in Murshidabad and Nadia. There is also a fair amount scattered near Dacca and Barisal.

President.—Is the rainfall more or less the same in all the areas?

Mr. Carbery.—It varies considerably from 140" to 40 or 50".

President.—The lowest is 40 to 50".

Mr. Carbery.—Yes, in West Bengal.

President.—The highest is how much?

Mr. Carbery.—140".

Mr. Peterson.—In some cases it is even 190".

President.—We should take the mean. We cannot go much into details. Would you say that the average rainfall ranges from 45" to 130"?

Mr. Carbery.—Yes.

President.—That is in the main sugarcane growing area?

Mr. Carbery.—Yes, from Birbhun to Jalpaiguri.

President.—What direction is that?

Mr. Carbery.—From south-west to north-east.

President.—South-west is the lowest

Mr. Carbery.—Yes.

President.—45" in the south-west and 135" in the north-east?

Mr. Carbery.—Yes.

President.—That would give a fair description.

Mr. Carbery.—Yes.

President.—There has been a fairly considerable expansion in the area under sugarcane in recent years. Is that due to the substitution of cane for jute?

Mr. Carbery.—Yes, I would say that it has been considerably hastened by that, but it is now showing signs of going back.

President.—What is the preliminary forecast for 1937?

Mr. Carbery.—It is given as 320,000 acres but I shall put in down to 290,000.

President.—These are Government figures.

Mr. Carbery.—Yes.

President.—What would you put it at this year?

Mr. Carbery.—290,000 acres.

President.—Do you think that 329,000 is an over-estimate?

Mr. Carbery.—Yes, as far as I know.

President.—You can send us the second forecast later on.

Mr. Carbery.—Yes.

President.—Can you give us details of the cost of cultivation by an ordinary cultivator?

Mr. Carbery.—The actual cost is 2 annas 10 pies. I do not know how far that is correct.

President.—Have the Imperial Council of Agricultural Research made any investigation in this province?

Mr. Carbery.—Yes.

President.—In what area?

Mr. Carbery.—One in north of Rajshahi and the other in west Bengal.

President.—Have you seen the figures?

Mr. Carbery.—They are a bit higher than this.

President.—What is your figure?

Mr. Carbery.—2 annas 10 pies is the one from the Economic Enquiry.

President.—What is your figure?

Mr. Carbery.—3 annas 7 pies in a Government farm.

President.—Have you worked out any figure for the ordinary agriculturist?

Mr. Carbery.—Considerably less than that. It would be 2 annas.

President.—Have you got details?

Mr. Carbery.—No. We tried to work it out but found it very difficult.

President.—You have given a figure for the Government farm. Is that a fairly large area?

Mr. Carbery.—Yes, 6 acre blocks. 10 acre block is the biggest; that is mostly experimental.

President.—Is the crop grown under special conditions?

Mr. Carbery.—Specially heavily manured.

President.—More highly manured than an ordinary cultivator would.

Mr. Carbery.—Yes.

President.—Your actual cost of cultivation is how much?

Mr. Carbery.—3 annas 7 pies per maund, or Rs. 240 per acre.

President.—The yield will be how much?

Mr. Carbery.—1,000 maunds of stripped cane.

President.—That works out to less than 4 annas a maund.

Mr. Carbery.—Yes.

President.—Would your cost of cultivation be much higher than that of the ordinary cultivator taking into consideration the yield?

Mr. Carbery.—It depends upon what the crop is wanted for. If it is only wanted for gur it pays, but if it is wanted for sugar it does not because we over-manure the crop. We worked that out two or three years ago.

President.—You have done some manurial experiments with special reference to sucrose content and found that over-manuring affects the sucrose content.

Mr. Carbery.—Yes. It pushes the growth of the cane beyond maturity.

President.—How does the sucrose content in the Bengal cane compare with the sucrose content of, say, Bihar cane?

Mr. Carbery.—As far as I can gather, the sucrose content of the Bengal cane is higher.

President.—There are certain figures supplied to us from the Technological Institute, according to which the sugar per cent. of cane in Bengal is lower. You doubt the correctness of that?

Mr. Carbery.—Yes, I do.

President.—The average rate of recovery is definitely lower. But that may be due to the fault of the mills.

Mr. Carbery.—Yes.

President.—You are inclined to think that the sucrose content is higher in Bengal.

Mr. Carbery.—Yes. There is a greater distribution of rainfall.

President.—It has been suggested to us that the rainfall might be too much.

Mr. Carbery.—In certain places it is. It does affect it in this way that if we get early rain at the time of harvest, down goes the sucrose content.

Dr. Jain.—In some places, the sucrose content is higher and in some places it is lower.

Mr. Carbery.—Yes.

President.—According to the rainfall?

Mr. Carbery.—Yes, and soil.

President.—You cannot say very definitely that the sucrose content is higher.

Mr. Carbery.—That is only my impression.

Mr. Rahimtoola.—Based on the experience of crushing Bengal cane?

Mr. Carbery.—Yes.

President.—You have put the fair price of sugarcane as 4 annas a maund. Is that delivered at the factory?

Mr. Carbery.—Yes.

President.—Including carting?

Mr. Carbery.—Yes.

President.—That would not leave very much margin?

Mr. Carbery.—No.

President.—We have been told that the cost of transport in Bengal is rather unusually difficult owing to rivers and streams.

Mr. Carbery.—True.

President.—The cost of transport is possibly higher in Bengal than in Bihar and United Provinces.

Mr. Carbery.—Because there are no roads and the rivers are not always full.

President.—Some of the mills have explained to us the difficulty. When the water goes down, they cannot get cane.

Mr. Peterson.—That is only in East Bengal. In other areas there are roads.

Mr. Rahimtoola.—In Gopalpur they can get cane at 5½ annas a maund.

President.—Do you think that 4 annas would be a fair price considering the difficulties of transport.

Mr. Carbery.—4 annas within a radius of 3 miles and 4 annas 2 pies within a radius of 5 miles.

Mr. Peterson.—That is where the roads exist.

President.—It may be higher where communications are bad.

Mr. Carbery.—Yes.

President.—4 to 5 annas according to communications would be fair.

Mr. Carbery.—Yes.

President.—Why has the area under sugarcane dropped this year?

Mr. Carbery.—Chiefly because the price of gur was low generally speaking and secondly the price of jute is up. The cultivator in this province is up against this problem.

President.—He can grow jute and paddy.

Mr. Carbery.—Yes.

President.—How many crops does he lose when he grows sugarcane?

Mr. Carbery.—He may lose three.

President.—So, in Bengal, sugarcane has definitely got to compete with other crops.

Mr. Carbery.—Yes.

President.—Whereas in United Provinces and Bihar practically there is no alternative crop.

Mr. Carbery.—That is right.

President.—With regard to research work and money given for research for agricultural stations, have you any definite ideas in what directions you would like to spend more money?

Mr. Carbery.—For diseases work.

President.—When you say diseases, you mean diseases or pests?

Mr. Carbery.—Chiefly borers.

President.—The borer is the worst enemy.

Mr. Carbery.—Yes.

President.—Is pyrilla bad?

Mr. Carbery.—Not so much. There are two borers, stem and top.

President.—What about mosaic?

Mr. Carbery.—It is not of any importance.

President.—White ants?

Mr. Carbery.—Yes, two borers and white ants.

President.—Would you like some money for research work in these directions?

Mr. Carbery.—Yes.

President.—What about agricultural stations? Have you got a sufficient number?

Mr. Carbery.—Yes. We have a good number of agricultural stations, but there are still some districts without farms. We hope, however, to get money for these in three or four years' time.

President.—Is that financed from provincial funds?

Mr. Carbery.—Yes.

President.—You are getting a subsidy from the Imperial Council.

Mr. Carbery.—Yes, we have a small subsidy.

President.—Has the money granted from the excise duty been utilised? Have you put up a scheme?

Mr. Carbery.—Yes.

President.—What is that for?

Mr. Carbery.—It is a combined co-operative and agricultural scheme.

President.—Has it been turned down?

Mr. Carbery.—They have given no decision on it.

President.—So you have not actually made use of the money?

Mr. Carbery.—No.

President.—What is the standard cane in this province?

Mr. Carbery.—Co. 213. The only other cane is Tanna variety recommended by us some years ago.

President.—What varieties are you experimenting on?

Mr. Carbery.—The main canes are:—

381 and 281—early varieties.

331—late variety.

421 against 213.

508 and 513—early varieties.

President.—Which is the most promising cane?

Mr. Carbery.—508 is very promising; 421 is also giving a good yield.

President.—In what direction do you think there is possibility of improvement in the quantity and quality of cane?

Mr. Carbery.—One big item we are up against is ratooning. 25 per cent. of the crop is ratooned.

President.—Is that a common practice? How many ratoons?

Mr. Carbery.—Sometimes as many as three. What I object to is that they are all diseased and the plant cane is also affected. That is the cause of the heavy percentage of borer.

President.—Are you opposed to ratooning altogether or will you have one ratoon?

Mr. Carbery.—I don't think I would ratoon at all owing to damage by disease, or at the most one ratoon. But I am rather against it at the moment because I can't get them ratooned properly.

President.—What is your experience of the yield of the first ratoon?

Mr. Carbery.—It is as good as plant cane, but I can't get it in this province as an early cane.

President.—In some provinces it is preferred because it is early?

Mr. Carbery.—Yes.

President.—The Tariff Board has got to consider what are the probable developments in the next 8 years: can you hazard an opinion as to what improvement is possible in the quantity and quality of cane in the next few years?

Mr. Carbery.—It is difficult to say. We are always qualified by what is going to be the price of jute. Another factor is the paddy crop.

President.—What is the improvement possible in the quantity and quality of cane?

Mr. Carbery.—I do not think the quantity will improve very much unless more inducement is given to the grower by factories. The quality will improve.

President.—I am talking about the quantity per acre.

Mr. Carbery.—After all it depends a great deal on whether we can introduce better manuring or something like that.

President.—Would improvements lie in the direction of better culture or better manuring?

Mr. Carbery.—We are trying both.

President.—Where is the biggest need for improvement?

Mr. Carbery.—I think manuring and intercultivation.

President.—You say a few more vacuum pan factories are required in the province. In what areas would you suggest more factories to be established? We understand there are six new factories actually projected. Are there any others in course of erection?

Mr. Carbery.—There is one in Jessore but I understand they have not gone very much further and there is perhaps one in Burdwan.

Mr. Rahimtoola.—Can you give us the names of these new mills?

Mr. Carbery.—I have not got them here. Most of them are small factories.

Mr. Rahimtoola.—Do you know anything about the United Sugar Mills?

Mr. Peterson.—I think I have heard of that. Most of those factories have failed. They were working on the khandsari process.

President.—Khandsari is rather an indefinite term, so we took a more definite term "sugar made by other processes than vacuum pans". I see in this list you have put down khandsari factories as 24 and then you give department type gur factories 4 and department type open white sugar factories. The figures are a little bit difficult to follow.

Mr. Peterson.—Here is a list of factories actually working now. The others are all closed down. These are the factories where departmental machinery has been installed.

President.—Some of these factories make gur only I see and some sugar only and some both sugar and gur.

Mr. Peterson.—Yes. We want all these factories to make sugar as well. But last year several of these worked on gur because gur prices were high.

President.—What was the number of factories working in recent years?

Mr. Peterson.—There were as many as 48 to 50 in Jessore district alone.

President.—Are these all working with sugarcane or also date palm?

Mr. Peterson.—These are all cane factories.

President.—There are also some concerns working with date palm gur?

Mr. Peterson.—That is done in Jessore but practically all of them are now closed down.

President.—Will these be in addition to the 14 in your list?

Mr. Peterson.—Yes. These are refineries and these are sugar factories.

President.—Do you know how many refineries are there?

Mr. Peterson.—There are innumerable sugar refineries all over Bengal. Two or three of them are working in Jessore with sugarcane and date juice.

President.—You do not know the number of refineries working?

Mr. Peterson.—No.

President.—They press for exemption from excise duty. Have you anything to say on that? You know sugar from palmyra is exempt from the duty.

Mr. Carbery.—I do not think we have got sufficient sugar made from date juice that we might consider the question of exemption.

President.—I was thinking simply of the encouragement to date tapping.

Mr. Carbery.—Cane has really killed the date sugar industry in Jessore.

President.—Is cane gur preferred to date gur?

Mr. Peterson.—Date gur is preferred to cane gur because of the flavour.

President.—Is it more costly?

Mr. Peterson.—It is more costly because there is less sugar than in cane juice and you have to purchase fuel as well.

President.—What do you think of the prospects of the open pan concerns manufacturing gur and sugar or gur or sugar?

Mr. Carbery.—There are very good prospects if they are efficient; if they are not efficient it is impossible for them to compete.

President.—Do they pay the excise duty?

Mr. Peterson.—It depends on the size of the factory and the number of men they employ. Some of these factories may be up to 40 tons.

President.—They come under the Factory Act if they employ more than 19 men?

Mr. Peterson.—Most of them employ more than 19 and pay the excise duty. They work in shifts.

President.—Have you anything to say on the claim for exemption from the excise duty for these open pan concerns?

Mr. Peterson.—It depends on the open pan owners themselves. We have improved their machinery to such an extent and have given them processes which are so efficient that if they work their factories efficiently there is no necessity for them to ask for exemption. I will give some figures: by some processes they can manufacture at Rs. 5-8-0 a maund and by other processes they can manufacture at Rs. 5-0-0 and by the latest process they can manufacture at Rs. 4-12-0 a maund.

President.—Including the excise duty?

Mr. Peterson.—Yes.

President.—Ordinary Khandsari factories you put it at Rs. 6-6-0 per maund.

Mr. Peterson.—Yes.

President.—Department type factory Rs. 5-8-0 and the latest process of filtering you put at Rs. 5-10-0 per maund.

Mr. Peterson.—That was a mistake; we have again worked them out and find that they were paying more per maund of sugar for manufacture. We get so much more sugar that it works down to Rs. 4-12-0 a maund.

President.—Including depreciation and overhead?

Mr. Peterson.—Supervision and everything included if it is properly worked, and worked by individual owners.

Dr. Jain.—What is the difference between the old process and the new process?

Mr. Peterson.—The new process is a process of refining and the old process was a process of bleaching. By the latest process we get a very small percentage of waste through inversion and that allows for a higher percentage of recovery.

President.—How does the sugar compare with the vacuum pan sugar?

Mr. Peterson.—We do not get the grain but it is equally fine in colour; in fact the colour is better. Even with some of our old processes we get as good colour if not better than vacuum pan sugar.

Dr. Jain.—What about the keeping quality?

Mr. Peterson.—Keeping quality in the older process is not good but in the case of the new process it is certainly as good as vacuum pan or perhaps better because it is refined. Practically there is no bacteria in that sugar. The same process can be applied to the vacuum pan. It would increase their efficiency immediately.

Mr. Rahimtoola.—You have given us the total acreage under cane. How much of that is under silt soil and how much under red soil?

Mr. Carbery.—It is very difficult to say.

Mr. Rahimtoola.—I would like to know because the yield depends on the soil. Can you send the information later on?

Mr. Carbery.—Yes.

Mr. Rahimtoola.—Between the two, which soil would you prefer?

Mr. Carbery.—Grey silt.

Mr. Rahimtoola.—I understand that the sucrose content is much better in that soil.

Mr. Carbery.—I think it varies from two-thirds to a third.

Mr. Rahimtoola.—In 1937-38 cane cultivation has gone down. What is it chiefly due to?

Mr. Carbery.—Partly due to the low price of gur.

Mr. Rahimtoola.—I understand that sugarcane cultivation has been taken up because Government were anxious to reduce land under jute cultivation.

Mr. Carbery.—Yes.

Mr. Rahimtoola.—Therefore if the price of jute goes up, the cultivation of sugarcane would automatically diminish.

Mr. Carbery.—It must be that way.

Mr. Rahimtoola.—So that sugarcane is considered as a subsidiary crop.

Mr. Carbery.—It is not a main crop—not by any means.

Mr. Rahimtoola.—It will all depend upon the factories that are put up round about the cane cultivation area.

Mr. Peterson.—It depends upon the price of gur. That is one of the things that killed it. The cultivator did not think it was worth while manufacturing it.

Mr. Rahimtoola.—Are you importing a large quantity of gur from United Provinces and Bihar?

Mr. Peterson.—Mostly chakki gur which is sold in Calcutta or round about Calcutta.

Mr. Rahimtoola.—What is the price of gur at present?

Mr. Peterson.—Rs. 2-8-0, per Bengal maund of 82 lbs.

Mr. Rahimtoola.—The cost of cultivation is 4 to 5 annas. I want to know what is percentage of gate cane to rail cane. How is cane transported?

Mr. Peterson.—In bullock carts as a rule and in some places by boat.

Mr. Rahimtoola.—Cane is also railed.

Mr. Peterson.—Yes.

Mr. Rahimtoola.—But not generally?

Mr. Peterson.—A large percentage comes in by rail: also a certain percentage by bullock carts direct to factories.

Mr. Rahimtoola.—From where?

Mr. Peterson.—From the vicinity of factories. Cane is being grown all round the factories.

Mr. Rahimtoola.—What percentage would you put as the gate cane?

Mr. Peterson.—That is very difficult to say.

Mr. Rahimtoola.—The Director of Industries is of opinion that the question of the transport of cane is an uneconomic proposition. I suppose you have no definite information on the subject.

Mr. Carbery.—In the case of Beldanga, I do not know where the cane came from. Their figure is 16 lakhs of maunds by rail against 2 lakhs of maunds at the gate.

Mr. Peterson.—Beldanga is not a very big cane growing area. In Rajshahi there is more cane.

Mr. Rahimtoola.—With regard to the figure of Rs. 4-12-0 as the cost of production by the new process, can you give us the details?

Mr. Peterson.—I have here with me (handed in).

Mr. Rahimtoola.—Is that new process confined to Bengal?

Mr. Peterson.—No. There are new factories growing up in Central India and in the United Provinces which have adopted this process. They had been here and had seen the factories working.

Mr. Rahimtoola.—The process was invented in Bengal.

Mr. Peterson.—Yes.

Mr. Rahimtoola.—How much sugar is produced at the moment by this process?

Mr. Peterson.—Very little. This process was only developed last season.

Mr. Rahimtoola.—Is it still in an experimental stage or is it freely used?

Mr. Peterson.—This season it will be freely used.

President.—How many factories do you think will be working in this coming season?

Mr. Peterson.—Three.

President.—Last season?

Mr. Peterson.—One, towards the latter end it worked on this process. We worked with makeshift machinery. We did not have proper machinery for that. Now new machinery has been designed.

Mr. Rahimtoola.—Is all this machinery made in India?

Mr. Peterson.—Yes, made by Kumardhubi Engineering Works.

Mr. Rahimtoola.—What is the quality of sugar?

Mr. Peterson.—It is much better than khandhari sugar which is soft sugar. This sugar is neither soft nor hard. It is midway between the two.

Mr. Rahimtoola.—How would you compare it with vacuum pan sugar?

Mr. Peterson.—It is much smaller grained. I should say it is equal to No. 2 quality of vacuum pan sugar in size of grain.

Mr. Rahimtoola.—Did the factory which was manufacturing sugar by this process market its product?

Mr. Peterson.—Yes.

Mr. Rahimtoola.—What price did it fetch?

Mr. Peterson.—That was being sold as ordinary sugar fetched a price from Rs. 6-12-0 to Rs. 6-14-0 and for this sugar the price obtained was Rs. 7-8-0.

Mr. Rahimtoola.—It is more than the price of first class crystal sugar.

Mr. Peterson.—They prefer it to the vacuum pan made sugar.

Mr. Rahimtoola.—They not only prefer it but pay a higher price.

Mr. Peterson.—Yes.

Mr. Rahimtoola.—Can you send us a small sample packet of this quality?

Mr. Peterson.—Gur at present will not be as hard as it was when it was manufactured. The difference is due to the moisture in the air owing to the damp climate of Bengal.

President.—It cannot be as good as you showed us in April?

Mr. Peterson.—No. However, I shall send it on to you.

Mr. Rahimtoola.—How long will gur keep?

Mr. Peterson.—If it is put into a tin, it lasts for a whole year. That is what many of them do because they get very good price for their gur, from now onwards—October, November and December—to December, the price of gur will go up to as much as Rs. 4-4-0. They preserve gur in that way and commence selling from now.

Mr. Rahimtoola.—Otherwise how long does it keep?

Mr. Peterson.—What they call Jola gur or fab in other parts of India—that would all ferment say by the beginning of August. The chukki or hard gur keeps for a year. But if it is wrapped with gunny or straw or *ullu* grass then nothing happens. It keeps in a wonderfully good condition.

Mr. Rahimtoola.—How would you distinguish rab from chukki gur?

Mr. Peterson.—Rab is boiled up to 110°; chukki gur may be boiled up to 114°.

Mr. Rahimtoola.—That is the only distinction between the two.

Mr. Peterson.—The difference lies in the boiling temperature.

Mr. Rahimtoola.—What is the raw material for sugar made out of gur?

Mr. Peterson.—Cane.

Mr. Rahimtoola.—The sugar manufactured by this new process is made direct from cane.

Mr. Peterson.—Yes.

Mr. Rahimtoola.—Is it through rab? What is the process?

Mr. Peterson.—Rab is simply massecuite. In vacuum pan factories it is called massecuite; in open pan it is rab. It is exactly the same thing.

President.—Is rab done at all in this province?

Mr. Peterson.—The better classes prefer rab and the poorer classes chukki gur.

Dr. Jain.—The material that you take is cane and not rab.

Mr. Peterson.—We crush the cane and make it into rab.

Dr. Jain.—You do not buy rab from cultivators?

Mr. Peterson.—No.

Dr. Jain.—One of the problems with which you are faced in agriculture is in regard to diseases—top borers and white ants.

Mr. Carbery.—Yes.

Dr. Jain.—Can you give us an idea of the extent of the damage caused by these?

Mr. Carbery.—I do not know about the damage caused by white ants, but the extent of damage caused by borers comes to 40 per cent.

Dr. Jain.—Is it as high as that?

Mr. Carbery.—Yes.

President.—Have you seen the statistics published by Dr. Haldane regarding the extent of damage in Bihar?

Mr. Carbery.—I saw something.

President.—They were published by the Imperial Council. Do you think that the figures are higher in Bengal than in Bihar?

Mr. Carbery.—It all depends upon the season—sometimes very bad and sometimes not too bad.

President.—They gave 43 per cent.

Mr. Carbery.—We gave 41 per cent. two or three years ago.

President.—Of course, it depends upon the season.

Mr. Carbery.—Yes.

President.—I was thinking of the maximum figure.

Mr. Carbery.—The maximum that I gave was 41 per cent.

Dr. Jain.—From your answers it appears that there is cordial relation between your Department and the factories with regard to research, cultivation of improved varieties, etc. How exactly does that happen? Have they got sub-stations for testing?

Mr. Carbery.—We give them cuttings. We go and inspect their plantations. They also come and see our work. The Ramnagar people have kept in close touch with us for many years. They were a gur factory originally.

Dr. Jain.—Would you be in favour of sub-stations for factories to see that the varieties yield proper results?

Mr. Carbery.—Yes. Gopalpur people are inclined to bring in cane which I object to. Unless it is possible to get the cane tested in a Government farm, I don't think it is right to bring it. It may produce diseases like red rot.

President.—How long does the testing of cane take in this province?

Mr. Carbery.—5 years is the minimum. In the 1st year they go to the main station and in the 3rd or 4th year they go to the other two farms that we have.

President.—Where are they situated?

Mr. Carbery.—Rajshahi and Berhampore. From there they go to all the farms.

President.—In six years you will be able to distribute them to the cultivators?

Mr. Carbery.—Yes.

President.—You begin multiplication in the 6th year.

Mr. Carbery.—Yes.

Dr. Jain.—The suggestion that has been made is that there are sub-stations which may be utilised to the advantage of the industry. Do you agree to that?

Mr. Carbery.—Yes, if the varieties are properly tested. What I object to is to grow cane which is not tested.

President.—Selected factories—I emphasise the word selected—should be utilised to test these canes on condition that they do not release them to any one else until you approve.

Mr. Carbery.—Yes.

Dr. Jain.—In answering the question about the possibilities of starting subsidiary industries in the province, you say that the possibilities are many. Can you give us a little more information on the subject?

Mr. Carbery.—There is a good deal of work that could be done on the canning industry in this province. We have a very big area under fruit trees of all description—particularly mangoes, pine apple, etc.

Dr. Jain.—Have you any scheme in progress about it?

Mr. Carbery.—Not at the moment. There is an institution at Rajshahi where canning is taught. There is also the possibility of toffee from date sugar. We worked on that but owing to retrenchment Government cut it out.

President.—Is date sugar particularly suited for it?

Mr. Carbery.—It has got a nice flavour.

President.—It has got a better flavour.

Mr. Carbery.—Yes.

Mr. Peterson.—It is like Demarara sugar.

Dr. Jain.—Anything else besides canning?

Mr. Carbery.—Those are the two main items.

President.—Toffee prepared in England by ordinary household is made out of Demarara sugar.

Mr. Carbery.—Yes.

President.—It will be suitable for the same reason.

Mr. Carbery.—Yes.

Mr. Peterson.—Another thing is treacle.

Dr. Jain.—About the statistics, you say that the acreage figures are anything but accurate.

Mr. Carbery.—That is right.

Dr. Jain.—Is it possible to indicate the extent of error?

Mr. Carbery.—It is so difficult.

President.—What about the average yield per acre?

Mr. Carbery.—That is worked out on the basis of crop cutting experiments.

President.—Do you continue those experiments?

Mr. Carbery.—Yes.

President.—These figures are not so bad.

Mr. Carbery.—They are not far out.

Dr. Jain.—Lastly about the question of assistance given to factories, is there any assistance given to sugar factories?

Mr. Carbery.—When they started, they came to us for information. That is all I know about them. I do not know what they did with the Industries Department.

Dr. Jain.—You have got an Engineer under you which they have not got.

Mr. Carbery.—That is true.

Mr. Peterson.—I think we knew more about it at that time than they did. I have been in sugar myself for many years and so I am in a position to advise both on cane and manufacture.

Mr. Rahimtoola.—I am rather interested in your open pan factory about which you have promised to send a statement. What will be the capital cost of putting up such a factory?

Mr. Peterson.—Rs. 1,000 per ton.

Mr. Rahimtoola.—Per ton of sugar?

Mr. Peterson.—No. Suppose you want a 25 ton factory—capable of crushing 25 tons of cane per day—it would come to Rs. 25,000. The cost of a vacuum pan factory of a similar size would be just Rs. 3,000 per ton. It works out to one-third of the price of a vacuum pan factory initially.

Mr. Rahimtoola.—What would be the economic unit of a factory working this process?

Mr. Peterson.—The larger the better: the larger the more economical.

Mr. Rahimtoola.—What is the crushing capacity of the factory which is at present working on this process?

Mr. Peterson.—It is a 25 ton factory. There are several 25 ton factories working now. They are going to work this year.

Mr. Rahimtoola.—I do not understand why persons should put up vacuum pan factories and invest lakhs of rupees when they can make a profit of Rs. 2-12-0 a maund by this process?

Mr. Peterson.—Originally I designed these factories to reduce unemployment in Bengal, to be worked by say 25 or 30 youths on a co-operative basis, but it did not seem to suit them and then people started taking them up. These are all small factories—8 to 10 ton factories. Now everything has gone up to 25 and 50 tons. In Bengal we have none bigger than 25 tons, but up-country they are going to put in 50-ton factories. Here they have put in 25 ton factories with the intention of extending them to 50 tons in another year or two, but the other people are putting up bigger factories because they realise the bigger the factory the better the profits. The initial cost comes down and the working costs are also lower.

Mr. Rahimtoola.—What is the working season?

Mr. Peterson.—It depends on what you turn the plant to. As you see, the whole plant can be converted into a gur plant. If you are for the gur market which should be every one's intention, the working season commences in November and goes on to December. During November and December the price of gur is very good in Bengal. From January the plant can be utilised for the manufacture of sugar right up to 15th May.

Mr. Rahimtoola.—Shall we say 5 months?

Mr. Peterson.—6 months—2 months in producing gur and 4 months in manufacturing sugar.

Mr. Rahimtoola.—I am only talking of sugar.

Mr. Peterson.—4 months.

President.—How many centrifugals would you have in a 25 ton factory?

Mr. Peterson.—2 24" x 14" centrifugals.

Dr. Jain.—How many labourers would you employ?

Mr. Peterson.—Not counting the supervisory staff, 48.

President.—Have you given all the particulars of the recovery rate you expect and so on in the note?

Mr. Peterson.—Yes.

Mr. Rahimtoola.—Is it not 9 per cent.?

Mr. Peterson.—Yes.

Mr. Rahimtoola.—To produce a maund of sugar, how many maunds of cane would you require?

Mr. Peterson.—11 maunds.

Mr. Rahimtoola.—What is the price you have taken for cane?

Mr. Peterson.—3 to 4 annas. Some of these open pan factories paid more than the vacuum pan factories. Some paid 4 annas 9 pies per maund of cane; others paid between 3 annas and 4 annas.

Mr. Rahimtoola.—What is the actual price you have paid for cane?

Mr. Peterson.—Yes, at 3 annas a maund for the cane.

Mr. Rahimtoola.—What is the cost of manufacture?

Mr. Peterson.—Rs. 4-12-0.

Mr. Rahimtoola.—I am confining my attention to the new process. Rs. 4-12-0 is the total cost. What is the manufacturing cost? You say that one factory is working on that process.

Mr. Peterson.—If you deduct one rupee, it works out to Rs. 3-12-0.

Mr. Rahimtoola.—Are you paying excise duty?

Mr. Peterson.—I have put down one rupee.

Mr. Rahimtoola.—That comes to Rs. 3-12-0.

Mr. Peterson.—Yes.

Mr. Rahimtoola.—You have to deduct the cost of cane.

Mr. Peterson.—I have worked that out in detail.

Mr. Rahimtoola.—I want to understand how the details are worked out. You get cane at 3 annas a maund, does it include carting?

Mr. Peterson.—3 annas is per maund of cane delivered at the factory.

Mr. Rahimtoola.—I want to know whether Rs. 4-12-0 is exclusive of overhead charges.

Mr. Peterson.—Inclusive of all costs.

Mr. Rahimtoola.—Rs. 1-11-0 is the balance inclusive of depreciation, selling expenses and profit.

Mr. Peterson.—That does not include profit.

Mr. Rahimtoola.—Rs. 2-12-0 is the profit.

Mr. Peterson.—Yes.

President.—How many rollers do you employ?

Mr. Peterson.—3 rollers. I get better extraction than the vacuum pan factories without maceration. If they did not macerate my extraction figure will be better than theirs. I get about 72 and they get about 65 or 66. With maceration they go up to about 84.

Mr. Rahimtoola.—How far is the factory from here?

Mr. Peterson.—There are two factories in the Dinajpur district. This particular one where we carried out these tests is near Chorkai, 2 stations below Parbatipur, within a mile from the station.

Mr. Rahimtoola.—The Director has taken 4 annas as the fair price to the grower.

Mr. Peterson.—That is for the vacuum pan factories.

Mr. Rahimtoola.—What is the difference between the two prices?

Mr. Peterson.—In the matter of open pan factories, it is practically their own cane. Many of these people have their own factories, others purchase from the cultivators.

Mr. Rahimtoola.—This price is taken irrespective of the cost of cultivation.

Mr. Peterson.—Yes.

Mr. Rahimtoola.—That makes a very big difference.

Mr. Peterson.—It does not make a big difference, because these open pan factories pay as much and more for their cane than the vacuum pan factories.

Mr. Rahimtoola.—It does.

President.—In a subsequent letter you have said that the treatment of cultivators is not satisfactory.

Mr. Carbery.—I don't think that it is at all fair in Eastern Bengal.

President.—Is that due to underweighment?

Mr. Carbery.—They take off $1\frac{1}{4}$ seers per maund of cane and the price is $2\frac{1}{2}$ annas per maund.

President.—You have mentioned the areas.

Mr. Carbery.—Yes.

**(2) Evidence of Mr. S. C. MITTER, Director of Industries, Bengal,
and R. CHOUDHURY recorded at Calcutta on Thursday,
the 21st September, 1937.**

Mr. Mitter.—May I be permitted to make a statement before you begin to take my evidence? It has been my definite opinion that in any scheme of economic reconstruction the first point to be considered is that the province must be self-supporting in the matter of her requirements of food products. Whatever food products are necessary for consumption in the province must be produced in the province. Secondly, agriculture must be so organised as to be able to supply raw materials to the industries of the province. And thirdly, we in Bengal by means of agricultural planning must try to capture some of the markets to acquire supplementary purchasing power until such time as Bengal is in a position to export commodities enabling her own people to meet their obligations whenever they buy certain imported goods.

Mr. Rahimtoola.—Export market for what commodities?

Mr. Mitter.—Raw materials which are purchased by foreign markets. Coming to the first point I may say that the consumption of sugar in Bengal is so large that there is great scope of, and abundant room for, the development of a very large number of sugar mills.

President.—We do not want much exposition on the subject. We have put to the Director of Agriculture questions as to what are the possibilities of development.

Mr. Mitter.—My point is this: when the sugar import duty was imposed in 1932 there was a definite condition laid down that within a limited number of years Government expected that wherever this industry developed they should attain the maximum efficiency. If a question were put enquiring about the steps the mills in Bihar and United Provinces have taken towards the realisation of this expectation, possibly the Board, I think, would have found that they have yet a long ground to cover for attaining the maximum efficiency and the difficulties that stood in the way could also be ascertained.

President.—The whole of our questionnaire was directed to find out those very points, that is to say, manufacturing efficiency and so on.

Mr. Mitter.—These materials are very helpful so far as working conditions of the factories are concerned.

Mr. Rahimtoola.—When the Sugar Mills' Association is examined we shall probably get all information.

President.—Can we say that the level of efficiency in India is definitely lower than in Java?

Mr. Mitter.—General efficiency of the average Indian mill is lower than in Java. Actually the quality of sugar which is produced in India is not as good as in Java and does not reach the Dutch standard in all cases.

President.—That depends on the quality of cane?

Mr. Mitter.—But it also depends on technical efficiency.

President.—In a majority of the mills in India according to the technical advice we have received, they have nearly reached the efficiency of Java.

Mr. Mitter.—Yes, some of them.

Mr. Rahimtoola.—I would personally like you to confine your attention to the industry in Bengal.

Mr. Mitter.—Yes.

President.—What are the difficulties of the mills with regard to transport?

Mr. Mitter.—Railway freight is very high. For the same type of wagon and for the same floor area we pay Rs. 4-8-0 more than on the East Indian Railway, at prevailing rates.

President.—We have all the figures with regard to railway rates. What about the development of subsidiary industries, sweet making and so on?

Mr. Mitter.—All these propositions have been incorporated in a programme which is now receiving the consideration of the local Government. Unfortunately I am not in a position to give away the confidential information now. But I will give you information as to the possibility of subsidiary industries.

President.—Are you concerned with the open pan factories?

Mr. Mitter.—No. The whole sugar industry is now in charge of the Director of Agriculture.

President.—You are not concerned with the matter except possibly with the by-product or subsidiary industry which is very small?

Mr. Mitter.—The possibility of by-product or subsidiary industry is not really very small but, as matters now stand, little progress has been made until now.

Mr. Bahimtoola.—Are you concerned with the industrial side of the industry?

Mr. Mitter.—Officially I am not concerned with any aspect of the industry other than what the Chairman rightly pointed out.

Mr. Bahimtoola.—What exactly does the department do for the sugar industry?

Mr. Mitter.—If any sugar manufacturer writes to us soliciting our help, we try to help him as far as we can. For instance, very recently a case has been referred to us by the North Bengal Sugar Mills. They are anxious to lay tramway lines and have asked for our help in connection with land acquisition, tenders and so on. We are assisting them on the technical side of these questions. This kind of work is done by me.

Mr. Rahimtoola.—What about the confectionery industry?

Mr. Mitter.—That is not developed here. The sugar industry and sugarcane cultivation have not developed to the same extent as they have in other provinces. To my mind, one of the reasons for this deficiency is that Bengal has not been considered a fit place for sugarcane cultivation. Till 1905-06 we had sugarcane cultivation but the Report of 1920 either discouraged, or did not support, the view that Bengal had any economic possibility for the development of the sugar industry. Cultivators naturally were not asked to go back to sugarcane cultivation until recently—about two years ago—when as a result of the campaign that has been going on for the restriction of jute cultivation, Government had had to suggest some form of substitute crops of which sugarcane was one. The Agricultural Department will tell you more about the difficulties of the cane-growers. They have now got the cane, but more mills will have to be established.

President.—How many new mills are projected now?

Mr. Mitter.—Another six—I have given those particulars.

President.—One is in course of erection, and that is Ramnagar.

Mr. Mitter.—Yes.

President.—And the others are projects only.

Mr. Mitter.—They are going ahead and I believe in the next few months they will be able to make a start.

President.—Have they ordered for machinery?

Mr. Mitter.—Some of them have and some of them have not.

Mr. Rahimtoola.—7 of them have worked during 1936-37?

Mr. Mitter.—Yes.

Mr. Rahimtoola.—What is the total production?

Mr. Mitter.—23,000 tons.

Mr. Rahimtoola.—Apart from open pans and khandsaris?

Mr. Mitter.—There is no khandsari industry in Bengal.

President.—It does not include open pan production as well.

Mr. Mitter.—Mr. Peterson will be able to give you full particulars, but there is no khandsari industry in Bengal.

President.—There is not much difference between the open pan and khandsari systems.

Mr. Mitter.—Mr. Peterson will be able to tell you what the difference is.

President.—We will put it this way—sugar produced by processes other than vacuum pans.

Mr. Mitter.—Yes.

President.—Can you send us a list of all the new factories projected with their crushing capacities?

Mr. Mitter.—Yes.

Mr. Rahimtoola.—When your assistance is sought by these factories do they ask you about the sites?

Mr. Mitter.—Not up till now.

Mr. Rahimtoola.—That means factories that have started already have started according to their own views.

Mr. Mitter.—It may be that they have consulted the Director of Agriculture and I believe, it would be well if you would ask him these questions.

Dr. Jain.—Is molasses used for hookas?

Mr. Mitter.—Yes.

Dr. Jain.—I understand that the price obtained here for molasses is the highest in India.

Mr. Choudhury.—4 annas per maund.

Dr. Jain.—Not as much as 8 annas?

Mr. Choudhury.—You might take 4 to 8 annas.

Dr. Jain.—Is there any quantity of molasses sold for hubble-bubble?

Mr. Choudhury.—Molasses are sold in two forms, viz., liquid and boiled molasses. The liquid molasses are sold at 4 to 8 annas per maund. The boiled molasses are sold at 14 annas to Rs. 1-2-0.

Mr. Rahimtoola.—There is one point which I would like to ask you and that is with regard to a statement “in the Foreword to your book” on the “Prospects of Sugar Industry in Bengal”. I want to know whether you endorse the opinion stated therein, viz., “I am of considered opinion that the Government of Bengal should impose a provincial protective cess of about Rs. 2 per maund on all sugars imported into the province”.

Mr. Choudhury.—That is his opinion.

Mr. Rahimtoola.—The whole of your case is to make Bengal self-supporting in the matter of sugar.

Mr. Choudhury.—If it is necessary even to go to that extent it might be considered advisable. At this stage if the Tariff Board's recommendation will be enough to enable Bengal to grow sugarcane, the industry can be developed in the usual course.

President.—It is not permissible under the Government of India Act to impose such a cess. So, it is outside our scope.

Mr. Mitter.—It may be put as town duty. Every town can do it.

President.—Are you in any way concerned with the manufacture of sugar from gur made from date palm?

Mr. Mitter.—No.

President.—Do you know anything about it?

Mr. Mitter.—Except that one gentleman applied for a loan during Mr. Weston's time but I do not know whether he got the loan to develop this industry. If you want I can look up my files and send you the information.

Dr. Jain.—Is there any importation of sugarcandy?

Mr. Mitter.—I cannot tell you.

Dr. Jain.—In Bombay, it is manufactured as a cottage industry.

Mr. Mitter.—I have not got any detailed statistics ready with me but I am informed that in this province also it is produced on small scale.

Dr. Jain.—Is sugarcandy part of your comprehensive scheme?

Mr. Mitter.—Yes.

President.—In this note, have you dealt with the sugarcandy?

Mr. Mitter.—Yes.

Dr. Jain.—The present position and future possibilities?

Mr. Mitter.—Yes.

Dr. Jain.—You say that you do not possess statistics regarding prices.

Mr. Mitter.—It is very difficult to give you any reliable statistics off-hand.

Dr. Jain.—You mean wholesale statistics. I thought there was difficulty about retail prices.

Mr. Mitter.—These figures are maintained by the Senior Marketing Officer (of the Government of India scheme) working under the Director of Agriculture and when I wrote to him I got from him a reply to that effect.

Mr. Rahimtoola.—The figures that you have given on page 19 with regard to alternative crops and returns for them have been obtained from the Director of Agriculture.

Mr. Mitter.—Yes.

Mr. Rahimtoola.—From sugarcane do you get a higher return?

Mr. Mitter.—No independent attempt has been made properly.

Mr. Rahimtoola.—You say Rs. 140 to Rs. 210 for sugar as against potatoes Rs. 120 to Rs. 180.

Mr. Choudhury.—That is the general impression.

Mr. Rahimtoola.—Out of all crops, sugarcane is giving the highest return to the cultivator at the present moment.

Mr. Choudhury.—Even if they produce gur, they will get the highest return. My point is that sugar should be manufactured.

Mr. Rahimtoola.—In order to get an outlet for cane?

Mr. Choudhury.—Yes. Then we get the maximum return from the cultivation of cane. In the last six years efforts have been made to increase the cultivation of sugarcane without providing suitable outlets.

Mr. Rahimtoola.—The figures of yield, sucrose content, etc., that you have given are all based on actuals.

Mr. Choudhury.—Yes.

President.—Can you tell us why the sucrose content of cane in Bengal is on the whole inferior to that of Bihar or United Provinces?

Mr. Choudhury.—It is higher. If the sucrose content is 14, then recovery will depend upon minimising the total loss. It depends upon the efficiency of the factory. In Bengal, there are very few efficient factories.

President.—What type of cane are you using?

Mr. Choudhury.—Co. 213.

President.—Still you are using 213.

Mr. Choudhury.—Co. 213 is cultivated on a very large scale. Other numbers of Coimbatore and P.O.J. varieties are also introduced. All these are doing well.

President.—Do you say that the low recovery is due to the inefficiency of factories?

Mr. Choudhury.—Quite.

President.—And not to the poor sucrose content of cane?

Mr. Choudhury.—No. I make efficiency the prime cause. Even if the sucrose content is 11, the total loss must not exceed 2 per cent. In Java it is 1.5 or 1.75. In most of the Indian factories the efficiency question depends on the staff.

President.—Actually the sucrose content is lower in Bengal.

Mr. Choudhury.—It is higher.

President.—I am talking about the sucrose content apart from recovery rates. Those are official figures which may be correct or may not be correct.

Mr. Choudhury.—From my personal experience I can say that it is 1½ to 3 per cent. higher than in United Provinces.

Dr. Jain.—Have you made experiments?

Mr. Choudhury.—I am analysing daily.

Mr. Rahimtoola.—Wherefrom did you get those figures given on page 31?

Mr. Choudhury.—Those are actuals given by the Agricultural Department about 3 years ago.

(3) Evidence of Khan Bahadur A. M. ARSHADALI, Registrar, Co-operative Societies, Bengal, recorded at Calcutta on Thursday, the 21st September, 1937.

President.—How long have you been Registrar of Co-operative Societies?

Khan Bahadur.—For the last five years.

President.—In what respects do you come into contact with the sugar industry and the growers of cane?

Khan Bahadur.—We have two open pan factories one at Malda and another at Rajshahi district and we have been working these two factories for some time now, about 3 or 4 years. Besides that in connection with the Government of India grant for organisation of co-operative societies I made enquiries in the cane growing areas and held meetings of cane-growers.

President.—You have not received any money from the Government of India?

Khan Bahadur.—We have not drawn the money; we have got a grant of Rs. 25,000 for organising co-operative societies but our scheme is still under the consideration of the Government of Bengal.

President.—How are your two co-operative factories getting on?

Khan Bahadur.—The Malda factory was organised by the District Magistrate, Mr. Talukdar, and he used to take a lot of interest in it. This is an open pan factory and the machinery was supplied by Mr. Peterson, the Agricultural Engineer to Government, and we expected that we would make some profit out of it. Actually we made some profit though small. On last year's working the profit was about Rs. 1,500 after meeting all expenses. The main difficulty is the excise duty and I think we could have made more profit if the excise duty was not there.

President.—That is the only society that worked last season?

Khan Bahadur.—Yes.

President.—Can you send us the balance sheet?

Khan Bahadur.—Yes. I shall get a copy and send it to you. The profit we made is not very encouraging to the promoters of the society. Our accounts are regularly audited. The workers are recruited from the villages round about and they have been trained in the work.

President.—What is the capacity of the factory?

Khan Bahadur.—We crushed about 20,000 maunds last year.

President.—What is the staff employed?

Khan Bahadur.—One mechanic and about 6 or 7 workers. There is one gentleman in that locality who is the manager of a zamindar. He takes a good deal of interest and supervises in an honorary capacity. The product of the mill is consumed by the local sweetmeat merchants in Malda town and the factory can supply the whole of the requirements of the people of that town only.

President.—Is the sugar liked or do they prefer to have vacuum pan factory sugar?

Khan Bahadur.—It is very white and is liked by the people.

President.—Do you make gur also?

Khan Bahadur.—No.

President.—How many coolies are employed in the factory?

Khan Bahadur.—About 25.

President.—It comes under the factory act?

Khan Bahadur.—Yes.

President.—You say one of the main difficulties about sugarcane growing is the difficulty of transport.

Khan Bahadur.—Yes. This I have come across when I investigated into the condition of the cane-grower in the neighbourhood of two big mills in Bengal, one is Gopalpur in the district of Rajshahi and the other is Sitabgunj in the district of Dinajpur. I made enquiries into the condition of the cane-growers and I found that there was considerable difficulty about transportation. Even people residing within a radius of 10 miles of the mills could not bring their cane for want of good roads. Generally the bulk of the cane is rail-borne on account of road transport difficulty.

President.—What would you put the average cost of transport at?

Khan Bahadur.—One anna per mile per maund. In Naogong, where I enquired it was 3 pies per maund per mile by cart.

President.—While you were enquiring into the cost of transport did you enquire whether the growers had any complaint about factories about weighment?

Khan Bahadur.—Yes. The factory people have a system which I have seen in the Gopalpur mill. They appoint a number of agents and these agents go about the villages within a radius of 20 to 30 miles and it is these agents who really supply the produce. They have got a sort of negotiation with the village leaders and they generally fix up how much crop should be supplied and at what time. The cane-growers are given advances so that they cannot bring the cane without their permission and the agents generally bargain with the producers and the man who can give some bribe to the agent gets his cane taken to the mill first. Secondly at the weighbridge the cane is left for some time so that it dries up and there is consequent loss in weight and therefore the price received by them is lower. This sort of complaint was made to me particularly by the cultivators in the Malda district where sugarcane is grown in very large quantities.

President.—To which mill did they supply?

Khan Bahadur.—The factory people make a combination. The Malda people can very easily supply to Sitabganj mills but this factory would not purchase any cane from this area; they allocate this cane to a certain mill in Bihar. I have been also told that they make arrangements in such a way that cane grown in the vicinity of a certain mill is not taken by that mill. I saw a very large quantity of cane left on the roadside stations in North Bengal from Rajshahi to Malda for days together and the growers were compelled to accept a bargain price. The people who brought cane from a distance of 20 to 30 miles had to accept a nominal price only.

President.—Because minimum price has not been fixed in Bengal?

Khan Bahadur.—That is right. We cannot organise co-operative societies also for that reason.

President.—Have the local Government considered the question of fixing a minimum price?

Khan Bahadur.—There was one meeting last year in which several Collectors and the Director of Agriculture met. But it was thought that the time had not yet come for fixing a minimum price because in some districts people were getting more than 5 annas per maund. But my information is that people are not getting 5 annas now.

Mr. Rahimtoola.—What do you think should be the lowest price?

Khan Bahadur.—Never less than 4 annas.

Mr. Rahimtoola.—Delivered at the factory?

Khan Bahadur.—In the field.

Mr. Rahimtoola.—How much would you allow for transport?

Khan Bahadur.—I fixed it in this way, that 150 maunds is produced in a bigha and the cost price we take as Rs. 25 per bigha. At 4 annas a maund it is Rs. 37 and the cost is Rs. 25, or Rs. 75 per acre.

Mr. Rahimtoola.—And the yield?

Khan Bahadur.—450 maunds per acre. This may be increased by a little manuring.

Mr. Rahimtoola.—On an acre he is making about Rs. 37 profit at 4 annas roughly?

Khan Bahadur.—Yes.

Mr. Rahimtoola.—Do you think it is necessary to organise co-operative supply societies to protect the interest of the growers?

Khan Bahadur.—The time has come I think not only to organise but to make the mills to co-operate with us. They are really exploiting the growers of sugarcane and so I think the time has come to organise co-operative supply societies and save the cultivators from exploitation, and before I can do this a minimum price for cane must be fixed.

Mr. Rahimtoola.—Why do you say there was overproduction of cane?

Khan Bahadur.—It is not exactly overproduction. The existing mills cannot consume the quantity of cane now grown. There should be more mills as early as possible.

President.—Do they not manufacture gur?

Khan Bahadur.—We had a scheme for gur manufacture but people generally are disinclined to use gur; they are more for sugar than for gur even in the villages.

President.—According to the Director of Agriculture only 5 per cent. of the cane production is used by sugar factories at the moment and the rest is converted into gur.

Khan Bahadur.—Because there is no other way of utilisation of sugarcane.

President.—Probably your point of view is that the price of gur has fallen to such an extent that nobody will produce gur.

Khan Bahadur.—That is true. Government suggested—grow less jute and produce more subsidiary crop, and sugarcane was recommended and people are now producing sugarcane, and they find themselves handicapped because they cannot sell.

President.—What is the sugar recovery you get out of open pan factories under the co-operative system?

Khan Bahadur.—4 per cent.

President.—That seems very low.

Khan Bahadur.—That is in Naogong factory.

Mr. Rahimtoola.—Are they using the process designed by Mr. Peterson?

Khan Bahadur.—Yes. In the Malda factory out of 20,000 maunds crushed we had an outturn of 900 maunds of sugar.

Mr. Rahimtoola.—With regard to the work of the societies, what exactly are they doing? Are they selling any cane to the factories?

Khan Bahadur.—Growers are members of the Society. Members bring their cane to the factories and they are paid 4 annas a maund and sometimes a little more than that. Practically Society means the factory: the factory works under the auspices of the Society.

Dr. Jain.—What qualities of sugar are they producing in these co-operative factories?

President.—Have you got a note on the working of the Society?

Khan Bahadur.—Yes.

President.—Would you be able to send us a copy of your note?

Khan Bahadur.—I shall send a copy of a note on the whole working of the society as well as the balance sheet.

Dr. Jain.—4 per cent. recovery would make it almost impossible to run the factory. 4 per cent. would mean 25 maunds of cane would be required to make a maund of sugar. I think you might let us have a note giving the exact figures.

Khan Bahadur.—This 4 per cent. I have said about a factory which is now practically defunct. But this Malda factory is working.

President.—What is their recovery?

Khan Bahadur.—They get 900 maunds of sugar by crushing 20,000 maunds of sugarcane.

Dr. Jain.—That is only 4½ per cent. They cannot make any profit on those figures.

President.—If they increased their recovery, they ought to do very well.

Khan Bahadur.—There are by-products which they sell.

President.—Do they sell their molasses?

Khan Bahadur.—They sell their bye-products. 100 maunds of sugarcane worth Rs. 18-12-0 would give 10 to 11 maunds of 1st rab which would give again 3½ to 4½ maunds of 1st sugar and 4½ to 5 maunds of 2nd rab. The cost of manufacture would come to Rs. 11.

President.—What do they do with the 2nd rab?

Khan Bahadur.—They sell it to people for mixing it with tobacco.

President.—What do they get for molasses?

Khan Bahadur.—I do not know.

Dr. Jain.—You have said that the number of unskilled labour is 25. What is the number of skilled labour?

Khan Bahadur.—Mr. J. N. Talukdar under the direction of Mr. Peterson trained some people of the locality. His idea was that they must not get any mistri, engineer or mechanic from outside. They must have the local people trained. I have seen 4 or 5 of them. One man is the Director who attends to the machinery and there are several others who work in pans.

President.—Is it an oil engine?

Khan Bahadur.—Yes.

Dr. Jain.—What wages do you pay for the unskilled labourer?

Khan Bahadur.—Rs. 18 is the maximum.

Dr. Jain.—What is the average?

Khan Bahadur.—Rs. 12.

Dr. Jain.—Never less than Rs. 10?

Khan Bahadur.—No.

Dr. Jain.—Do you pay weekly or monthly?

Khan Bahadur.—At the end of each month.

Dr. Jain.—What are the hours of work?

Khan Bahadur.—I had been there for two days. I found them working in the morning with a rest at noon for one or two hours and working again till 7 o'clock in the night.

Dr. Jain.—Would it be 10 hours a day?

Khan Bahadur.—About that.

Mr. Rahimtoola.—How would you compare this sugar with the vacuum pan sugar in quality?

Khan Bahadur.—It may be a shade less white—it is difficult to say. As regards crystals, they are not large. But in taste there is no difference. At the beginning there was a little scent of sugarcane but gradually that has disappeared. I do not know whether it is due to the fact that people have got themselves accustomed to it or not, but they now say that there is no scent of sugarcane as before.

President.—Do you happen to know anything about the date palm gur industry?

Khan Bahadur.—No.

Dr. Jain.—Do you know about the recent enquiry instituted by the Imperial Council of Agricultural Research about the cost of cultivation? As Registrar of Co-operative Societies, did you have anything to do with it?

Khan Bahadur.—They are making it, but they have not made any reference to me.

GOVERNMENT OF ORISSA.

**Evidence of Mr. S. N. MOZUMDAR, Development Director,
Mr. H. L. DUTTI, Deputy Director of Agriculture, and
Mr. S. C. ROY, Deputy Registrar of Co-operative
Societies, recorded at Puri on Monday, the
27th September. 1937.**

President.—Are you giving evidence on behalf of the Orissa Government or are you giving evidence representing the Department?

Mr. Mozumdar.—I suppose representing the Department. We have no clear instructions from Government.

President.—It does not necessarily follow that you represent the Government. Some Governments have clearly stated that their officers represent the views of their Departments.

Mr. Mozumdar.—We have no instructions to that effect or to any effect. We have only been instructed to give evidence before you. There is nothing very much with which we could help the Board. In this province there is not much of sugar. The province was started only about a year ago. The Statistics are not always readily available. Those available are for Bihar and Orissa. There are no separate figures for Orissa.

President.—Orissa is mainly a gur producing area. We are also interested in the question of gur because it has a very important bearing on the question of sugar definitely from more than one aspect. You might ascertain and let us know whether the evidence that you give this morning should be considered as that of the Department or of the Government.

Mr. Mozumdar.—Yes, I could phone up to Government and find out. Perhaps we could settle that after the Chief Minister comes here on the 29th.

President.—He is not giving evidence before the Board. We are only going to have an informal talk with him. We do not take evidence from Ministers.

Mr. Mozumdar.—I shall find out and let you know.

President.—It is better to get the matter cleared up because there have been questions raised about that.

Mr. Mozumdar.—Yes.

President.—It is not much use taking the cultivation figures for previous years. I think perhaps it is best to take the figures for 1936-37 which are for the new province.

Mr. Mozumdar.—Since then we have worked out some more figures.

President.—What figures have you got for 1936-37?

Mr. Mozumdar.—They are based on the cost of cultivation in the sugarcane area.

President.—I am really dealing with the total area.

Mr. Mozumdar.—31,000 acres.

President.—Can we take that as correct?

Mr. Mozumdar.—To the extent that some areas in the province are not surveyed.

President.—In the case of Bihar we have been told that there may be 100 per cent. error.

Mr. Mozumdar.—As a matter of fact these are based on the figures of the Revenue Department. The Agricultural Department consider that the area is much larger. The trouble about the Agricultural Department's

figures is that they are not based on any statistics collected by the Department. It is more or less an estimate of the officers of the Department.

President.—The only accurate figures you have are for the raiyatwari area.

Mr. Mozumdar.—For Ganjam *minus* the agency tract.

President.—It is the middle Ganjam that you have accurate figures for; that is what it comes to.

Mr. Mozumdar.—Yes.

President.—Roughly speaking, you have 12,000 acres from Madras.

Mr. Mozumdar.—Yes.

President.—For the purpose of comparison would you divide the province into North and South Orissa or would you treat it as one unit? Is there any marked distinction?

Mr. Mozumdar.—We have found that in South Orissa they are still growing canes which we have definitely given up in North Orissa. We do not know why. So, for the present we shall probably have to partition the province into two parts from that point of view, but not from any other.

President.—In our report we are giving a brief description of each province. For instance we have divided United Provinces into three areas and Bihar we have divided into north and south where conditions are different. Is it worth while drawing any distinction in Orissa on those lines?

Mr. Dutt.—What we find is that in South Orissa the method of cultivation is entirely different from that of North Orissa.

President.—For descriptive purposes we might divide the province into South and North Orissa. South Orissa comprises (of) what?

Mr. Mozumdar.—Ganjam and Koraput.

President.—That is the Madras area?

Mr. Mozumdar.—Yes.

President.—North Orissa is the rest.

Mr. Mozumdar.—Yes.

President.—Can you give us the average rainfall for the two areas?

Mr. Mozumdar.—Not to any exactitude just now.

President.—You can give it to us later.

Mr. Mozumdar.—Yes.

President.—What we are doing is that we are sending the descriptive paragraphs to the respective provinces and asking for comments and insertion of figures. So, you could give us the average rainfall for North and South Orissa.

Mr. Mozumdar.—Yes.

President.—Originally you were rather for dividing the province into highlands, lowlands and flooded area. That is not very suitable for popular description.

Mr. Mozumdar.—No.

President.—This is a difference in regard to cultivation.

Mr. Dutt.—And also varieties of cane.

President.—The flooded area is unirrigated?

Mr. Mozumdar.—Mostly.

President.—And the other areas are irrigated.

Mr. Dutt.—Yes.

President.—Could you give us an estimate as to how much is irrigated and unirrigated taking the two parts separately?

Mr. Dutt.—The total area is 31,000 acres. The flooded area is about 7,000 acres.

President.—I understand that South Orissa is entirely irrigated.

Mr. Dutt.—Yes.

President.—As a matter of fact I happen to be acquainted with that area personally as I had been Collector both of Ganjam and Vizagapatam. I know personally that South Orissa is entirely irrigated.

Mr. Dutt.—Yes.

President.—As regards North Orissa how would you put the proportion roughly?

Mr. Roy.—7,000 to 16,000.

President.—One third unirrigated and two thirds irrigated?

Mr. Dutt.—Yes.

President.—In North Orissa what is the chief variety of cane?

Mr. Dutt.—Co. 213 in the highlands; 285 in flooded areas.

President.—In South Orissa?

Mr. Dutt.—J 247.

President.—Is that the standard cane in Vizag District?

Mr. Dutt.—Yes.

President.—213 and 285 in North Orissa?

Mr. Dutt.—Yes.

President.—In North Orissa the irrigation rate is Rs. 7-8-0.

Mr. Dutt.—Yes.

President.—What about South Orissa?

Mr. Roy.—Rs. 30.

President.—I want to know the canal irrigation rate.

Mr. Roy.—There is no canal irrigation. It is mostly lift irrigation.

President.—I want to know the canal rate.

Mr. Roy.—It is all amalgamated with rent.

Mr. Mozumdar.—We have not got figures.

President.—You say you have got some new figures about the cost of cultivation in which we are particularly interested.

Mr. Mozumdar.—Here is a statement showing the details (put in). The cost of cultivation at the Government farm is Rs. 114. The next one is of the Banki area where a large amount of sugarcane is grown.

President.—Where the open pan system is in vogue.

Mr. Mozumdar.—Yes. As regards Aska we collected the details through our Agricultural Overseer. The total comes to Rs. 192.

President.—There you have put down irrigation as Rs. 26-4-0, carting to the factory as Rs. 20 and rent as Rs. 30.

Mr. Mozumdar.—Yes, that is our highest figure.

President.—From my local knowledge of the area, Rs. 30 is rather high.

Mr. Mozumdar.—Mostly these are sub-leases.

President.—You have given the cost as Rs. 192. What is the yield per acre?

Mr. Mozumdar.—500 maunds.

President.—At the Cuttack farm the yield is 650 maunds for plant cane.

Mr. Mozumdar.—Yes.

President.—We take plant cane as our standard. In the case of Banki the yield is 500 maunds.

Mr. Mozumdar.—Yes.

President.—At Cuttack for an expenditure of Rs. 114 you get 650 maunds.

Mr. Mozumdar.—Yes. The next statement gives you the figures for the cost of cultivation per maund. They are as follows:—

Cuttack Farm As. 2-10 per maund of cane.

Banki Farm As. 2-6 per maund of cane.

Aska Farm As. 4-5 per maund of cane.

President.—Those are interesting figures. There is no great difference between Banki and Cuttack.

Mr. Mozumdar.—No.

President.—Aska is much more expensive?

Mr. Mozumdar.—Yes.

President.—It is very awkward to take the ratoon crop. So we need say only in general that the yield of ratoon crop is either two thirds or half of that of the plant crop. But in some areas actually the first ratoon yields more than the plant crop. That is what we have heard. We had better take the Cuttack area and compare the cost of cultivation and see why the cost of cultivation at the Aska area is much more expensive. We are mostly interested in the Aska area because that is where we have one vacuum pan factory.

Mr. Mazumdar.—That is an old factory.

President.—The cost of manuring is higher; planting is higher and irrigation is considerably higher. The main difference is in irrigation as far as I can see.

Mr. Dutt.—Yes, and in manuring. Another item is tying and wrapping.

President.—They do not prop much in the Aska area.

Mr. Dutt.—They do.

Mr. Roy.—That comes to Rs. 20.

President.—Do they prop with bamboos?

Mr. Roy.—Yes. Co. 213 does not require much propping.

Mr. Dutt.—Manuring is much more expensive in the case of Aska.

President.—Manuring comes to Rs. 48 as compared with Rs. 45 in the Government farm.

Mr. Mozumdar.—In the Banki area there is not much manuring. When it gets flooded they get the silt.

President.—We may take these figures as your revised figures.

Mr. Mozumdar.—Yes.

President.—As regards the ordinary cultivator, Rs. 77 might be taken as his normal expenditure with an average yield of 500 maunds.

Mr. Mozumdar.—Yes.

President.—In the unirrigated area would it be less?

Mr. Dutt.—A little less—by Rs. 5 to Rs. 8.

President.—Say Rs. 70.

Mr. Dutt.—Yes.

President.—Will the yield be the same.

Mr. Dutt.—Yes, and sometimes better.

President.—That is in the flooded area?

Mr. Mozumdar.—Yes.

President.—Because you get the silt?

Mr. Dutt.—Yes.

Mr. Mozumdar.—We have given you a further statement showing the actual expenditure of the cultivator on gurmaking. Four or five join toge-

ther and put their own labour. They use their own bullocks and their own carts. On that basis the cost comes to Rs. 52-9-0.

President.—For man's labour we must allow something.

Mr. Mozumdar.—Yes.

President.—That makes a very big difference. You have not made any allowance for the interest on money which has to be borrowed. In any scientific costing, some allowance ought to be made for that. What would be the rate of interest?

Mr. Roy.—In Banki it is about 10 per cent; in other places it is more.

Mr. Mozumdar.—Money-lenders would charge much more and private Banks would charge 12½ per cent. to 18 per cent.

President.—Would 12 per cent. be a fair rate?

Mr. Dutt.—Private Banks charge 12½ per cent. to 18 per cent.

President.—It is very difficult to get an average figure.

Mr. Dutt.—Yes.

President.—If they borrow money from Co-operative Societies the rate will be less, but that depends upon the man's credit.

Mr. Mozumdar.—25 per cent. is not unusual.

President.—As a matter of fact it does not amount to a very great item in the case of the ordinary cultivator because if his cash outlay is only Rs. 50, it would not be for twelve months; it would probably be for 6 months. So, it is not a very big item.

Mr. Mozumdar.—Quite. We might take Rs. 5 for that.

President.—That will bring the figure to a little over Rs. 80.

Mr. Dutt.—Yes.

Dr. Jain.—The figures that you have given for the cost of cultivation seem to be rather on the low side. How did you get the cost of cultivation in the case of a farmer? Did you have enquiries made?

Mr. Mozumdar.—In the Banki area enquiries were made. Aska figures can be considered reliable as they have been obtained through an officer of the Agricultural Department.

Dr. Jain.—What was the nature of the enquiry? How many cultivators were consulted or examined?

Mr. Roy.—About 20 cultivators.

Dr. Jain.—All in one plot?

Mr. Roy.—All round the factory. The figures seem to be a little on the high side.

Dr. Jain.—These are very approximate figures.

Mr. Roy.—Yes. The raiyats have always a tendency to give higher figures and we judge them by our experience.

Mr. Mozumdar.—The Banki figures may be taken to be fairly correct.

Dr. Jain.—As the President said, we are more concerned with Aska.

Mr. Mozumdar.—The figures there were obtained from several villages and they were checked with the figures collected by the Sugarcane Overseer. We came to the conclusion that Rs. 200 is a fairly accurate figure.

Dr. Jain.—You have said that 4 annas 5 pies is the cost of sugarcane per maund in the Aska area. Is it a fair estimate?

Mr. Mozumdar.—Yes.

Dr. Jain.—Are you aware of the enquiries which the Imperial Council of Agricultural Research made into the cost of cultivation of sugarcane?

Mr. Dutt.—No, not in Orissa but in Bihar.

President.—The farm costs would of course be higher than the costs of an ordinary cultivator?

Mr. Dutt.—Yes.

President.—How far is the Cuttack farm from the Banki area?

Mr. Dutt.—20 to 30 miles away—on the other side of the Katjuri river.

President.—Would the cost of cultivation be different?

Mr. Dutt.—Yes. The wages will be higher in the Cuttack area being about 4 annas per day as compared with 2 annas 6 pies in the other area.

President.—For the ordinary cultivator the cost will be higher in the Cuttack area than in the Banki area.

Mr. Dutt.—Yes.

President.—About the Aska factory, have there been any complaints from the raiyats about the underweighment of cane?

Mr. Mozumdar.—No, we have not heard of any complaints. The Department was established only about 10 months ago.

President.—About this Banki factory, it is rather interesting to note that they are making quite a lot of sugar. Is it a Co-operative organisation?

Mr. Roy.—No.

President.—Is it a private concern?

Mr. Roy.—Yes.

President.—We have not got any returns from them. How are they doing? Are they making money or losing money?

Mr. Dutt.—The factory is not making any money from sugar, but it is making money out of gur made out of molasses.

President.—They convert their first molasses into gur and sell it. Taking the two together (sugar and gur) they make a little profit.

Mr. Dutt.—Yes.

Dr. Jain.—What is their working capacity?

Mr. Mozumdar.—Figures have been given.

Dr. Jain.—How many days do they work?

Mr. Mozumdar.—About 90 days or 3 months.

Dr. Jain.—Do you know anything about their cost of manufacture?

Mr. Mozumdar.—No. We have not received anything from them except that their cost of manufacture is Rs. 1-6-0.

President.—That is their actual manufacturing cost apart from cane presumably.

Mr. Mozumdar.—Yes.

President.—I wonder whether that includes overhead.

Mr. Mozumdar.—We could not get any information from them.

President.—You do not know what their recovery is.

Mr. Dutt.—5 per cent.

President.—They have been working for the last three years.

Mr. Mozumdar.—Yes.

President.—Have you seen the factory?

Mr. Dutt.—Yes.

President.—Is it run efficiently?

Mr. Dutt.—It is working very efficiently.

President.—It is rather an interesting development. It is also taking place in Bengal.

Mr. Dutt.—Yes.

President.—Mr. Peterson has devised improved machinery for this process in Bengal. I do not know whether they have adopted it down here.

Mr. Dutt.—No.

President.—Do you know whether the machinery is up-to-date?

Mr. Dutt.—The engine is an old one but the centrifugals and crushers are new.

President.—What power does it use—oil engine?

Mr. Dutt.—I do not know the name of the engine, but it is an oil engine.

President.—They are not using a steam engine.

Mr. Dutt.—No.

Mr. Roy.—Banki is 25 miles from the nearest railway station, so it is very costly to take coal there.

President.—I see you have got a grant out of the excise duty.

Mr. Mozumdar.—Rs. 10,000 for the next four years. We have got a few men working—four overseers and 8 kamdars in four centres.

President.—How long have they been working?

Mr. Mozumdar.—From 1st of April last.

President.—Have they achieved any results yet at all?

Mr. Mozumdar.—It is difficult to say.

Mr. Dutt.—In the Banki area they are doing something. In Aska area they have to learn a lot. They must know the different varieties of cane and also about manuring. That is what they are doing at present.

President.—In the Aska factory I notice there was a very big drop in manufacture for 1934-35. Do you know the reason for that?

Mr. Mozumdar.—The Manager said that they were not making any profits. Last year they could have gone on for a longer period. The reason why they stopped was the excise duty.

Dr. Jain.—1934 excise or 1937 excise?

Mr. Mozumdar.—1937 excise duty.

Dr. Jain.—The big drop was in 1935. That was probably due to the 1934 excise duty.

Mr. Mozumdar.—Most probably they have a distillery.

President.—Do they make use of their molasses?

Mr. Mozumdar.—Yes. They are Government contractors in that area.

President.—In regard to the estimate of consumption of sugar in Orissa, you have taken the production of two factories as roughly 100,000 maunds. That does not entirely correspond with the figures except for 1935-36. In 1934-35 it was a good deal more.

Mr. Mozumdar.—We took the 1935-36 figure.

President.—That was lower than the average. Actually for the purpose of comparison we are taking 1936-37 figures. In 1936-37 it comes to 160,000 maunds.

Mr. Mozumdar.—Yes.

President.—Have you got rail-borne figures for 1936-37?

Mr. Mozumdar.—No.

President.—Could you give us figures for 1936-37?

Mr. Mozumdar.—We will have to write to the Bengal Nagpur Railway.

President.—I suppose there are no exports of sugar.

Mr. Mozumdar.—Not much. A certain amount of Aska sugar goes to the Madras Presidency but I do not know how much.

President.—That will be shown in the rail-borne figures. Your figures cannot be quite accurate because a certain amount of sugar goes by road.

Mr. Mozumdar.—Quite so. We will have to allow for that. A certain amount of sugar also goes to the Feudatory States.

President.—They might be considered as part of Orissa for that purpose. In regard to the manufacture of gur, the prices of gur seem to be very high in this province compared with what they are in other provinces. You have given us figures somewhere. What does it work out to per maund?

Mr. Mozumdar.—Rs. 5-8-0.

President.—That is very high.

Mr. Mozumdar.—That is the retail price. The wholesale price is Rs. 2-14-0. Last year, in 1936, it varied between Rs. 3-4-0 and Rs. 4.

President.—Generally speaking there is a big drop in the price of gur in 1936-37. These figures seem to be more comparable with the figures we had from other provinces.

Mr. Mozumdar.—You mean the wholesale prices.

President.—Yes. Is the difference between the wholesale and retail prices so high as that?

Mr. Mozumdar.—The merchants charge Rs. 2 more when it is retailed.

President.—Is there a terminal tax?

Mr. Mozumdar.—No.

Dr. Jain.—We were told elsewhere that the difference between the wholesale and retail prices at the outside would be 4 annas a maund.

Mr. Mozumdar.—The information was collected this year from various merchants.

Dr. Jain.—What price do you pay for your sugar?

Mr. Dutt.—Rs. 7-6-0 or Rs. 7-8-0.

Dr. Jain.—Have you seen the Bengal Nagpur Railway sugar? It is described as refined sugar. I wonder whether it is Java sugar or Indian sugar? Its price comes to Rs. 13 per maund.

Mr. Mozumdar.—I know it is 20 to 25 per cent. above the market rate.

Dr. Jain.—Are these quotations for Indian sugar? Could you find out and let us know? It is rather important for us to know whether Java sugar is being consumed at that price?

Mr. Mozumdar.—Yes.

Dr. Jain.—I want to know whether the Bengal Nagpur Railway 10 lb. bags contain Indian or Java sugar.

Mr. Mozumdar.—Yes.

President.—Is there much damage to sugarcane crop in Orissa from diseases or pests?

Mr. Dutt.—In the last 4 or 5 years the borer is causing a little damage. When the cane was first introduced it was not attacked by borers. After 4 or 5 years it is being attacked by them.

President.—What is the extent of the damage?

Mr. Dutt.—In collaboration with Mr. Isaac of the Imperial Council of Agricultural Research we are working out this year. The damage caused by diseases is small. In years of drought as well as excessive rainfall insectpests damage sugarcane badly.

President.—What part does the Co-operative Department play in sugarcane growing?

Mr. Roy.—In North Orissa the propagation of improved varieties of cane has been done by the Co-operative Societies and the Department of Agriculture also has been working in close collaboration. Co-operative Banks maintain an Agricultural Inspector and several kamdars.

President.—Kamdars correspond to Demonstrators.

Mr. Dutt.—Yes, they are paid Rs. 15 to Rs. 20.

Mr. Mozumdar.—They are given one year's training in the Cuttack Farm.

Mr. Roy.—After the depression has set in the Banks' income has dwindled and they have dispensed with the services of Inspectors. Moreover the Agricultural Department has increased the number of Inspectors. We are maintaining kamdars and propagating improved varieties of cane. We supply them with crushing machines and tools which they hire out on a nominal rent.

President.—Are there any other open pan factories?

Mr. Dutt.—There used to be one or two years ago in Sambalpur. It was a failure.

Dr. Jain.—Why did it fail?

Mr. Dutt.—20 miles off the railway. I do not know what the marketing facilities are. Cane is very much scattered. The supply of the raw material is very difficult. A few sporadic attempts have been made by small capitalists with just a few centrifugals here and there and they dropped within a year.

President.—Can you tell us what new varieties of cane you have been experimenting? You have a farm at Cuttack.

Mr. Dutt.—Yes. The most promising variety is 421. That is a very good variety and it will probably replace Co. 213 in course of time.

President.—What about Co. 419?

Mr. Dutt.—It is good for chewing purposes.

President.—P.O.J. 2878?

Mr. Dutt.—We tried that in the Cuttack Farm for the last 5 or 6 years. They produce very good quality of sugar. The tonnage is much lower than Co. 213. We have taken the variety in the flooded area. We have got a farm in the flooded area. Along with 285, we put in 421. These are resistant to water logging. We are trying all that in the highlands and in the flooded area.

President.—What is the highest yield per acre?

Mr. Dutt.—Banki is the most important sugarcane area. 6 or 7 years ago when the price of gur was high, 125 maunds of gur was not uncommon. Last year in the flooded area farm with 285 cane a little over 1,000 maunds per acre were obtained.

President.—Do you expect with the introduction of the improved varieties in the next 5 or 7 years, there would be a considerable increase in the average yield?

Mr. Dutt.—I think so.

President.—Would you like to hazard a guess as to what the increase in the yield would be in the next 5 or 6 years taking the present yield in Aska as 700 and in Banki as 500?

Mr. Dutt.—5 or 6 years ago the average for Banki was much higher than that. On account of the low price of gur, the cultivation of sugarcane has gone down. Banki used to have the best crop in the whole province, but now it is one of the poorest crops, because people are not manuring their crop. They are not taking any care of their crop.

President.—That is rather interesting.

Dr. Jain.—Are any new factories contemplated for Orissa?

Mr. Mozumdar.—I don't think so. There is one already floated in Jeypore State. It is entirely an estate concern. It has not started operating.

President.—What is the capacity of the proposed factory?

Mr. Dutt.—250 tons. They did work for 15 days last year. The extraction was very low. It will be operating in the next season.

President.—It is near a cane growing area.

Mr. Mozumdar.—It is a cane growing area. It is also expanding. That is one of the places where we have placed an Overseer from the Sugar Excise Fund. One party is working in that area.

President.—Do you know the price they pay for cane?

Mr. Dutt.—No. They only worked for 15 days.

Dr. Jain.—You have been good enough to give figures of sugarcane area for 1936. Do you expect an increase or decrease in the sugarcane area?

Mr. Mozumdar.—I shall let you know later.

President.—In the Jeypore area will there be any?

Mr. Dutt.—They are arranging for irrigation. In the Jeypore State they are arranging for pumping irrigation over large areas.

Dr. Jain.—You divide the province into two parts, North Orissa and South Orissa from the point of view of sugarcane cultivation.

Mr. Dutt.—We are suggesting that because of the different types of sugarcane grown in that area, our knowledge of South Orissa is very poor. We have not got any staff working in that area.

Dr. Jain.—I thought you said there is a difference in the method of cultivation.

Mr. Dutt.—Yes.

Dr. Jain.—What is the main difference in the method of cultivation?

Mr. Dutt.—The main difference is this. There is a much larger quantity of manure used in South Orissa. To do away with summer irrigation they start planting in November. They continue it in January, February, March and April, and in June they transplant cane. They raise a particular crop for planting purposes, so that the cultivation is entirely different from North Orissa. In North Orissa the cultivation is exactly the same as in Bihar.

Dr. Jain.—Would you put the fair price to the grower at 6 annas?

Mr. Mozumdar.—On the figure we supplied then. If the fair price comes to 2 annas 6 pies. . . .

Dr. Jain.—Not in Aska.

Mr. Mozumdar.—4 annas 5 pies.

Dr. Jain.—Would you still keep it at 6 annas for that area?

Mr. Mozumdar.—They are selling at 5 annas. Last year that was the rate.

Dr. Jain.—In answer to question 8 you say the alternative crops give a profit of Rs. 100 per acre.

Mr. Mozumdar.—That is the average income from cultivation of vegetable.

Dr. Jain.—Whereas in the case of sugarcane it comes to Rs. 62 per acre. You say the cost is 4 annas and the fair price you put down at 6 annas and he gets a profit of 2 annas.

Mr. Mozumdar.—There is cartage.

Dr. Jain.—4 annas includes cartage. That means 2 annas per maund and the yield is 700 maunds an acre which will come to about Rs. 100. It is a matter of indifference to the cultivator whether it is sugarcane or any other crops.

Mr. Dutt.—The other crops have no market except in urban areas.

Mr. Mozumdar.—Sugarcane is a one year crop. Vegetables have a market for 6 months. Cultivator in the highlands plant in March or April.

Dr. Jain.—Is there much damage due to floods?

Mr. Dutt.—Flood resisting varieties can stand these floods.

Dr. Jain.—Nothing is allowed for that.

Mr. Dutt.—If water continues for a long time, it affects the sucrose content.

Dr. Jain.—In regard to research you say that a sum of Rs. 10,000 has been allotted out of the Sugar Excise Fund for your Province.

Mr. Mozumdar.—Yes.

Dr. Jain.—You consider that as inadequate because the important cane growing tracts are not covered. What tracts are left out?

Mr. Dutt.—Ganjam and another area in Balasore. We have men in other tracts.

Dr. Jain.—In answer to question 12 you say no assistance at all from the Imperial Council of Agricultural Research.

Mr. Dutt.—No.

Dr. Jain.—Have you any suggestions to make in this regard?

Mr. Dutt.—We are going to suggest to the Imperial Council to have a Sub-Station on the lines of Coimbatore Model.

Dr. Jain.—Have you sent up your scheme?

Mr. Dutt.—Not yet. The province was only separated last year.

Dr. Jain.—In regard to the consumption of cane you say about 85 per cent. of the total production goes to gur and 15 per cent. goes to chewing.

Mr. Dutt.—That is a rough estimate. 10 per cent. goes for planting purposes and 5 per cent. for chewing purposes.

Dr. Jain.—Is there any consumed by animals?

Mr. Dutt.—We have got wild animals in Banki area. Even elephants attack the crop.

Dr. Jain.—They damage the crop.

Mr. Dutt.—Yes.

Dr. Jain.—Is that considerable?

Mr. Dutt.—That is negligible.

Dr. Jain.—Is sugarcane used as cattle feed?

Mr. Dutt.—No.

Dr. Jain.—With regard to labour you say the conditions are satisfactory. I should like to know a little more about labour if you can tell me.

Mr. Dutt.—We have no experience of Aska factory. We went over there for a few days.

Dr. Jain.—We have been told that they employ technical labour in the busy season and dismiss it in the silent season.

Mr. Mozumdar.—We have no information. We don't know that area very well.

Dr. Jain.—Does the Industries Department keep in touch with the factory?

Mr. Mozumdar.—Not so far.

Dr. Jain.—Is there any machinery by which the work of the Industries Department in this regard can be carried on?

Mr. Mozumdar.—We have an Industrial Engineer. He usually helps in setting up small rice mills and looking after them. That has been his function. In the old days of Bihar and Orissa they were called Circle Officers.

Dr. Jain.—Is it now proposed to do something for sugar?

Mr. Mozumdar.—Not now.

Dr. Jain.—That reminds me of another important question that I wanted to ask you in connection with excise. I find your Government have expressed no views on the question of excise. Would you like to say anything about that?

Mr. Mozumdar.—No.

Dr. Jain.—Or about the extent of protection?

Mr. Mozumdar.—We have absolutely no data in this province to study the problem.

MYSORE STATE.

Evidence of Mr. RAMA IYER, Director of Agriculture, Mysore, recorded at Bangalore on Monday, the 12th July, 1937.

(Dewan Bahadur K. Matthan, Mr. R. Anantasubramaniam, Mr. C. J. N. Penning, Dr. V. K. Badami were present.)

President.—First of all we may want some information about cost of production of cane in a slightly different form. We are interested in the price of sugarcane as delivered at the factory. With regard to Irwin Canal Tract and other tracts, would you give us some revised figures?

In answer to question 1 you have given the acreage figures up to 1935-36. Could you give us the acreage figures for 1936-37?

Mr. Iyer.—The year 1936-37 is just over, 12 days ago.

President.—Can you give us a little later?

Mr. Iyer.—Yes.

President.—When can you give?

Mr. Iyer.—A month hence. Our year is from July to June end.

President.—If you can give us these figures in due course, we shall be glad.

Mr. Iyer.—Yes.

President.—Have you any idea of the acreage increase in 1936-37?

Mr. Iyer.—There is slight increase in the factory area only.

President.—Do you know whether the plantings in 1936-37 show an increase?

Mr. Iyer.—There has been an increase.

Dewan Bahadur.—The plantings are actually available to the factory, but not to the department which hasn't got the necessary staff for the purpose.

President.—Has any additional area been planted?

Dewan Bahadur.—This year we anticipate 13,000 acres as against 12,000 acres. There is a slight increase.

President.—What we want to know is the irrigation rate at the Irwin Canal tract.

Mr. Iyer.—For purposes of revenue water rate is imposed at an even rate of Rs. 10 per annum. It is really based on Rs. 15 for sugarcane, Rs. 10 for paddy and Rs. 5 for a dry crop, this being the order of triennial rotation of crops under the Block system.

President.—Can we take Rs. 15 as an average figure?

Mr. Iyer.—Yes, for sugarcane.

President.—We only want to know the cost of cultivation for the Irwin Canal area. You have given the cost of cultivation for a number of places. I am not quite certain which is which.

Mr. Iyer.—I am in a position to give you very detailed figures of the cost of sugarcane cultivation in the Irwin Canal area. If you are interested in details, I can give them as also under the main headings.

Mr. Rahimtoola.—We should like to have them both on the lines indicated on page 55 of the last Tariff Board's Report, and also in detail you can send the information later on.

Mr. Iyer.—Yes.

President.—What does your total cost work out to?

Mr. Iyer.—Rs. 8 per ton including the cost of transport to the factory.

President.—Does that include every item of expenditure?

Mr. Iyer.—Yes, including land assessment, interest on investment and everything.

Mr. Rahimtaola.—What is your total cost per acre?

Mr. Iyer.—The cost of cultivation per acre with an yield of 30 tons works out to Rs. 245.

President.—That comes to Rs. 8 a ton.

Mr. Iyer.—Yes.

President.—The raiyats have to bear the cost of transport.

Mr. Iyer.—Yes, it is included in Rs. 8 per ton.

President.—You say that the sucrose content is on the whole 15 to 17.

Mr. Iyer.—That is the factory average figure for crusher juice of mixed canes of varying ages from 12th to 17th month including ripe and over-ripe cane. According to the Agricultural Chemist of the Department it will be between 20 and 21 in juice extracted by bullock-mills, extracting 68 per cent. from cane at the proper stage of ripening, i.e., 12th and 13th months.

President.—When did the Irwin Canal come into operation?

Mr. Iyer.—In 1932.

President.—So that the development of sugarcane in that area is dependent partly on the canal and partly on the factory.

Mr. Iyer.—Yes, on the canal for irrigation and the factory for purchase of cane.

Dewan Bahadur.—The canals were constructed and the area was there, but unless the factory was put up, the raiyats were not prepared to cultivate sugarcane.

President.—It depends really on the factory.

Mr. Iyer.—Yes, for ready market for cane.

President.—As regards these other cash crops, are they grown in the Irwin Canal area at all as an alternative? Are there any possible alternatives?

Mr. Iyer.—There is some scope for Cotton.

President.—Cambodia cotton?

Mr. Iyer.—It is Cambodia type which we call doddahatti. There is no good alternative to sugarcane as a cash crop.

President.—What about paddy?

Mr. Iyer.—The raiyat does not get as good a return from paddy as from cane.

President.—Paddy is the only other alternative.

Mr. Iyer.—Yes. At present.

Dewan Bahadur.—As a matter of fact, the canals have been aligned in such a way that the whole project is based on the expansion of sugarcane. One third of the project is going to be for sugarcane. It is on that basis the canals were constructed.

Mr. Iyer.—The idea of extending sugarcane was inherent in the project. The idea of a factory came subsequently.

President.—As regards yield what is the maximum yield for any variety in your area?

Mr. Iyer.—We have only one variety in the whole area, viz., H. M. 320, and the maximum so far grown is 70 tons per acre for a 12 to 13 months crop. In more than half the villages studied for the purpose we have got a maximum of over 40 tons per acre so far and vast advance has been made in tonnage. In three years we have been able to raise the tonnage by 10 tons per acre from 16 in 1933 to 26 in 1937. It took Java 10 years

to show a similar increase of 10 tons. I don't say of course that this rate of progression will be kept up indefinitely.

President.—With P.O.J. 2878 they took only 5 years.

Mr. Iyer.—In 1930 the average yield in Java was 49 tons per acre and now it is 55, so that they have got one ton extra per acre per year.

President.—But the increase in tonnage was very much more rapid when they got P.O.J. 2878.

Mr. Iyer.—Their increase represents one ton per acre per year. These are the figures:—

1934	.	.	.	.	.	.	.	.	.	55 tons.
1933	.	.	.	.	.	.	.	.	.	53 "
1932	.	.	.	.	.	.	.	.	.	52 "
1931	.	.	.	.	.	.	.	.	.	51 "
1930	.	.	.	.	.	.	.	.	.	49 "

I am saying all this to show how well the Irwin Canal area is suited for the cultivation of sugarcane which has to be extended in that area.

President.—During the remaining protective period of about 8 years, what average tonnage do you expect the raiyats to raise?

Mr. Iyer.—We can raise it to not less than 35 tons because as I said in more than half the villages examined for the purpose we have already got a maximum of 40 tons per acre.

Dewan Bahadur.—As regards the maximum yield, the factory has got fuller figures than the Department.

President.—Do you expect to reach 35 tons?

Mr. Iyer.—Yes, in the course of 7 years we can raise it from the present 26 to 35 which is only about one ton per year.

President.—35 tons at least?

Mr. Iyer.—Yes.

President.—And possibly more?

Mr. Iyer.—We hope to reach easily 35 tons.

Dewan Bahadur.—As regards the average, my expectation is 27 tons and on that basis we shall send you a statement.

At the final stage, we may reach an average of 30 tons.

President.—The factory does not seem to be quite so optimistic as you are, Mr. Rama Iyer.

Mr. Iyer.—I am only giving the opinion of the Agricultural Department. Yield is mostly a question of manuring.

Dewan Bahadur.—We have about half the number of people at present growing considerably less than 20. Therefore we have to gradually educate them and eliminate some of them. Some areas have also to be eliminated.

Mr. Iyer.—Raiyats in the factory area have already reached the average of 26.3 tons per acre. It is the considered opinion of the Department that with suitable manuring we can raise the average to 35 tons in seven years in the Irwin Canal area.

Dr. Jain.—The existing average is 20 tons for the State?

Mr. Iyer.—Yes, that is the average for the whole State, including the area under tanks which are nearly four times the area under the Irwin Canal. The figures for the area under tanks are not so accurate as for the area under the Irwin Canal.

President.—You have got pretty accurate figures for the Irwin Canal tract?

Mr. Iyer.—Yes.

President.—The main difficulty of the raiyat is that the crop is on the ground for 14 months and therefore he will get only one crop in two years and our cane is not good for ratooning.

Mr. Iyer.—In that respect also there seems to be a difference of view between the factory and the Department. I shall give you the view of the Department. According to us our cane (H. M. 320) is a twelve month-cane if planted from February to April and a thirteen month cane if planted from July onwards. The Padegaon Research Station is also of opinion that it is a thirteen month cane. My view is based on the maturity studies of sugarcane by our Agricultural Chemist for the last one year for fortnightly analysis of juice of whole canes. The sucrose content and ripening studies are conducted from the tenth month onwards. Padegaon Research Station has also conducted maturity studies. What we find is that if planted in the rainy season, it is a thirteen month cane. I have detailed figures showing the results of analysis throughout one year which, if you want, I can furnish. I quite see that it will be difficult for the factory to act up to the planting programme because raiyats do not always plant to order just at the time they are asked. Further, our cane has the advantage that cane planted from July does not deteriorate till the 16th month. It will more or less give high sucrose content from the 13th to 18th month if planted in the rainy season.

President.—Does the factory agree to that?

Dewan Bahadur.—No.

President.—What is the factory point of view?

Mr. Penning.—When I came here Dr. Coleman said that they could mature cane in 12 months and I told him considering the climatic conditions and comparing this place with the places I had been, I did not see how it was possible when in Java with its much warmer climate they took 14 months and in Natal 18 to 24 months. I said that I could not see how under these conditions here they could mature cane in 12 months. Of course we can cut it in 12 months and make sugar. If it is left longer in the field and cut on the 14th or 16th month, we have definitely proved that we can get 1 per cent. more sugar. I do not at all agree with the Agricultural Department that it is possible to mature cane in twelve months.

President.—What will be the sucrose content in a 12-month cane?

Mr. Penning.—It will depend on the time of harvesting. There are certain things of which I cannot yet form a definite opinion. I have only got three years' experience. But generally I would say that it would be difficult to mill between mid May and August when owing to climatic conditions the sugar content is very low. I believe sugar is setting in during the cold weather.

Mr. Iyer.—It has been stated that our cane is very poor as ratoon cane. With your permission I shall read an extract from a report of Dr. Coleman who was Director of Agriculture for 25 years and the first Managing Director of the factory, who was largely responsible for the scheme.

“ A plot of plant cane comprising five acres on the Irwin Canal Farm had an average yield of 24.5 tons per acre in 1932. The same plot under ratoon in 1933 which has just been harvested for milling has yielded at the rate of 33.1 tons per acre, an increase of about 30 per cent. Similar figures for other plots have shown consistently in the ratoon crops an increase of from 25 per cent. to 30 per cent. over plant cane of the previous year”. The opinion of the Department is that it is a good cane for first ratoon.

Mr. Rahimtoola.—Have you milled to a considerable extent cane 12 to 14 months old?

Dewan Bahadur.—Yes. My own opinion as Managing Director of the factory is that this is a matter which requires further study. We have got the drawings of the pol at the bottom portion, middle portion and the top portion of the cane 12 months, 13 months and 14 months old. We are still studying the question.

Mr. Rahimtoola.—I only want to know the sucrose content of the cane milled which is 12 months old and of the cane milled which is 14 months old?

Dewan Bahadur.—We have not completed our study. The point which Mr. Penning has been emphasising is this that there is a wide difference between the pol at the bottom and the middle and the top. It shows that the maturity is incomplete.

Mr. Rahimtoola.—Take the same cane, H.M. 320: you have milled it at 12 months and also at 14 months. Do you find the sucrose content better in 14 months than in 12 months?

Dewan Bahadur.—In some cases we have found it better in 12 months. It depends on the month in which it is crushed. That is why I feel that the matter requires special study in connection with the month in which it is planted and it is crushed. If it is planted in the month of February, we find it as satisfactory as possible, but later on we want a longer period of growth. Therefore we can only say that we want to study the subject further. That is how we feel about it.

President.—In answer to question 17 you say you have taken into consideration three factors in fixing the minimum price of cane, I don't imagine that you fix any particular value for each factor and you try to arrive at an average figure?

Mr. Iyer.—No. All factors are considered by a statutory committee which includes representative growers of cane also.

President.—Is the lease amount paid by the Company a concession rate?

Mr. Iyer.—No. Government charges Rs. 29 per acre. Water-rate for a sugarcane crop is computed at Rs. 15 and the lease value of the land is adopted at Rs. 14 per acre.

Dewan Bahadur.—That Rs. 29 is charged even in the years when the land is fallow.

President.—What is the average lease amount per acre in that area?

Mr. Iyer.—The average rate of lease amount in the locality cannot be tested because there are more lands than there are people to cultivate cane.

Dewan Bahadur.—There are some cases of which we are aware where the rate is Rs. 30 per acre in the year in which sugarcane is grown. That includes water rate and cess.

Mr. Iyer.—In fixing the amount of Rs. 29 there was no consideration of a concession.

President.—In answer to question 30 you say "There are two factories engaged in the manufacture of peppermint, sweets, etc., in Bangalore. Is that a considerable industry?"

Mr. Iyer.—On the whole small.

President.—With reference to your answer to question 31, I suppose the question of zoning has not yet arisen? Was there any proposal for starting any other factory?

Mr. Iyer.—It has not arisen. There was a proposal for a factory in the Shimoga area. In view of the present position of the industry that has been deferred.

President.—In regard to the question of statistics of acreage production under cane are your figures based on surveys of the areas?

Mr. Iyer.—Yes. The village officials compile them for the village. In each village they visit the Survey members and estimate the acreage and yield of cane crop and the figures are then compiled. That is how we get the figures.

President.—Is there any land survey in the State?

Mr. Iyer.—Yes. Our figure is based on land surveys.

President.—So that the acreage figures may be taken to be not far out?

Mr. Iyer.—That is so.

President.—But the question of outturn is a different proposition. How do you estimate the outturn?

Mr. Iyer.—Village officials will go and inspect the lands and they estimate the value of crop in terms of annas, taking the standard outturn as sixteen anna crop. 200 to 250 maunds of jaggery for sugarcane is what we generally estimate as the standard outturn in the Eastern parts of the State.

President.—How is that standard arrived at?

Mr. Iyer.—Originally when the standards were fixed crop cutting experiments were conducted; that was long ago.

President.—Are not these standard figures rather out of date now?

Mr. Iyer.—There is no difference except in the Irwin Canal area. We get 10 maunds of jaggery for one ton of cane so we are not far out in the estimate of standard yield.

Dewan Bahadur.—As regards the outturn per acre in the factory area they are fairly accurate figures because each raiyat knows how much he is delivering to the factory. It is fetched on his cart and weighed and we know the areas he has planted as far as the factory area is concerned.

President.—In future this question of acreage production of sugarcane for all India would be a very important point, whether much reliance can be placed on some of the present figures of acreage and outturn.

Mr. Iyer.—We have issued circulars for re-examining these figures.

Dewan Bahadur.—There is no cane grown for any other purpose here except for supplying to factories.

President.—You are no doubt aware that in Bengal and Bihar where there is permanent settlement acreage figures are merely guesses. You will give us a note on the question of outturn.

Mr. Iyer.—Yes.

Mr. Rahimtoola.—May we take it that about 75 per cent. of the present cane is of improved varieties?

Mr. Iyer.—All the cane in the Irwin Canal area is of the improved variety and in other areas you may take it as 60 per cent.

Mr. Rahimtoola.—Since when did you start experiment with H. M. 320?

Mr. Iyer.—Even before the factory came into existence. It was a well-known cane and was evolved by Dr. Badami, Deputy Director of Agriculture, who was our Economic Botanist.

Mr. Rahimtoola.—Did you get the assistance of the Coimbatore Central Station?

Dr. Badami.—I started work in 1912 along with Dr. Barber. I was a student in the senior class when Rao Bahadur Venkataraman was there. We both started work simultaneously. I was working in Mysore State.

Mr. Rahimtoola.—When did you evolve H. M. 320: if it was evolved in the breeding plots in 1917, that means it took practically five years.

Dr. Badami.—It was selected in 1917. From 1917 to 1920 we multiplied it. It came to the test plots in 1921. I left this place in 1923, so it was in the breeding plots till I returned from England in 1926 (1916?). From that year we started distributing sets and in 10 years it has covered 60 per cent. of the area under cane in the State.

Mr. Rahimtoola.—It took about 10 to 12 years before you could make it of use to the cultivators?

Dr. Badami.—Yes, to extend to the different parts in the State. So far as the Irwin Canal area is concerned we took seed-sets from an acre of cane at Hebbal, planted it on 10 acres in the Irwin Canal Farm, multiplied it on 200 acres and then planted 2,000 acres and in three years the cane was ready for milling in the factory.

Mr. Rahimtoola.—Generally speaking it took about 10 years to bring it to the crushing state?

Dr. Badami.—In five years we can bring it to the crushing state.

Mr. Rahimtoola.—What is the present relation between the Central Station in Coimbatore and the Hebbal Farm?

Dr. Badami.—They are breeding canes more for Northern India. We are producing thick cane. Whenever we happen to have a thin cane we distribute it to the thin cane areas which will be about 10,000 acres. If they want setts of any variety they take from here and if we want any material from Coimbatore, we take it from them and in this way we have been working in co-operation from the beginning.

Mr. Rahimtoola.—Do they send you any cane which they find promising?

Dr. Badami.—Every year we write to them to send us their best cane, both thick and thin. We test them and those which are suited to us we send to the multiplication plots in the Irwin Canal area.

Mr. Rahimtoola.—You have got a grant from the Government of India?

Mr. Iyer.—Rs. 21,000 spread over five years. That will expire at the end of this year.

Mr. Rahimtoola.—Your Government is also represented on the Imperial Council?

Mr. Iyer.—Yes.

Mr. Rahimtoola.—With regard to the costs you have given in reply to question 4, I had better take only one cost which was given by the factory. Is that the figure accepted for the Irwin Canal. Will you consider that as the average for the rest of the plots. I am referring to this figure of Rs. 173-0-0.

Mr. Iyer.—They have left out land assessment and water-rate Rs. 15 and depreciation of live-stock.

Mr. Rahimtoola.—It comes to Rs. 8 a ton. That is also for the rest of the plots?

Mr. Iyer.—Yes.

Mr. Rahimtoola.—Dr. Badami, the Hebbal farm was in existence before you arrived?

Dr. Badami.—Yes. They were working on paddy cane and other dry crops.

Mr. Rahimtoola.—The real work about sugarcane came on with the establishment of the factory?

Dr. Badami.—We have nearly 30 years research work before the factory was started. The Hebbal farm was started in 1905.

President.—When was cane breeding work begun?

Dr. Badami.—In 1912. Before that there was importation of canes from other countries.

President.—What do you call the station here?

Dr. Badami.—Hebbal experimental farm. There is a botanical section on that farm, where cane breeding is done.

Mr. Rahimtoola.—With regard to jaggery manufacture, I want to get the costs. You say deduct Rs. 20 for transport to factory and add Rs. 70 for harvesting, milling and boiling. That means an addition of Rs. 50 per acre for the cost of making jaggery.

Mr. Iyer.—The cost of making jaggery from cane including harvesting is one rupee for every 3 maunds of jaggery. It includes harvesting and boiling but not the cost of cultivation of cane.

Mr. Rahimtoola.—That is 28 lbs. a maund?

Mr. Iyer.—Yes.

Mr. Rahimtoola.—You say you have adopted some improved methods. Has it led to any reduction in the cost?

Mr. Iyer.—Yes.

Dr. Badami.—Formerly they used to find the cost of wood fuel high but now there is no cost of wood fuel and the improved method has brought down the cost of boiling by 1 to 2 annas per maund and the quality has improved. The extraction also has improved by the use of improved crushers. Formerly it was 58 to 60 per cent. now it is 68 to 70 per cent. and sometimes they get over 70 per cent.

Mr. Rahimtoola.—The average would now be 68 to 70 per cent?

Dr. Badami.—That would be a fair figure.

Mr. Rahimtoola.—With regard to the relation that you give between the price of sugar and jaggery in answer to question 39, you give us figures from 1929-30 whereas the Madras Government gives us figures up till that year. You say there is no definite relation between the price of sugar and the price of jaggery.

Mr. Iyer.—No. There are different classes of consumers: and different purposes for sugar and jaggery, some use jaggery by habit, but I believe white sugar is very slowly encroaching into that field. But people in the villages have been accustomed to the use of local jaggery which is cheaper and it will take a very very long time for them to take to white sugar in preference to jaggery.

Mr. Rahimtoola.—But the consumption of jaggery has not gone down?

Mr. Iyer.—It has not because people in the villages have been accustomed to its use. They still use mostly jaggery which is much cheaper and is made in the villages.

Dr. Jain.—In answer to question 33 you have given the quantity of jaggery produced for 1935-36 as 993,485 maunds and forecast for 1936-37 as 955,216 maunds.

Mr. Iyer.—The production of jaggery from cane under tanks depends on the vagaries of the rainfall and the water supply available in tanks, which determine the area under cane. It is not always progressive from year to year.

Mr. Rahimtoola.—With regard to the costs you have given in Statement E, I find that one item is missing and that is watching. It appears in other statements, but it is not here.

Mr. Iyer.—Usually special people are not engaged to watch cane.

Mr. Rahimtoola.—What is the usual practice?

Mr. Iyer.—Where there is only a solitary patch of cane, or in a far off area where there are many jackals, watchers are employed. In the Mandya area there is no watching as everyone grows cane.

Mr. Rahimtoola.—Please look at the items given by the factory as well as the items given by you.

Mr. Iyer.—Menial servants will be shown as watchmen in the scale of establishment. That is an administrative detail. The raiyat does not employ watchman in the Irwin Canal area.

Mr. Rahimtoola.—Do they employ their own family people for watching?

Mr. Iyer.—During the day time most of them will be working in the field and there is no special watching at night.

Dewan Bahadur.—Nothing is spent on watching.

Mr. Rahimtoola.—There may be another aspect of the question. What we are told is that the family employs its own labour. After all wages means labour, and I am told that if the family does not employ one of its members, hired labour is employed.

President.—I may say that in our report we are probably going to have brief descriptive paragraphs about each Province and State and we

shall probably send you descriptive paragraphs of Mysore. It is only a description and no expression of opinion. If it might be convenient, you might return it after perusal with such comments as you deem fit.

Mr. Iyer.—Yea.

Dr. Jain.—On page 5 you say the costliness of the disc-harrow accounts for its limited use in the State. How much does it cost?

Mr. Iyer.—About Rs. 150.

Dr. Badami.—The effective one we imported from Canada costs over Rs. 100. Very few raiyats have it.

Dr. Jain.—Is it of sufficient economic value to warrant its popularisation? If it is of economic value, the State could advance or some other means could be found.

Mr. Iyer.—The economic condition of the riyat and the narrow margin of additional profit account for the small number of disc-harrows.

Dr. Jain.—Apart from the costliness, do you think it is suitable?

Mr. Iyer.—We can manage without it. The riyat uses it for clod-crushing in the sugarcane field. He draws a date tree trunk attached to a pair of bullocks like a tennis court roller. He is able to do clod-crushing with the date-trunk at the rate of 4 acres a day at a cost of about 4 annas per acre. The use of the disc-harrow is too costly for the riyat.

Dr. Jain.—Artificial manures are largely used.

Mr. Dutt.—Yes.

Dr. Jain.—What is the extent of it as compared with the natural manure?

Mr. Iyer.—In addition to available organic manure all the raiyats in the Irwin Canal area use artificial fertilisers in cane cultivation at the rate of 5 cwt. of ammonium sulphate, 1 cwt. of concentrated super phosphate per acre. This is in addition to half a ton or mixed oil-cake.

Devan Bahadur.—The factory issues the composition. In the Company's plots we use artificial manures.

Dr. Jain.—How does it affect the quality of sugar or jaggery as compared with the natural manures?

Mr. Iyer.—It does not affect the quality. It only increases the yield. An overdose of ammonium sulphate is considered to affect the quality of jaggery by prolonged maturity of cane.

Dr. Jain.—You get no aid from the Imperial Institute of Sugar Technology. How do you solve your technological problems,

Mr. Penning.—We know better.

Dr. Jain.—Regarding bonus payments for early and late varieties you say that the proposal is not quite practicable. What is the reason?

Mr. Iyer.—Our point is that our cane is capable of being grown all the year round and it is able to give a uniform yield of sugar except in May and June. May and June are periods when the sucrose in cane is low whatever may be the age of cane. In May and June the sucrose content, if you see the curve, falls down in these months and after June the tendency is to go up. From about 15th April the sucrose content falls down and from the middle of July the sucrose content rises.

Mr. Rahimtoola.—Dr. Badami, when do you consider a cane a promising one to be tried in cultivator's soil?

Dr. Badami.—We have two standards here. One is so far as the quality of the cane is concerned. From the time Dr. Lemon was with us, the sucrose content of the Mysore cane was 20 to 22. We have this standard of Pattapatti cane. As regards tonnage to compete with Pattapatti cultivated in good soil even with all care, won't yield more than 30 to 35 tons, but the average would be only 18 to 20. We wanted to raise the yield further. So we evolved H.M. 320 and other canes to get higher yields with the sucrose standard of Pattapatti.

Mr. Rahimtoola.—Don't you take brix into consideration?

Dr. Badami.—Brix is a misleading factor. I don't place much reliance on mere purity alone. The ripening ratio gives you all the information we require. If planted in July, it is 13 months crop. If planted in December, it begins to ripen even in 10 months.

Mr. Rahimtoola.—Supposing you get 20 per cent. of sucrose content in the ideal situation, as I call the farm conditions—would you get about 70 per cent. of that in the factory area.

Dr. Badami.—Dr. Coleman and myself started to find out the ripening ratio in the ryot's field for issuing permits for harvests. At that time there was direct connection between the department and the factory as the head of the department was the Managing Director.

Mr. Rahimtoola.—What is the approximate figure under factory conditions?

Dr. Badami.—10.4 sugar recovery throughout will be satisfactory. Sometimes for shorter periods over 11.5 seems to have been recovered. We can get even more if proper precautions are taken with this rich cane. That is the work we have to do hereafter.

Mr. Iyer.—Relating to the question of prospective average yield of cane per acre 8 years hence I should like to state the following facts:—In 1933 in the villages where tonnage was studied only 33 persons got an yield of more than 30 tons per acre. Last year 188 persons got an yield of more than 30 tons per acre in the same villages. On these data I hope I shall not be considered a visionary when I say that it would be possible to raise an average of 35 tons per acre in the course of 7 years at the rate of only one ton per acre per year.

Mr. Badami.—We have generally assumed that certain classes of soil are unfit for sugarcane as a result of detailed soil survey. In some soils H.M. 320 did not give more than 10 tons. On the same soils other canes have given an yield of 48 to 50 tons. We have also solved the problem of raising the percentage of fibre in the cane. In a few years, our average production will go up even to 45 tons with proper adjustment of soil, variety and manuring. In three years we will be in a position to do that.

Mr. Rahimtoola.—How far have you progressed with regard to X-ray research?

Mr. Badami.—We have already got 170 strains of various colours varying in quality, vigour, etc., under tests on the Irwin Canal Farm. New canes are being subjected to this treatment.

Mr. Rahimtoola.—Are you still in an experimental stage?

Dr. Badami.—No. The work has passed the experimental stage and it is being utilised for the general work of vegetative mutations not only for sugarcane but for other plants. It is being adopted by Mr. Dodds in South Africa and Professor Tyrobuzo Tenaka in Formosa. Incidentally it has opened up a new method of plant breeding.

IMPERIAL SUGARCANE BREEDING STATION, COIMBATORE.

**Evidence of Rao Bahadur T. S. VENKATRAMAN and
Mr. N. L. DUTT recorded at Coimbatore on
Tuesday, the 6th July, 1937.**

President.—Mr. Venkatraman, how long have you been associated with Coimbatore now?

Rao Bahadur.—From the very beginning of the Station.

President.—That is from what year?

Rao Bahadur.—From 1912.

President.—Mr. Dutt, for how long have you been associated with Coimbatore?

Mr. Dutt.—From 1926.

President.—From the time of the extension of the farm?

Mr. Dutt.—Yes.

President.—You have given us a very interesting note containing a bird's eye view of what is being done at Coimbatore. We would probably wish to print this as part of the Appendix in the record of evidence. You have no objection to that, have you?

Rao Bahadur.—No.

President.—You have given us a very full note so that there is not really very great deal that we need ask you, but there are one or two points which we would like to clear up. For purposes of consideration of the sugar producing areas in India, I take it we might reasonably divide India into tropical and sub-tropical regions.

Rao Bahadur.—Yes.

President.—The tropical region comprising Bombay, Madras, Hyderabad, Mysore and so on and the sub-tropical the remainder?

Rao Bahadur.—Yes.

President.—One point which struck many people and which has struck us is this: could you give an answer to this question—why is it that the sub-tropical region which *prima facie* might appear to have less natural advantages than the tropical actually grows a great deal more cane and is able to produce cane at a considerably less cost?

Rao Bahadur.—I shall have to answer it at some length. The Indian Sugar Industry is different from that in the rest of the world essentially in this matter, *viz.*, that, whereas the Sugar Industry elsewhere depends upon tropical growth and tropical canes, the bulk of the Indian industry depends upon sub-tropical cane areas. Now the reason why we have got a bigger industry in the sub-tropics than in the tropics is because cane has been grown in India for a much longer time in the sub-tropics than in the tropics. In the tropics the sugarcane has been grown more as a fruit and for the manufacture of gur. In the sub-tropics, on the other hand, it has formed an essential link in crop rotation and the agricultural economy of the area. The second reason is because the kind of cane that is grown in the sub-tropics is of a type which can grow with much less cost than the cane grown in the tropics. It is not so thick, it is not so delicate, it is not perhaps so juicy, but it is harder and hardier. One important factor which raises the cost of cane cultivation in the tropics is irrigation. Whereas in the sub-tropics because of the deep Gangetic alluvium, the irrigations are much fewer and sometimes *nil* the crop in the tropics has to be irrigated at times once every 7 to 10 days. The only other countries whose sugar industry we can compare with that of North India are Lusianna, Natal and Argentine. But the rest of the sugar countries of the world are basing their industry on tropical areas.

President.—What about Australia?

Rao Bahadur.—Australia is chiefly tropical and a little sub-tropical. It is just the reverse of what obtains in India. We are chiefly sub-tropical and a little tropical. In the sub-tropical region, the cane has been in cultivation for perhaps 4,000 to 5,000 years.

President.—Why should that be? When *prima facie* the sub-tropical conditions are less favourable, why is it that cane has started in Northern India instead of in Southern India?

Rao Bahadur.—The reason why, it is said, that cane favours the tropics is because the general idea about sugarcane is the tropical cane whereas the Indian cane,—the Indian indigenous cane—belongs to a different type, a different caste, a different race altogether. Apparently there are two races of sugarcanes one born in India which represents the indigenous Indian cane and the other probably born in New Guinea or near about which represents the tropical or the 'noble' thick type.

President.—Here let us go into the matter a little further. The cost of cultivation in the tropical region is higher than in the sub-tropical region for the reasons stated by you.

Rao Bahadur.—Yes.

President.—On the other hand, the yield per acre and the sucrose content are higher in the tropical region.

Rao Bahadur.—Yes.

President.—In calculating the cost of cultivation, it is not only how much is the cost per acre but how much per acre is the outturn is the way to look at it.

Rao Bahadur.—Yes.

President.—How far can the increased yield compensate the increased cost of cultivation in the tropical region?

Rao Bahadur.—Ultimately when the new productions from Coimbatore do replace the present canes now in cultivation in tropical India, I expect, we would be able to compete with any country in the world.

President.—That brings me to a point you have already hinted at. The work in the Coimbatore farm was, I believe, concentrated on the production of canes suitable for the sub-tropical regions?

Rao Bahadur.—Yes.

President.—The work on the noble or thick canes began only in 1926.

Rao Bahadur.—Yes.

President.—Could you give us any rough estimate as to how many years is the tropical region behind the sub-tropical owing to the reasons I have stated?

Rao Bahadur.—It is difficult to definitely mention it in terms of years, but I can mention one thing that the canes already available with us and produced at the thick cane area by Mr. Dutt are now in a position to compete with the noble canes now in cultivation. They have proved superior to the canes in cultivation as well as to the canes imported from outside countries like Java. For instance, the so called "wonder cane" of Java (P.O.J. 2878) has been outyielded by a Coimbatore production in certain tracts. What is wanted is an organisation by which to translate the work of Coimbatore into healthy heavy yielding crops in growers' fields. That is lacking. The canes are available but their spread into cultivation is slower than in Java. In Java they have a number of experimental plots,—sometimes over 2,000—in the cultivators' fields and when once they know a cane is good, within two years the whole area is filled with that cane. Now if we had a similar organisation, Co. 419 would have already taken up quite a large area in Madras and the position would be absolutely different.

President.—How long did it take to introduce your improved varieties in Northern India? Can you give any figure?

Rao Bahadur.—Roughly I may mention that we started work in 1912 and we sent out the first batch between 1918 and 1920. They began to take a hold on cultivation between 1926—1928. I should also like to mention

another small point. The cane is not so extensively cultivated in the tropics as in the sub-tropics, with the result that when a new cane is available it spreads quicker in the sub-tropics.

President.—How many years would you say that it took the sub-tropical region to substitute the improved types for the indigenous varieties? The term 'improved' is rather a relative one. On the wide sense of that term 'improved' in how many years would the substitution really take place in the sub-tropical region?

Rao Bahadur.—To-day the improved canes occupy about 60 to 70 per cent. of the total area. I think it took us about 8 to 10 years to get to this stage.

President.—How long do you think it would take to introduce Co. 419 in the tropical region? Do you think that it would take as long as 8 years?

Rao Bahadur.—That is one of our handicaps in this country. If we had a proper organisation, it ought to spread in two or three years. The experimental stations are already taking it up. There are certain places where it is being distributed also fairly widely. I think that things will move a bit quicker hereafter because when we started with our work for the sub-tropical India, we were handicapped by the fact that people did not believe in us. That has gone. They have got faith in us now. They think that Coimbatore is associated with something good. Therefore I think that the way will be a little smoother hereafter.

President.—Is that true of the tropical region? Have they faith in you?

Rao Bahadur.—Yes.

President.—In the sub-tropical region they have had long experience of Coimbatore canes. You think in the sub-tropical region Coimbatore canes appeal to growers.

Rao Bahadur.—Yes. In fact, it is very difficult to collect indigenous canes in some parts. They have been so completely replaced by Coimbatore canes.

President.—In what period do you think that this improved cane Co. 419 will spread? Will it take 5 years?

Rao Bahadur.—Surely I should expect it in five years.

President.—Possibly less?

Rao Bahadur.—Yes, because the moment you get big plantations with factories the spread is quicker as they are anxious to spread a good cane round about their locality and exert in that direction.

President.—In your opinion would it be now time for the provincial Governments to take an active part in popularising these canes?

Rao Bahadur.—They are already taking part.

President.—Are they doing enough in that respect?

Rao Bahadur.—That is rather difficult and delicate to answer. I will leave it at that.

President.—Have you any suggestions about an organisation for the popularisation of canes in the tropical region?

Rao Bahadur.—Yes, an organisation like the one they have started in the United Provinces and Bihar to utilise one anna from the excise duty and have a special staff to go about. This is quite a success. In the United Provinces for instance there are places round about tube wells where they are demonstrating the superiority of these canes and in the growers' own fields.

President.—Comparing different parts of the tropical region, in Madras the area under sugarcane in the last seven years has increased roughly from 114,000 to 121,000 acres speaking from memory. I think that that is correct. The progress in Madras has been slower than in any other part of India including Bombay judging by the figures.

Rao Bahadur.—Yes.

President.—In fact, the area in 1936-37 was a little less than in 1934-35. I think it was 125,000 in 1934-35. Can you account for that?

Rao Bahadur.—Oh, yes, in North India, the spread was rapid because of the factories.

President.—At the moment I was comparing Bombay and Madras. Why has the progress been less rapid in Madras?

Rao Bahadur.—Again the same reason. In Bombay we have got factories with plantations. For example there is the Belapur factory which has got its own plantation. There is Ravalgaon which has got its own plantation. In fact one very important feature of the development of the sugar industry in Bombay has been the starting of factories with their own plantations. This is an ideal condition for the economic production of sugar. Such development has not taken place in Madras.

President.—You would say then that the development of sugarcane growing in Madras is largely dependent upon the opening of factories.

Rao Bahadur.—Yes, the absence of the stimulus of factories is delaying development and the few factories that we have are not very brilliant in their performance.

President.—Supposing in 5 years your new varieties in the tropical region have practically taken up the whole area, do you then suppose the cost of production per maund in the tropical region would be much higher than in the sub-tropical region allowing for the increased yield?

Rao Bahadur.—The difference will be getting steadily less and less till it ought to disappear altogether.

President.—I take it that the cost of cultivation will be higher in the the tropical region, but the yield will be higher and the sucrose content will also be higher so that the cost per maund ought not to be higher in the tropical region than in the sub-tropical region.

Rao Bahadur.—The difference ought to vanish if the work is properly organised.

President.—That is a very important point because one of the problems of the future might be the territorial production of sugar. Just as India has become self supporting, there is a move nowadays for different provinces and States to become self supporting. Do you think that it is possible on the cost of production that the tropical region will be ultimately able to produce at as low a cost as the sub-tropical?

Rao Bahadur.—Yes.

President.—This year they have been paying less.

Rao Bahadur.—Yes, because of the organisation on a proper basis and the plantation growing new canes and in a proper way.

President.—In the sub tropical region—improved varieties is rather a relative term and you have said you are always improving—do you think there is much scope for further improvement?

Rao Bahadur.—Yes. We are very ambitious and I think, subject to further experience, we would not stop till we touch 40 tons which is scientifically possible.

President.—In the tropical region, what would you put it at?

Rao Bahadur.—60 to 70 tons.

President.—That is the ultimate possibility.

Rao Bahadur.—Yes, it is not easy to give these figures—I mean it depends upon so many factors.

President.—There is a distinct possibility that the average yield might be ultimately 40 tons in the sub-tropical region and 60 to 70 tons in the tropical.

Rao Bahadur.—Yes. There is no reason why we should be behind practically all countries in the world in the matter of production.

President.—In fact you claim that some of the canes you produce are really superior to the wonder cane of Java—P.O.J. 2878?

Rao Bahadur.—In fact some years back I got a telegram from an Assembly Member asking "Have you got the wonder cane of Java"; I did not know what it was because I had something better until I remembered that that he was referring to P.O.J. 2878.

President.—Of course all these questions are rather leading up to the point which is this: to what extent is it possible to reduce the cost of cane per maund delivered to the factory?

Rao Bahadur.—I think practically so far as tropical India is concerned we should be able ultimately to produce raw material as cheaply as Java: that is of course one of the aims we have. I already see signs by which we in India working in the tropics ought to be able to do as well as Java, if not better with regard to cost of raw material.

President.—Can you give us any recent figures of cost of production in Java?

Rao Bahadur.—I suppose between 2½ annas to 3 annas. That was the figure that I was able to get from the plantations when last I visited Java, not from experimental stations. There are big Chinese plantations in Java and also Chinese factories, from whom I got these figures when I visited Java in 1935.

President.—You don't think it can be as low or even lower than 0-2-6 even with the wonder cane?

Rao Bahadur.—No, I do not think so.

President.—And you think in India they ought to be able to produce at the same figure?

Rao Bahadur.—Yes.

President.—Of course we have been confronted with the difficulty that no one really knows what the cost of cultivation of cane is to the ordinary ryot. The Imperial Council of Agricultural Research recently made some enquiries the results of which are not yet available. One of our difficulties at present is to form any accurate estimate of the cost of cultivation because, after all, the cost of sugarcane, as everyone knows, is one of the most important elements in the total cost of manufacture, as much as 60 per cent.

Rao Bahadur.—That is so.

President.—Under present conditions I take it the cost of cane per maund in the tropical region must be taken at a higher figure than in the sub-tropical pending the introduction of new canes?

Rao Bahadur.—Yes.

President.—Could you give us an estimate of what you think would be the cost per maund?

Rao Bahadur.—I could give you very rough figures and I must mention here that these figures are subject to correction for this reason that they fluctuate a great deal from plantation to plantation and according to the organisation they have in the particular plantation. I have found that if a factory has no control over the cutting operations then the figures are high. I will have to indicate two figures fairly apart from one another and these would be 8 to 12 annas for the tropical area. As for the sub-tropical area again I know there are certain plantations which have been able to produce at 3 annas. From 3 annas to 6 annas will be the figure for the sub-tropical region.

President.—Actually in 1936-37 from the figures we have received we find that in the tropical region prices actually below 8 annas have been paid for cane. Do you think that will be below the cost of production?

Rao Bahadur.—I am glad to hear that. But that is because the method of cultivation varies: it depends upon whether you allow for the wages of the family and that is a very important factor. My figure allows for the wages of the family—for a portion at least.

President.—There is one other point on which I would like to have your opinion. In the sub-tropical region—I won't say the major portion—a

considerable proportion of the factories are able to produce enough bagasse for their fuel requirements. In the tropical region, on the other hand, the fibre is much less and therefore it is impossible to run entirely on bagasse and I would like to have your opinion on that.

Rao Bahadur.—On this particular matter I can give you fairly reliable figures. Before a factory introduces canes of a particular quality, it has to study the fibre content of the cane as well and that is generally what they do in Java and other countries. They mix the varieties in such a way that they get the needed fibre. In Northern India indeed the bagasse is more than what they need.

President.—Even in Northern India there are few factories which have surplus bagasse.

Rao Bahadur.—I have only heard that. As I said, if you mix the varieties according to the fibre content there will be no difficulty even in the tropical region.

President.—A suggestion was made to us by one factory that with these thick varieties of cane one could not expect to get enough fibre for the whole of its fuel requirements.

Rao Bahadur.—That is why I say that if there is a judicious mixture of varieties then there will be no difficulty.

President.—What are the fibrous canes for the tropical region?

Rao Bahadur.—We have got quite a number of fibrous canes.

President.—What about Co. 419?

Rao Bahadur.—It has more fibre. I know of a particular factory which found it difficult to work with P.O.J. 2878 but by a suitable mixture with Co. 290 they were able to get over the bagasse difficulty. It will be disastrous for a factory to go on purchasing fuel.

President.—The majority of the factories still do buy fuel even in the sub-tropical area, but that may be due to the wrong type of furnace and so on. A great many factories have reduced their fuel consumption considerably by the introduction of improved types of furnaces. At any rate your conclusion is that even in the tropical region it should be a judicious mixture of varieties be possible to produce enough bagasse for the full requirements of a factory?

Rao Bahadur.—Yes.

President.—That is very interesting. Mr. Dutt will now perhaps like to say something on the subject. You heard the questions put to Rao Bahadur: the Board would now like to hear your views on the subject.

Mr. Dutt.—As regards the tropical and sub-tropical areas, tropical canes are also grown in North-Western Frontier Province and Assam though they are sub-tropical from the climate point of view. They grow a thicker class of cane than is grown in other provinces. In Assam the rainfall is higher and the temperature in the summer months is not so high as in the neighbouring provinces of Bengal, Bihar and Orissa. In the North-Western Frontier Province why they grow thicker class of cane is very difficult to say. For one thing the rainfall is low, about 14" at Peshawar, which is a valley and probably the atmosphere is humid and the soil also is better. These may be the probable reasons why they are able to grow a better class of cane. In the Bombay Presidency, once the canes are released they have made notable progress because their organisation of staff is very well indeed. Recently I understand they are growing canes which were recently released, Co. 360 at forty centres and Co. 419 in 16 centres. That is a fair progress, as progress goes in this country. A somewhat thickish class of canes it would be possible to grow in sub-tropical India also. A recent cane, Co. 421—I may mention incidentally it has a very high fibre content also—if preliminary results at experimental stations are any guide, might prove of some use in certain tracts in Northern India because it withstands drought and frost.

President.—How is it that the thick canes grow in the North-Western Frontier Province when it has more frost?

Mr. Dutt.—For planting purposes they cut their cane and put them inside the ground and utilise them when the time comes. That is how they skid over the period of frost.

President.—I take it Assam is not liable to frost?

Mr. Dutt.—I am afraid I do not quite remember at the present moment.

President.—Of course the North-Western Frontier Province in that respect is more unfavourably situated than the Punjab.

Mr. Dutt.—That is so. As for the tropical areas Co. 419 is not the only cane. We have others also. We have Co. 360; and Co. 413, the latter having a little more fibre. These again have done well in Burma and Assam and I have mentioned so in my written evidence.

President.—How would you classify Burma?

Mr. Dutt.—Tropical.

Rao Bahadur.—We have lost interest in Burma!

President.—Co. 419 and Co. 421 are the two canes

Mr. Dutt.—Yes. Co. 419 for tropical and Co. 421 for sub-tropical and for such conditions in tropical area where there is scarcity of water and so on.

President.—I suppose from your experimental work you cannot really judge the cost of cultivation?

Dr. Dutt.—It is only from the yield point of view that we can give some figures and that too from small plots. We calculate about 60 tons, say an average of 50 tons, and work the price per maund and judge the cost of cultivation. The aim is that the cost of cultivation ultimately should be less.

Mr. Rahimtoola.—Rao Bahadur, I would like to ask a few questions in connection with certain important statements you have made in the course of your oral examination by the President. You have told us that there is want of proper organisation in India and that is why the proper growth of the industry is hindered. May I know exactly what you mean by that?

Rao Bahadur.—I would just narrate the organisation that exists in Java. When a particular cane is found promising in the experimental station, it straightaway goes to over 1,000 plots situated in the various plantations and the experimental station watches the results from those stations. It is a very big advantage to have the cane which is considered promising tested in so many plots and therefore when these results are available the experimental station is able to come to a decision quickly, definitely and with confidence that this is a good cane. And the moment they come to this decision they have got the material in these thousand plots and therefore it is easy to spread. It is desirable that a similar organisation is available in our country.

Mr. Rahimtoola.—At present, you know, as a result of the Sugar Committee's recommendations a number of research stations have been started all over India. I understand that the canes found promising at your station, are sent out to the various provinces to be tried out under local conditions, and if they are successful they are given to the cultivator. This system is not quite adequate?

Rao Bahadur.—After all take the sub-tropical area. It is rather a large area having how many experimental stations? We have got two in the Punjab, two in the United Provinces—with a third as a sort of auxilliary—we have got 3 in Bihar which is totally inadequate for such a big area.

Mr. Rahimtoola.—How many stations would you suggest for the sub-tropical area?

Rao Bahadur.—I would suggest all these testing stations to have other centres in which to grow these canes that are just coming in.

Mr. Rahimtoola.—In order that the Board may be able to visualise the problem, it would be better if you would let us know exactly the number of stations, and the amount of money required and what are the particular localities in which the stations should be situated. I don't mind if you

would prefer to submit a considered note on this subject rather than answer the question on the spur of the moment.

Rao Bahadur.—I think I could send up a note giving the general lines of development.

President.—I may mention that we have visited Shahjahanpur and Pusa and we have had the advantage of seeing the other end so to speak.

Mr. Rahimtoola.—What is the relation at present between Provincial Stations and your Station.

Rao Bahadur.—My job at Coimbatore is just to try and produce as many new canes as possible and when we consider, for example, half a dozen canes promising we send them out to provincial stations. We don't send them to private plantations, we don't send them to factories. We send them to provincial Sugarcane Testing Stations, from among the half a dozen canes that are tested at the provincial stations, only such as are found useful are spread into cultivation by the Testing Station. Therefore my relationship with the Provinces is only with the Testing Stations.

Mr. Rahimtoola.—Let me understand you take certain types of canes which are found promising for the sub-tropical area; and send them to be tried at the Stations under Provincial Government's control.

Rao Bahadur.—Yes.

Mr. Rahimtoola.—Do you hear anything from them as to how they have behaved in those places?

Rao Bahadur.—I keep a very live touch with these Testing Stations. Whenever possible I visit the Stations, study the crop myself in the place and also get periodical reports, so that the whole breeding work at Coimbatore is guided by the results from the provincial testing stations. The provincial testing stations are the eyes by which Coimbatore can see in which direction to steer the ship. This is very important and therefore I am keeping in very live and close touch with these testing stations.

Mr. Rahimtoola.—What is your opinion about the working of Provincial testing stations? Have they got adequate staff and the money or do you think that there is anything lacking, which is hindering the growth of the industry.

Rao Bahadur.—I think they are all right.

Mr. Rahimtoola.—And they are working all right?

Rao Bahadur.—Yes, generally.

Mr. Rahimtoola.—The grant is given out of the excise duty fund both in the Provinces and in the Centre.

Rao Bahadur.—Yes.

Mr. Rahimtoola.—Are you keeping in close touch with those varieties which you send to the provinces, I would also like to know whether there is enough material, men and money to enable the Provincial organisations to carry out what is called the second stage of research.

Rao Bahadur.—On the whole they are quite all right.

President.—I take it your point is that these provincial stations are all right as far as they go, but there ought to be more.

Rao Bahadur.—Yes.

President.—As far as they go they are all right as regards staff, area and so on.

Rao Bahadur.—Quite.

Mr. Rahimtoola.—You have nothing to do with the factories?

Rao Bahadur.—Nothing.

Mr. Rahimtoola.—Do you visit any factories?

Rao Bahadur.—Yes. As I have already mentioned my whole work depends upon the results in the plantations and I am very anxious to know which canes are good and which bad, so that my breeding work can be guided by such knowledge. I make it a point whenever I go on tour to

visit the factories and the plantations as much as the experimental stations. Very often these factories give very useful hints as to the lines on which to work.

Mr. Rahimtoola.—Your station is mainly for breeding purposes?

Rao Bahadur.—Only for that.

Mr. Rahimtoola.—And you have no personal experience about the cost of sugarcane.

Rao Bahadur.—Not in Coimbatore. Our costs are not of any use because the whole growing is experimental. Every seedling has got to be saved at any cost.

Mr. Rahimtoola.—I want to know whether you have any experience at all.

Rao Bahadur.—My cost figures will not apply to ordinary field conditions.

Mr. Rahimtoola.—You say for the sub-tropical area 3 to 6 annas a maund.

Rao Bahadur.—Yes.

Mr. Rahimtoola.—Is this based on personal experience or have you seen the costings of the various plots?

Rao Bahadur.—I don't go through the figures or check them. I get the figures from the people.

Mr. Rahimtoola.—It is not based on your personal knowledge. These figures have been supplied to you for whatever they are worth.

Rao Bahadur.—Yes; supplied to me.

Mr. Rahimtoola.—Another point mentioned by you is the fibre content of the cane.

Rao Bahadur.—Yes.

Mr. Rahimtoola.—You said with a judicious mixture you can get the requisite amount of fibre out of the cane for the whole of the fuel requirements of a factory.

Rao Bahadur.—Yes.

Mr. Rahimtoola.—Can judicious mixture be got only if you own your farm.

Rao Bahadur.—Either you must own your farm or you must be able to influence your cultivators in such a manner as to grow the particular cane you want by a system of premia and subsidies.

Mr. Rahimtoola.—Do you think it is possible under present conditions in India?

Rao Bahadur.—Begg Sutherland once gave one anna premium for Co. 214.

Mr. Rahimtoola.—That is only for their factory.

Rao Bahadur.—It is a group of factories.

Mr. Rahimtoola.—I know they own about 10 mills.

Rao Bahadur.—I think it ought to be possible.

Mr. Rahimtoola.—Do you think that the cultivators can be persuaded to plant in such a manner as to get the requisite amount of fibre in the cane?

Rao Bahadur.—Provided the factory is able to part with the needed money to encourage that sort of thing.

Mr. Rahimtoola.—If you get more fibre, is there less sucrose content?

Rao Bahadur.—There is a general sort of correlation the other way.

Mr. Rahimtoola.—What is the ideal cane which would have the requisite amount of fibre and the requisite amount of sucrose content?

Rao Bahadur.—It is rather difficult to answer.

Mr. Rahimtoola.—You say it is possible under present conditions to get the requisite amount of both in a cane. So I am asking you whether we can set an ideal cane of this sort?

Rao Bahadur.—Supposing for certain reasons we have a plantation which has necessarily to cultivate a cane low in fibre, then it must plant another variety which is a little higher in fibre whether it be economically as good as the other variety or not. Such a mixture is possible. It is the common practice in Java.

Mr. Rahimtoola.—Have you made experiments with regard to such canes?

Rao Bahadur.—I only breed and do nothing else.

Mr. Rahimtoola.—Has any provincial station made any experiment?

Rao Bahadur.—Not yet.

Mr. Rahimtoola.—Then it is too early to say that it is possible in India.

Rao Bahadur.—It is done in Java.

Mr. Rahimtoola.—In Java several things are done. At present no experiments have been conducted in India to get more fibre in one cane and less fibre in another so that one can get the requisite amount of sucrose content as well as adequate fibre for fuel purposes.

Rao Bahadur.—Quite.

Mr. Rahimtoola.—You said that the Madras cane area has not developed because there is no ideal factory. Don't you think that a factory would have come up under the protective scheme as they have come up in various other provinces if the area had not been so scattered and the price of the sugarcane so high? Before a factory is put up the capitalist would like to know whether he can get a fair return on his capital. If there was a right type of cane and a large area to keep the factory going, I don't see why the capitalist of Madras should be backward as compared with others.

Rao Bahadur.—That takes me to a very delicate question indeed. As a matter of fact in certain places at any rate the area is concentrated enough for a factory.

Mr. Rahimtoola.—I think that the attention of the people has not been drawn to it because of the price of cane. The price of cane in the tropical area according to your experience is between 8 to 12 annas a maund. That might be the reason for not having many factories.

Rao Bahadur.—That is one reason. The other reason is . . . I know the ventures in Madras somewhat but I don't think I should give out the reasons which to my mind are responsible for the failure.

President.—Do you think there is anything in the point that in Madras the alternative cash crops are perhaps more numerous than in other provinces?

Rao Bahadur.—Paddy could be cut in less time and the cultivator has not to wait for getting his profit so long. That is one handicap.

President.—Plantains, chillies, tobacco, groundnut and cotton.

Rao Bahadur.—Sugarcane is paying.

President.—Does it pay as well as the others under present conditions? It has been suggested to us that the ryots prefer these alternative crops to sugarcane.

Rao Bahadur.—That is because there is not so much of waiting in cotton as in sugarcane.

Mr. Rahimtoola.—You said that the Central research station is aiming at obtaining about 40 tons per acre in the sub-tropical area?

Rao Bahadur.—Yes.

Mr. Rahimtoola.—What are you able to get at present? What is the average?

Rao Bahadur.—16 to 20 tons. When we started it was below 10.

Mr. Rahimtoola.—What is it in Java?

Rao Bahadur.—In Java it is 50 to 60 tons. That is tropical.

Mr. Rahimtoola.—What is the average for the tropical?

Rao Bahadur.—25 to 30 tons.

Mr. Rahimtoola.—I want to ask you a few questions about the late and early varieties. It is stated in Mr. Dutt's Report that the task of breeding equally successful early and late canes has yet to be completed. How far you have progressed in that direction?

Mr. Dutt.—We have some varieties which are early and late. When I speak of 421 and 419, what I mean to convey is they are head and shoulders above others in their own class, i.e., mid-season canes. No early and late varieties of that standard and that yield have come out from my station yet. We have canes like 416 which is a late variety and which is very low in sucrose content. Its yield is all right. We have got to build up in that direction. What I said was we haven't got canes of that standard.

Mr. Rahimtoola.—Yield of 60 tons.

Mr. Dutt.—That is what has been obtained at the provincial experimental stations. I don't think on a large scale we are getting that high figure.

Mr. Rahimtoola.—What is the difference between the provincial station and the actual cultivator's soil? You get certain results in the Provincial experimental stations. Do you get the same results on the cultivator's soil.

Mr. Dutt.—I don't think so. The result in the provincial stations is from small plots. When you grow in big plots, the average tends to become less.

Mr. Rahimtoola.—The results you have given are from the provincial stations.

Mr. Dutt.—The canes have not filtered down to the cultivator yet.

Mr. Rahimtoola.—None of these are for the cultivator.

Mr. Dutt.—360 is being tried in 40 centres in the Bombay Presidency and I understand that some of these will be in the cultivators' fields.

Mr. Rahimtoola.—What about Co. 419?

Mr. Dutt.—In sixteen centres in the Deccan Canal Tract. I anticipate some of these are in the cultivators' fields. Forty and sixteen centres are the figures that I got from the Padegaon Farm. Some of these will be in the cultivators' fields, but not all.

Mr. Rahimtoola.—I was concentrating on Co. 419 and Co. 421.

Mr. Dutt.—Co. 419 is for sub-tropical. I do not know if 421 has gone out of the experimental stations in the North. Co. 419 is in the cultivators' plots both in Madras and Bombay.

Mr. Rahimtoola.—What about Co. 360?

Mr. Dutt.—Only in the Bombay Presidency.

Mr. Rahimtoola.—Only at Padegaon or the whole of the Deccan area?

Mr. Dutt.—40 centres in the Deccan Canal tract.

Mr. Rahimtoola.—By the introduction of these early and late varieties, have you been able to extend the season?

Mr. Dutt.—That is the idea. I have not been able to give satisfactory early and late varieties.

Mr. Rahimtoola.—When does the season start?

Rao Bahadur.—We have been able to add 20 to 30 days to the working season.

Mr. Rahimtoola.—The last Tariff Board found the average working season to be 100 days.

Rao Bahadur.—Now it is 120.

Mr. Rahimtoola.—120 days is the average.

Mr. Dutt.—The season is from 3rd week of October to 3rd week of May. This is from a forecast by Mr. Srivastava in the Indian Trade Journal.

Mr. Rahimtoola.—That means more than 120 days.

Mr. Dutt.—Yes, that is for Bombay.

Mr. Rahimtoola.—In Bombay, we have a particularly big working season.

Mr. Dutt.—That is so.

President.—In Mysore it is higher still.

Mr. Dutt.—Yes.

Mr. Rahimtoola.—For the sub-tropical region can we take 120 days as the fair average.

Rao Bahadur.—Yes and we hope to extend further.

Mr. Rahimtoola.—In Java it is 126 days. Can you go up to 135 days?

Rao Bahadur.—My ambition is greater still.

Mr. Rahimtoola.—I want to confine my ambition to 7 years which is the period of protection we are asked to consider.

Rao Bahadur.—I think we can hope to go up to 140 days easily. In such a forecast I am more like an astrologer.

Mr. Rahimtoola.—We can take an average number of working days as 130.

Rao Bahadur.—I think so.

Mr. Rahimtoola.—Do you offer advice to provincial stations about manures?

Rao Bahadur.—No.

Mr. Rahimtoola.—Do you advise provincial stations about the methods of trials and selections?

Rao Bahadur.—I would not put it as advice. We offer suggestions.

Mr. Rahimtoola.—When you send canes which you find promising, do you advise how they should be grown or do you leave it simply to the officers in charge to do as they like?

Rao Bahadur.—We encourage their being grown just as the local cane is grown.

Mr. Rahimtoola.—Do you offer suggestions?

Rao Bahadur.—We do not offer any special prescription with regard to particular canes. We are anxious that our canes should fight a live battle under the same conditions as the existing canes and have their superiority tested under those conditions. Then only they ought to go out.

Mr. Rahimtoola.—There is only one more question I want to ask you about your station. Is the grant given to you sufficient to enable you to carry out all experiments?

Rao Bahadur.—Our last extension was in 1926. It is time for us to have another now.

Mr. Rahimtoola.—What extra expenditure do you think you are likely to incur? Do you want to put forward any suggestion before the Board on this subject?

Rao Bahadur.—Yes. I would be very much obliged if the Board would recommend that any proposals for extension from my Station should be favourably considered. At present I am not in full possession of details.

Mr. Rahimtoola.—Can you send us a note?

Rao Bahadur.—Yes.

Mr. Rahimtoola.—You said that it takes about 8 to 10 years before a cane is given to the cultivators. I find that you started work in 1926 for the tropical region.

Mr. Dutt.—Yes.

Mr. Rahimtoola.—It is just over 10 years.

Mr. Dutt.—We should calculate the period from the time of releasing the cane.

Mr. Rahimtoola.—When did that happen?

Mr. Dutt.—1931.

Mr. Rahimtoola.—That was the year when the first cane was released for the tropical area?

Mr. Dutt.—Yes.

Mr. Rahimtoola.—Then it would be about 1941-42 before the new cane come into use.

Rao Bahadur.—Somewhere about that.

Mr. Dutt.—Co. 419 was sent in 1933 and you have to add 10 years to that.

Mr. Rahimtoola.—With regard to Appendix II, it is stated that in 1930-31 out of 250,000 seedlings raised, you were able to get only a selection of 8. Is that correct?

Mr. Dutt.—Yes.

Mr. Rahimtoola.—What happens to the rest?

Mr. Dutt.—They are not upto the mark.

Mr. Rahimtoola.—Do you require such a large number for experiments?

Mr. Dutt.—If we had more land, we would possibly select from a much larger number. It is the quality of the resultant cane that matters and not the number of seedlings.

Mr. Rahimtoola.—Does it mean that you should have such a large number of seedlings?

Mr. Dutt.—I would very much like to have more. I would ask for a little extension of area if I could get it. Otherwise I would like to be able to raise more seedlings. The trouble is more area is occupied by the test plots. As every year more seedlings come into being, they occupy more space and less space is therefore available for seedlings.

Mr. Rahimtoola.—Do you think that all that is necessary in order to bring about the improvement.

Mr. Dutt.—As it is, it is a little less.

Mr. Rahimtoola.—It is all necessary.

Mr. Dutt.—Absolutely.

President.—There is one point on which I would like a little information. On the east coast in the Madras Presidency the cost of growing sugarcane is very considerably increased by propping and wrapping owing to the liability of cyclone. How far is it possible to overcome that difficulty?

Mr. Dutt.—The easiest way would be to give them a cane which can stand the cyclone and won't fall. In fact Co. 213 which is a fairly erect cane was some years ago distributed for cultivation in certain areas. The ultimate object I think is the cost of cultivation and if wrapping and propping is absolutely essential, there is no harm in it. If a cane gives him the necessary yield and if it requires wrapping and propping, there is no harm in it and I think that that is the correct way of looking at it rather than getting less yield and manuring less and having a cane which can stand only to a certain extent the cyclones.

President.—The question is really whether the extra expense is justified by the increased yield. That is what it comes to. Is that a correct statement?

Mr. Dutt.—Yes.

President.—You don't think that there is any probability that wrapping and propping would be able to be dispensed with by the evolution of another cane which could stand cyclones?

Mr. Dutt.—We have canes for fairly good yield in Co. 421 and Co. 213 but I do not know whether they are quite the type of canes which ought to go for Madras. Madras is in the tropical zone and there is no reason why Madras should not take advantage of that position by growing thicker canes.

Dr. Jain.—As regards the extension of your work have you been seriously hampered because of the grant given to you at present or have

you any improvement schemes held up because you did not have sufficient funds?

Rao Bahadur.—That goes to the very basis of sugarcane breeding. Sugarcane breeding is a question of hit and miss. It is a question of multiplying our chances. The greater the chances, the better, the quicker and the more reliable are the results.

Dr. Jain.—The more money you have, the better it is for you. But may I take it that no improvement scheme has been held up for lack of funds?

Rao Bahadur.—We have been asked not to send up any proposals because of the financial depression and we have to be satisfied with what we have got. If we get more certainly we can produce more canes. After all compared with that in other countries, it has to be remembered that the industry is the biggest to-day, bigger than Cuba.

Dr. Jain.—On the whole you have been fairly treated in the matter of finance.

Rao Bahadur.—It is very difficult to answer that question. I should like to be better treated.

Dr. Jain.—You have given us interesting figures of costs of production in sub-tropical and tropical regions. The cost varies from 8 to 12 annas in the tropical region and from 3 to 6 annas in the sub-tropical. What is the most usual cost for tropical and sub-tropical areas?

Rao Bahadur.—I do not like to indicate such a figure. Having given the maximum and minimum figures I should not like to venture the further average figure.

Dr. Jain.—You would not venture to say that it would be nearer 3 than 6 annas.

Rao Bahadur.—I should not like to venture a figure.

Dr. Jain.—Your work is mainly breeding which comprises evolving a cane capable of resisting adverse conditions, overcoming insects and pests, etc.

Rao Bahadur.—Yes.

Dr. Jain.—Have you been able to discover some canes which are very successful in regard to these diseases?

Rao Bahadur.—Yes. One of the most important results which we got by using the wild cane is resistance to adverse conditions including pests and diseases.

Dr. Jain.—What progress have you made in regard to that?

Rao Bahadur.—Most of my canes are more resistant to pests and diseases than the existing ones. At the sittings of the Last International Congress in Australia (1935), delegates from the various sugarcane countries of the world testified to the marked resistance of the Coimbatore productions.

Dr. Jain.—That is not the problem now.

Rao Bahadur.—I would not say that that is not the problem now. There are two ways of attacking the problem. Supposing there is a pest or disease, you can control it in the field or you can produce a cane with sufficient resistance strength. We have to work in both directions. For example supposing a cane is otherwise good but is liable to a particular pest, I would like the disease to be controlled in the field but if the field operations are too costly, I would rely more on the resistance quality. These have to go together.

Dr. Jain.—What about the red rot in the tropical area? Has it been completely overcome?

Rao Bahadur.—It has not been completely overcome.

Dr. Jain.—You are making experiments, I suppose.

Rao Bahadur.—Some of our canes are found to be more resistant to red rot.

Dr. Jain.—What about mosaic?

Rao Bahadur.—Mosaic is not a problem with regard to sub-tropical India. It does not seem to affect the yield. With regard to tropical India, however, it is serious and we do take it as a factor. When we are producing canes, we have so many factors to consider and disease resistance is one.

Dr. Jain.—You are making no experiments in regard to manures and their effect on sucrose content.

Rao Bahadur.—No, because all my time and all the time of my staff is engaged solely in the work of breeding. We are, constantly on the look out for new parents that would transmit the desired characters and hybridize them on a mass scale to secure the desired combinations of characters.

Dr. Jain.—These experiments are made at the provincial centres.

Rao Bahadur.—Yes. In fact, that is the job of the provincial centres.

Mr. Rahimtoola.—I want to ask you one more question with regard to the canes that you send to the various provincial stations. Do you get any reports about them?

Rao Bahadur.—Yes.

Mr. Rahimtoola.—Do you come to know that a certain number of canes have not been successful?

Rao Bahadur.—Yes.

Mr. Rahimtoola.—Do you keep a record of them?

Rao Bahadur.—Yes.

President.—I want to elucidate one point. As regards the extension of your work, is there any line of research that you at present have not undertaken which you would like to undertake if you had more money or more land or is it merely an extension of the existing activity that you are thinking?

Rao Bahadur.—Chiefly extension of existing activities.

President.—You cannot indicate any line of research which you are not at present undertaking and which you would like to undertake. That is more relevant to the question of finding more money for you.

Rao Bahadur.—I shall answer this question at some length. We are not able to study the sugarcane plant in all its aspects at the central station as one would like to. That is because we have not got the adequate staff and we have not got the needed funds, for example how the sugar is built up, how the fibre is formed and what are the various characters by which you can produce canes resistant to particular pests and diseases. I mean all these general problems we are not attacking. All that we are doing at present is to bring in as many parents as possible, breed them and then distribute them, but all these other questions will be very useful indirectly in the breeding work. All this we cannot do at present and we have to go by a particular standard.

President.—Does that mean more space, more staff and more money?

Rao Bahadur.—Yes.

President.—You have a lady assistant?

Mr. Dutt.—Cytologist. There is one more direction in which we want our station to expand and that is plant physiology which means more laboratory.

President.—Do you require for instance any other person of similar status to the cytologist to take up some other line?

Mr. Dutt.—Yes, we want for plant physiology.

Rao Bahadur.—Before I am done with, would you like me to make a statement?

President.—I was just going to say apart from any questions, are there any points which you would like to raise before us?

Rao Bahadur.—I have been vitally and directly interested in the industry for the last quarter of a century and I think it is but right that I should

mention before you what I feel in the matter of tariff although it does not directly concern me. I do not know much of mathematics. I am not conversant with figures. Having travelled abroad, having seen the Australian Sugar Industry, having visited Java at its peak and also when it was down, having carefully studied the industry in Australia which is unique in many respects, I should like to mention here a few facts if you do not mind. Probably it is better if you treat this portion as confidential. When I visited Australia what struck me most was this: though they lose Rs. 100 for every ton of sugar exported from Australia they still maintain an industry losing Rs. 2½ crores, just to keep sugarcane cultivation going and to keep the place populated. In fact, one of the questions put by the International Congress at Brisbane (1935) to the Australians was this: "You lose in this industry; then why keep it going? You not only want to supply your own needs but you want to export. Why?" The answer was "If we do not keep the industry going we would not be able to have this cultivation, we would not have these people living in contentment and prosperity". Not a grain of sugar is allowed to enter Australia though Australia is a big market. Therefore naturally these things set me to think and I would plead before the Tariff Board that considering the fact that the renaissance of our industry—we want it to be a fairly flourishing industry—confers great benefits to the country, it is desirable that it should be protected as well as possible. Any adjustment for regulating the industry is best done through excise but the tariff must be there. What I mean to say is that it is an industry which has found its legs and it is an industry of which we can very well be proud. Within five years crores of money have been sunk in the industry to the advantage of all concerned and therefore I would like to urge from what I have seen in other countries that we should try and keep the industry alive to the advantage of the country as a whole.

Mr. Dutt.—There is just one point which I would like to make clear about the judicious mixture of varieties. I think one difficulty would be the thickness of the cane because while feeding they might find some difficulty. Unless the canes are of the same type there may be difficulty in feeding.

President.—Is it correct to say that thicker the cane the less the fibre?

Rao Bahadur.—It is. Thickness does not merely mean the girth; it is the race.

ALL-INDIA SUGAR MERCHANTS CONFERENCE, CAWNPORE.

**Evidence of Messrs. J. U. MULJI, S. G. SHAH, P. L. BHURARIA,
RAMESHWAR DAYAL, HOLA RAM, Lala RAGHUBAR
DAYAL and MANEK LALL H. PAREKH representing
the All-India Sugar Merchants Conference,
recorded at Cawnpore on Saturday,
the 4th September, 1937.**

President.—Can you tell us which of you have special knowledge of which particular areas?

Mr. Mulji.—We have got shops at Calcutta, Madras, Ahmedabad, Surat, Bombay, Cochin and various other places. Our head offices are in Bombay. We have general information of almost all the places.

President.—Before I start I should like to get one point cleared up. We should draw distinction between merchants and dealers. By merchants I mean people who deal in hundreds and thousands of bags and by dealers those who deal in 25 or 50 bags. Should we draw a distinction of that sort?

Mr. Shah.—I don't think that there is any distinction between the two. They are almost synonymous terms.

Mr. Mulji.—The distinction should be drawn in this way. Those who are dealing only in sugar should be called merchants and those who deal in sugar amongst other things should be called dealers. We, sugar merchants are dealing principally in sugar.

President.—And in large quantities?

Mr. Mulji.—Yes.

President.—There is a distinction in quantity also.

Mr. Mulji.—Yes.

President.—We may take it practically speaking that there would be merchants, dealers and then retail shops dealing in sugar. Is that a fair distinction?

Mr. Mulji.—Dealers are nearly all reaching the consumer.

Mr. Shah.—We, who are appearing before you are big wholesak merchants. We are not small dealers.

President.—In the course of our examination we want to trace the sugar from railway station down to the mouth of the consumer so to speak. Can you first of all tell us what the general arrangements are, tracing the sugar in the manner I have indicated? How does the sugar go from the railway station or from the factory into the mouth of the consumer?

Mr. Mulji.—Generally we make contracts with factories through brokers. These contracts are made either in Cawnpore or Calcutta or Bombay. Manufacturers have their agents at all these places. Brokers approach us with indications of prices and we negotiate the business and then a contract is entered into between the factory and the merchant. After having purchased sugar, we send the mills challans, that is, despatching instructions to send specified number of bags to various places as we merchants sell at all places. We have printed forms of challans containing all the instructions. After despatching the consignment, railway receipt is tendered to us along with the bill. We make the payment and take the railway receipt. Afterwards we give delivery to our buyers.

President.—Your buyers are small dealers.

Mr. Mulji.—We have got small and big dealers as buyers.

President.—They are what we might call as dealers.

Mr. Mulji.—Yes, they take delivery and sell it to village merchants.

President.—To the bazar?

Mr. Mulji.—These dealers have their branch offices at various places in this country. There they take actual delivery. We give them railway receipts at their own station. After taking delivery they sell in their own shops.

President.—Dealing in 2 or 3 bags at a time?

Mr. Mulji.—Dealing in many more bags.

President.—The individual retailer may not take more than 2 or 3 bags at a time.

Mr. Mulji.—20 to 25 bags. Generally speaking they take not less than 9 bags, which means one cart load. These dealers buy in cart loads.

Mr. Rahimtoola.—There is very little difference between a dealer and a retailer.

Mr. Mulji.—Quite so.

President.—There is a difference between the man who sells in a shop and the dealer.

Mr. Mulji.—The retailer is the person who opens the bag and sells sugar by seers.

President.—I think the Association have given us a separate note tracing the history of the sugar in the last seven years.

Mr. Mulji.—Yes.

President.—We sent our special letter asking for the history of sugar marketing for the last 7 years. Perhaps we might go into the previous history. We gather in what perhaps the merchants would say good old days when sugar used to be imported, there was no difficulty about marketing at all practically speaking.

Mr. Mulji.—No.

President.—In fact the previous Tariff Board did not find any necessity for considering the question of marketing.

Mr. Mulji.—No.

President.—Even in those days there was a certain amount of Indian sugar marketed.

Mr. Mulji.—That was confined to Bihar and United Provinces and the quantity involved was also very little.

President.—In what year did the difficulties begin to arise?

Mr. Mulji.—After 1935.

President.—When the quantity of Indian sugar became considerably larger than the imported sugar?

Mr. Mulji.—Yes.

President.—I think you have given a very clear account of how business was transacted up to 1935. We need not discuss that any further.

Mr. Mulji.—Quite.

President.—In those days before 1931 you say the quality was one and the packing was uniform in Java sugar.

Mr. Mulji.—Yes and that is the same even to-day.

President.—What about sugarcandy? Is that coming in?

Mr. Mulji.—Not a single ton. Japanese sugarcandy used to come but since the raising of the tariff it has stopped.

President.—But some is coming from Hong Kong?

Mr. Mulji.—That is not sugarcandy. That is soft sugar. It is still coming.

President.—You say sugar is sold on c.i.f. Indian ports basis. Who pays the landing charges?

Mr. Mulji.—The buyer. What we want to say about Java sugar is this: in 1921 the price of Java sugar had gone up to 100 shillings a cwt. and it

came down to 6 shillings in 1935 and yet there was not a single complaint or dispute about the quality of the sugar or about the contract, inspite of such a heavy fall.

President.—Can you speak about the condition of the market during the Abyssinian war? There was a certain amount of speculation in all commodities including sugar and a good many forward contracts were entered into in regard to Java sugar. Is that correct?

Mr. Mulji.—Very little in Indian sugar. Generally our buyers were not satisfied with the terms of the contracts and it was very difficult to sell Indian sugar to our buyers. They were used to buying Java sugar; they knew the quality.

President.—The opposite point has been put to us in regard to the Abyssinian war and that is that the merchants bought Indian sugar forward expecting a rise owing to the possible European complications and then when nothing happened, the price of sugar fell and that was at the bottom of a good many complaints.

Mr. Mulji.—It is absolutely wrong. The merchants who were buying Java sugar and are wholesale merchants for Indian sugar were not bullish during the Abyssinian war. We were simply buying daily ready and selling from day to day not keeping anything in stock. Whatever sugar we purchased we hedged the Java sugar. I can prove it from my books of accounts. The Abyssinian war came about at the end of August or beginning of September, 1935, and it was two months business. At the end of the business I hedged about 20,000 tons of Java sugar against Indian sugar. As Indian sugar could not be sold we hedged Java sugar. So you will see that what they said is not correct.

Mr. Shah.—As a matter of fact very small quantity of Indian sugar was purchased at the time of speculation; all that was purchased was Java sugar.

President.—One difficulty I think everyone feels, both merchants and factories, is the absence of reliable statistics as to stocks. In the days of Java sugar you knew what the stocks were but when Indian sugar came into the market in large quantities the difficulty arose as to the statistical position and this continues up to now.

Mr. Mulji.—That is correct. Even to-day we do not know what the stocks are.

President.—The Tariff Board are obtaining figures from the mills and I hope we shall have fairly reliable figures and compare them with the official estimates and see what the stock is.

Mr. Mulji.—As regards Java sugar whatever figures are published are produced by the manufacturers themselves by their own organisation. In the same way why should not the Indian Sugar Mills Association publish these figures?

President.—The question has been raised that there appears to be some omission in the Act in not prescribing a penalty for not giving regular returns. The matter is under the consideration of the Government of India.

Mr. Mulji.—Why should not they do it in the interest of trade and industry instead of leaving it to Government?

President.—The present Tariff Board hopes to get fairly complete and reliable figures of stocks of sugar which will be of considerable interest to everyone, but then there remains the question of what the stocks are with merchants and dealers. What do you think of the present position? Is it possible to arrive at any estimate of the stock?

Mr. Mulji.—Most of the stocks are held at the ports and we can give figures for Calcutta and Bombay where most of the stock is held; the other places are holding very small stocks, and then there are invisible stocks, stocks lying in the interior, where it may be taken that stocks will always remain.

President.—Do you mean that it will remain constant?

Mr. Mulji.—It depends upon the market. If the market is stronger the stock in the interior is heavier; if the market is falling the stock is smaller.

President.—We were told the other day by a dealer that as prices have steadied a bit, instead of taking 25 bags he would perhaps buy 50, so that what you describe as invisible stock may perhaps be doubled?

Mr. Mulji.—Not so much as that. The market has not considerably improved. In Indian sugar the difficulty is this: the tail of the season is after the monsoon and any dealer is afraid of keeping stocks in large quantities. Supposing I think that the market will go up, I will sell it off. If I am bullish thinking of a higher price I will try to get hold of forward contracts but won't keep stocks because the stock is liable to deteriorate.

President.—Can you give us an estimate of what you think these invisible stocks are up-country?

Mr. Mulji.—India has 700,000 villages and some sugar is always lying there and therefore the invisible stock in India must not be less than 700,000 bags. There are thousands of villages where there may not be a single bag, on the other hand there are some villages where there may be two and that stock remains more or less constant. When this Abyssinian war broke out, Java sugar was contracted for in very large quantities for nearby shipments. September, October shipments arrived in very large quantities, but at that time when the tendency was bullish we did not find any pressure in Bombay. Every bag was going into the interior; we did not know where it was stored. Only when the market falls we find that the demand is slack.

President.—During the last two or three years what do you think was the amount of invisible stocks and what was the amount of stocks in the main ports?

Mr. Mulji.—This year stocks at the ports were higher than last year. Last year the stock of Indian sugar in Bombay was about 30,000 bags, to-day it is 140,000 bags. In the same way in Calcutta and the other smaller ports there are stocks and some stocks are also lying in the mills. They sell sugar on consignment and that is why visible stocks are heavier at the ports than last year, but the stock with the merchants is comparatively the same as last year.

President.—Those are figures issued by Mr. Srivastava?

Mr. Mulji.—Yes.

President.—Do you think those figures are fairly accurate?

Mr. Mulji.—Yes.

President.—You are satisfied with those figures?

Mr. Mulji.—Yes.

President.—We now pass on to the present position and the representations we have received from you. In paragraph 6 of your representation you say "in spite of this, even at this price more than 50 per cent. mills must be making normal profits and 30 per cent. less profit only a few mills have been hard hit". When we received the balance sheets it appeared to me that you have taken rather an optimistic view of the profits made by the mills.

Mr. Mulji.—That is what we understand from talks with the mills because we sugar merchants are in close touch with them. When we ask them to lower the price they say "our cost is so much, how can we sell sugar at this price"? In that way we have learnt about the costs. No doubt cost varies in this country owing to difference in the varieties of cane, difference in percentage, difference in climate and various other factors. But even in United Provinces there are certain mills which may be called very good mills and still their cost is very high because they pay good wages, they keep good chemists, they keep their quality up to the standard and it may be that for these reasons their cost is high. But there are others whose cost is different; there are mills who to outsiders will appear to be making no profits, but the mill agents themselves look into everything from top to

bottom and even in small mills they do make profits. These are things which only the Tariff Board can make out, as to what is actually the cost and so on, either by going into their balance sheets or going into the details of the balance sheets. Then again, certain mills whose crushing capacity in the beginning was 600 have extended it to 1,200 tons and therefore their cost, etc., cannot be as high as they were in the beginning.

President.—I do not dispute that the cost of manufacture has gone down generally speaking.

Mr. Mulji.—I would like to make one point clear. We, the sugar merchants do not have any grudge against the sugar manufacturers; we are their best friends and we feel that in co-operation lies our salvation also. We don't say that all the millowners are of that type; there are good and bad mill-owners and there are good and bad amongst the merchants. We are talking about the system. There should be perfect co-operation and understanding between the mill-owners and the merchants.

President.—In paragraph 7 you maintain that the mills made up the extra excise duty by lowering the price of cane.

Mr. Mulji.—Yes.

President.—When you talk about that, you are talking about the United Provinces and Bihar. In other parts of India the price of cane was not reduced.

Mr. Shah.—This season increase in excise duty has not hit generally most of the mills.

President.—My remarks apply to Bihar and the United Provinces.

Mr. Shah.—A large number of mills are in Bihar and the United Provinces.

Mr. Mulji.—If you will be good enough to see the excise duty collected by Government in March, you will find that almost all the mills with few exceptions, even in Bombay Presidency, had taken out their sugar from their compound which they sold afterwards. We have had to pay the excise duty while it was not paid by mills generally speaking. There may be exceptions here and there.

President.—You are rather wandering from one particular point. I am now dealing with this question whether the excise duty was made up by the reduction in the price of cane. Do these remarks apply to the United Provinces and Bihar?

Mr. Mulji.—Yes.

President.—We are all aware what the reduction in the price of cane was and your contention is that made up for the additional excise duty.

Mr. Mulji.—Yes.

President.—And that it fell on the grower.

Mr. Mulji.—Yes.

President.—Is it your contention that the whole excise duty was passed on to the grower?

Mr. Mulji.—Yes, certainly.

President.—And none of it was borne by the mills and none was passed on to the consumer?

Mr. Mulji.—Very little on the consumer.

Dr. Jain.—How do you say "very little on the consumer"? Did the price of sugar rise?

Mr. Mulji.—Yes for one month it had gone up. In March it went up by 6 annas.

President.—The average figures show that it went up by 3 or 4 annas for one fortnight.

Mr. Mulji.—The price is higher generally speaking by 6 annas.

President.—Owing to the Syndicate?

Mr. Mulji.—Yes. It comes to this that it fell originally upon the cane-growers and now upon the consumers and not even slightly upon the manufacturers.

Dr. Jain.—Not at all on the manufacturer?

Mr. Mulji.—No.

Dr. Jain.—At no period and at no stage?

Mr. Mulji.—Of course they last for two months. They made profits by keeping sugar outside and then the same sugar was taken out and sold.

President.—When you say outside, did they leave it lying on the compound?

Mr. Mulji.—In every village there are godowns. We have taken delivery of sugar from places outside the mills. Even to-day we are taking delivery of such sugar.

President.—Do you mean that the mills got wind of the excise duty?

Mr. Mulji.—After 15th February there was a thick rumour and naturally everybody wanted to protect himself. Shrewd people protected themselves.

Dr. Jain.—It is not easy to take out.

Mr. Mulji.—It has been taken.

Dr. Jain.—There have been complaints about wagons not being available.

Mr. Mulji.—It was not taken by wagons. It was taken by carts to village godowns. It was stored in other parts of the city, or in the next village.

Dr. Jain.—This is the first time that we hear of this.

Mr. Mulji.—These are the facts. We are taking delivery from those godowns.

President.—We shall see afterwards from mill figures whether there were very large deliveries from factories in February.

Mr. Mulji.—February has only 28 working days.

President.—We shall now pass on to paragraph 9, regarding the time when the slump in sugar became serious. In the Sugar Reports it was said that panicky conditions prevailed. Is that a fair description?

Mr. Shah.—Yes.

President.—I have seen that in several sugar reports. Every one was trying to sell at the same time to get rid of his sugar.

Mr. Mulji.—There was panic because of their desire to sell quickly. Merchants were holding large amounts of stocks and mills also were further sellers. They did not even give time to the merchants to clear off their stocks.

President.—They began selling on their own so to speak.

Mr. Mulji.—Yes.

President.—They were selling independently of the merchants.

Mr. Mulji.—What happened was this: we merchants were large buyers from mills. Some mills had sold their production, and were holding further stock. Let me explain the position by way of illustration. I purchased from Mill "A" 50,000 bags of sugar and the mill was holding a further stock of 50,000 bags. I gave them chalans to send sugar to various stations in Guzerat. From repeated chalans the mill came to know that there was a good demand for sugar in those places. They sent at once their own representative or clerks to the very places to which I had asked them to send to canvas orders. I introduced their sugar in those places. I did not disclose the names of merchants. I simply instructed them to despatch so many bags to stations on the Bombay, Baroda and Central India Railway at the lowest rate of freight. From that the mill came to know that there was a good demand for sugar in those places and they sent their own representative who sold to these dealers at our rate or even lower than our rate. Not only that, but they gave $\frac{1}{4}$ per cent. or $\frac{1}{2}$ per cent. commission or brokerage to small dealers. I can prove that they have done this. So how do you expect

us to sell our own stock of the very sugar which we bought from them. We are bound to give them the names of places where sugar has to be sent. If we don't disclose the names and bring it to another station, the cost will be higher. They knew where the sugar is going. They competed with us in the open market even in distant places and that was the reason that deliveries were delayed; sugar was further spoiled and the merchants were ruined. I wrote to them at that time on this point.

President.—In paragraph 10 you deal with labour conditions in the mills. You say: "The skilled and unskilled labourers are paid very low wages specially in the United Provinces and Bihar".

Mr. Mulji.—Yes.

President.—Have you any facts to substantiate that statement?

Mr. Mulji.—I have sent one statement from Bombay to the Board about the wages and cane-growers' conditions in Bihar and the United Provinces.

President.—At present we are not dealing with cane-growers.

Mr. Mulji.—I have dealt with both in that statement. We could not collect information from one and all. Time was very short. So we enquired into the conditions in certain districts and sent you the note giving you all the details. Why we had to go into this matter so deeply was this that we calculated what the cost of the mills would be and when they began to sell below that figure, we wanted to know the reason for it. Therefore we had to find out what the actual costs were. That was how we found out all these things.

Dr. Jain.—Did you make an extensive survey about the labour conditions?

Mr. Mulji.—We ourselves are merchants and are unable to survey all those things. Therefore I approached the labour leader Mr. Joshi who is a member of the Assembly and asked him whether anybody could provide us with a note about labour conditions in Gorakhpur and the United Provinces Districts. He directed me to Mr. Sibban Lal Saksena, M.L.A., Gorakhpur District who has made out a regular survey. He approached almost all the mills and got out these facts.

Dr. Jain.—These conditions apply to Gorakhpur factories.

Mr. Mulji.—Yes. We ourselves could not make enquiries. We know about certain other mills where our clerks are often going for despatching sugar. We learn through them what the wages are in Saran District and also about the labour conditions in Bihar.

Mr. Rahimtoola.—Have you forwarded a copy of his Report to the Board?

Mr. Mulji.—Yes. I leave it to the Board to enquire whether these are facts. The time was very short. Personally I could not go into all these details. I sent it to the Board so that they could make sure whether they were right or wrong.

Mr. Rahimtoola.—Are you in a position personally to substantiate it.

Mr. Mulji.—I have not made personal enquiries, but to-day even in Gorakhpur my six clerks are at the mills for despatching sugar and we know what wages are paid there.

Mr. Rahimtoola.—We have received returns from a large number of mills in India showing the wages of both technical and non-technical men. This note may prove useful when we are examining the Sugar Mills Association.

Mr. Mulji.—Yes. I think Mr. Saksena will appear before the Board to give evidence.

President.—We can leave that matter to him. We will pass on to another point.

Mr. Mulji.—While we are on this labour point, I would say that we merchants are interested in the stabilisation of prices. If labour is stabilised, we would know what the labour would cost.

President.—We pass on to paragraphs 11 and 12 of your General representation, in which you talk about the protection of the Gur industry.

I do not know what exactly you want to convey by that. The previous Tariff Board discovered that a certain amount of inferior staff was being imported for the adulteration of gur especially on the Bombay side and they paid special attention to that. The duty was raised and the result was that imports ceased. Now this adulteration has come to an end from the imported sugar. So whatever measure of protection was possible for the gur industry to be given has been given and has been found to be effective. What do you mean by protection for the gur industry? No gur is now imported from anywhere.

Mr. Mulji.—What we personally think is this. The main idea of Government in giving protection to the Sugar industry is protecting the agriculturists and if the agriculturists are really to be protected, the Gur industry especially in the United Provinces and Bihar should be organised.

President.—That is a different thing. It is a question of organisation. You say: "The main idea of Government in giving protection to the Sugar industry was to help the agriculturists". Protection won't help them. Whatever possible in the way of protection has been given.

Mr. Mulji.—This doesn't mean outside protection.

President.—It is rather confusing. You mean really organisation and so on and improvement of the Gur industry.

Mr. Mulji.—Yes. If the price of gur improves, the price of cane will remain steadier and the cane-growers and the agriculturists will not have to depend entirely on the factory owners because they will be able to convert their cane into gur. During the last crisis in Gorakhpur District, when the price of cane had to be reduced, if the price of gur had been better, these people would have made gur or jaggery and would have remained independent. The price of gur having gone down after the protective duty has been imposed and the price of sugar—I mean the average price—having gone down, there is relation between sugar and gur from the point of view of consumption.

President.—I should like a little more information on this question. As you know it is a debated point on which varying opinions have been expressed.

Mr. Mulji.—From our experience we may say that when prices go down in this country, the consumption of the commodity whose prices have gone down always increases. We used to produce gur about 2½ million tons before protection came in. This year, if we take Government figures, more than 4 million tons of gur is produced.

President.—These figures are not very reliable.

Mr. Mulji.—From the total acreage under cultivation a certain percentage is converted into sugar, certain percentage in chewing and the balance is converted into gur. In that way Government estimate 4½ million tons of gur. Suppose we take 4 million tons.

President.—The provinces have all agreed that these estimates of gur production have very little value whatever because there are so many uncertain factors and very little reliance can be placed on the figures of production.

Mr. Shah.—Even Government figures!

Mr. Mulji.—Let me give you certain instances while we are on this subject. Foreign gur or inferior sugar was coming for the adulteration of gur in this country. This happened probably in 1925. We were the importers of Java gur. We have offices in Java and we were importing brown sugar which was used in the adulteration of gur. At that time the price of gur was higher than the price of sugar in this country and the production of gur was smaller. We knew what the production of gur was. There was a shortage of about 100,000 or 200,000 tons of gur. Therefore 50,000 tons of foreign stuff entered into this country and I brought this fact to the notice of the last Tariff Board and it was stopped. I had given all the evidence to Government.

President.—We need not go into that because it is all finished.

Mr. Mulji.—What I mean to convey is that there is relation between sugar and gur. If the price of gur went down the consumption of gur would increase. It is very difficult to give you the average price of gur. I may say it is Rs. 2.

President.—That is a fair estimate.

Mr. Mulji.—If the difference was Rs. 4 between gur and sugar then more gur was consumed. If the price of gur had been Rs. 3, more sugar would have been consumed.

President.—Why?

Mr. Mulji.—It is all a question of purchasing power. If gur is cheaper, villagers in their caste dinners and marriages will use gur. In Southern India, even now in marriages they use gur.

President.—But has the price of gur fallen more in proportion than the price of sugar?

Mr. Mulji.—Yes. This year or since the last two years prices of sugar have gone down due to overproduction.

President.—If you look at the figures of prices of sugar and gur, they do not fluctuate in accordance with one another.

Mr. Mulji.—When the price is too low, what is there to fluctuate. The price of sugar is Rs. 6 for the last 6 months. It is either 2 annas more or 2 annas less. When the price reaches a certain level, it does not fluctuate.

President.—During the last 7 years there had been fluctuations in the prices of sugar and gur but not in relation to one another.

Mr. Mulji.—I am speaking of consumption and when the consumption becomes less it is related to prices too.

President.—I do not quite follow that.

Mr. Mulji.—If the price of gur is much lower, more gur is consumed and is used to a certain extent in village caste dinners and therefore the consumption of sugar is so much less.

President.—As we all know, prices of both gur and sugar have been in the downward direction for the last two or three years.

Mr. Mulji.—For the last two or three years we are overproducing both the things.

President.—Has the fall in the price of gur been greater in proportion than the fall in the price of sugar?

Mr. Mulji.—The price of gur from the very beginning was lower and it has reached the minimum level. Nobody will give it for nothing and therefore there is not any more fluctuation. The agriculturist instead of turning it into gur burns a certain amount of cane. It means that less cane will be planted for gur as the price is not paying.

President.—In the last year or so only the price has fallen to such extraordinary low level.

Mr. Mulji.—In 1936 also the price was lower. In 1935 it was low.

President.—It was not so low.

Mr. Mulji.—Quite so. At that time the sugar price was also high.

President.—Taking a long view of the fluctuations, there is some relation between the price of sugar and the price of gur. That is what you mean.

Mr. Mulji.—Yes.

President.—Your point is that Government ought to do something to help the gur industry.

Mr. Mulji.—Yes.

President.—You are not however quite sure how Government should help the industry.

Mr. Mulji.—The provincial Governments can help it. The Central Government can only help an industry by imposing the duty. That is not necessary in this case.

President.—Speaking generally of the production of sugar by the open pan process and khandsaris, you say that this industry ought to be helped. That means to say that you advocate the removal of the excise duty.

Mr. Mulji.—Yes.

President.—Completely on open pan and khandsari sugar?

Mr. Mulji.—Yes.

President.—Will you please state your reasons?

Mr. Mulji.—First of all it will protect to a certain extent the cane-grower. In that way more cane will be consumed and cultivators will be less dependent upon factories. There is large cultivation in the interior say 15 or 20 miles from the railway station. The factories will only buy from the area nearest to the railway station or from areas close by. What about the people further away? They must only convert it into gur. There is no other way of utilising their cane. But if the khandsari sugar is encouraged, then it will be of help to them. They will have the option of either converting it into gur or selling it to khandsaris. Another factor is this. To-day our prices have no relation to foreign sugar. It means that our prices are much lower than those of foreign sugar. Let us take the case of the present syndicate. Their aim is to raise prices to whatever level they can. From their original letters I can show that even upon 5 to 6 lakhs of tons they had calculated on a profit of Rs. 2½ crores. They have not been able to make that much amount so far. Either they are not all co-operating or they are not efficient enough to do it. Though they have failed up till now, their aim is that. They will try again. If khandsari sugar is produced more, then there will be a competitor for these factories, even in the interior. So long as the prices of Indian sugar have no relationship to the prices of foreign sugar, protection to the consumer lies either in gur or in khandsari sugar. Therefore the khandsari industry should be encouraged.

President.—We have been told that these khandsaris pay very very low prices to cane-growers.

Mr. Mulji.—For that industry cane prices should be raised with more pressure and with more vigour.

President.—Is the khandsari sugar preferred by any class of consumers?

Mr. Mulji.—Yes, by some very old orthodox people. I don't think that this prejudice will remain permanent. The factory sugar is replacing gradually khandsari sugar because it is a better stuff.

President.—You may say that it is a much cleaner stuff.

Mr. Mulji.—Yes.

President.—Have you seen the conditions in which khandsari sugar is manufactured?

Mr. Mulji.—I know. I have one small khandsari concern of my own.

Dr. Jain.—Will you still suggest then that khandsari sugar may be encouraged when it is being replaced by white sugar, when it is not so clean and when it is not so good as white sugar?

Mr. Mulji.—It is all a question of price. I can explain it if you will permit me. Everybody knows that a certain type of cloth is bad and still some persons buy that cloth because they cannot afford to buy anything better. In the same way, though a particular quality of sugar is not good, still it will be purchased.

Mr. Rahimtoola.—Khandsari manufacturers are not members of the Millowners Association?

Mr. Mulji.—No. In villages poor people go to a small grocer and ask for both tea and sugar for one pice. Such poor people are to be found in this

country in much greater numbers than in any other country in the world. For these poor people a little more quantity is a great blessing.

President.—You might draw an analogy between mill cloth and khandsari sugar.

Mr. Mulji.—The khandsari sugar is equally fit for consumption. In almost all countries as far as I know, they prefer brown sugar to white sugar in coffee. Our Government buy it for the Army. They used to buy up till now Java brown sugar which was similar to khandsari sugar for their troops. So we have at our own place a market for khandsari sugar. In many places in Southern India, they put gur into coffee because gur has got a little flavour. So if the consumption of khandsari sugar is encouraged it will be good for health also.

President.—In paragraph 14 where you deal with the question of Indian States, you mention Cochin. There is no sugar industry in Cochin. That is evidently a mistake.

Mr. Mulji.—Conditions there are different. There is very heavy rain. Cochin can have palmyra jaggery industry.

President.—South Travancore is a palmyra area similar to the adjoining British district of Tinnevely, but Cochin is different.

Mr. Mulji.—There are so many small States in Southern Mahratta country where conditions are favourable for the cultivation of sugarcane.

President.—In Indian States the same excise duty is levied as in British India.

Mr. Mulji.—They do levy excise duties but the temptation is to encourage capitalists to invest money in the States, and in various ways they can encourage them: for example by giving land cheap, cheap water charges, favourable labour conditions, less rigorous enforcement of the Factory Act and so on.

President.—Labour conditions are not better for the labourers!

Mr. Mulji.—Take Bhopal for instance. Bhopal is not an ideal place for sugarcane growing though for consumption of sugar it is an ideal place. But it is a question of financial gain by bringing in new capital to the State. Then Gwalior: this State has given permission to merchants to erect a factory and the State is prepared to give permission to erect another factory also. There is that temptation. Suppose I approach one State and request the State not to charge me any excise duty and the State enters into an agreement with me not to charge the duty. If that sugar comes into British India it will be charged duty, but if it goes to the adjoining Indian State then what happens? And that is what is going to happen.

President.—At present the excise duty is being levied in the States also.

Mr. Mulji.—As far as I know at Jaora it is not levied, and in the adjoining States of Gwalior and Indore they sell sugar in large quantities.

President.—In paragraph 16 you talk about the employment of foreign labour. I don't think there is any way by which this can be prevented.

Mr. Mulji.—I say after a certain period it must be stopped. When I read the British Beet Sugar Act I came to know that similar conditions prevailed in Great Britain and the Dutch people brought in capital and the British and Dutch co-operated and started factories. In 1931 from 236 foreign people employed before there was only one. I say that before employing foreigners the factory must ask permission of the Board of Trade or whoever is in authority as they do in England; let them say that there are no experts available and if Government are satisfied, they may be given permission to bring in outsiders for a certain period. Our people being naturally quite new and many millowners having no knowledge of chemistry themselves, think that all Dutch people are very good chemists and that all Chinamen are good pan men. I know in a certain mill Chinese pan men were brought in but they were found quite useless after a time and had to be sent back, but they had to be paid 10 months wages according to agreement. We are producing thousands of graduates in chemistry who are

without employment and these millowners take no interest in them. I will give you an instance. Certain Indian Chemists with foreign education approached me in Bombay and I took these people with me to factory owners and told them about the qualification of these boys. I told them that they were prepared to work as assistants and that after a time they would be very useful to the factory. Their answer was that they could offer only Rs. 25. I requested them to pay at least Rs. 75 but the answer was "we cannot pay more". Then, what about the students returning from foreign countries? We have so many educated and qualified men. Very recently there was one example in which an Indian had applied and a Dutchman had applied for a post. The qualification of the Dutchman was that in Java he had worked for 12 months and in India for two years. The Indian on the other hand had been to America and passed as an M.Sc. of a famous college and had research work on molasses to his credit. The man is working to-day as an assistant in a factory in India! There is a Dutch Chemist there and he wanted him to get a job as head Chemist in another factory. He applied and said that he was prepared to accept a lower salary as Head Chemist, but the manufacturer either did not appreciate him or did not want him or perhaps he wanted a foreigner although this man had better experience of Indian conditions and his foreign qualifications were of a high order. I tremble to think what will be the fate of our graduates unless they are employed by our own people in our own industry. In the interest of the manufacturers themselves it is essential that they must have Indians to enable them to bring down their costs and with that end in view I make this statement. Up to 1939 let them employ foreigners. The trouble is that they are still bringing in outsiders. One Dutch graduate who worked in Java as cane supervisor is now working as advisor of a sugar mill in technical matters! What I say is that the ignorance of the millowners should not be the cause of our graduates.

President.—Let us now pass on to paragraph 17. I gather that the main complaint of the merchants is that the sugar manufacturer has taken the selling of sugar into their own hands and thus taking it out of the hands of merchants.

Mr. Mulji.—This has been happening since the last six months since the time of overproduction. Our main trouble is that we wholesale dealers are middlemen though not in the strictest term. But we make the contracts and take the risk and they get the opportunity of delivering the goods; they get the opportunity of being financed and in this way we are useful to them. We say, let there be fair contracts and fair business terms. I give a challan for a certain place and the factory at once sends its own man to the place and tries to take away the business in their own hands. In India there are 700,000 villages and there must be at least one merchant in each village who deals in sugar. They must look to the interest of these 700,000 merchants also. During these two years the loss to merchants have amounted to not less than a crore of rupees, and by impoverishing the trade and the merchants we are ruining the industry also.

Mr. Shah.—It is a loss to the whole country.

Mr. Mulji.—Very good people have asked us "We have seen your complaints; why go into the sugar business at all, why don't you do some other business?" We are sugar merchants since our birth, so to say, we have got efficient staff; we know of the markets all over the country, we know what particular quality of sugar a town or a place requires. We have not ceased to be sugar merchants in spite of losses. No doubt we have reduced our business on account of unfair treatment from factories but still we have stuck to it and if conditions improve there are thousands of merchants in India who will be able to buy the whole production ahead! In Java we Indian sugar merchants have got our offices and there was one Indian merchant who used to buy from NIVAS 400,000 tons of sugar for India. I was importing 80 to 90,000 tons a year. All these people were making forward contracts in Java and sending to India. These merchants are an asset to the millowners in India. For the present these mills having made

large profits think that after all the consumer of sugar has to purchase sugar from some source or other and they are sending sugar to ports on consignment by approaching the parties direct but we have seen from experience that by sending to ports or sending direct they have lost more than they have gained.

President.—With regard to this matter we shall hear what the Sugar Mills Association have to say, but there is one point that occurs to me. The Association may say that what we are doing is to cut out the middleman and therefore it is to the interest of the consumer not to have middlemen as the consumer will get his sugar cheaper.

Mr. Mulji.—I asked Sir T. Vijayaraghavacharya if he has any representation of the millowners to the Tariff Board to give me, but I have not yet got any: I am in the dark. What I personally feel is that such representation should be public property. Why should the manufacturers have private sittings. I will give you an instance: the Belapur people wanted to meet in private. I say whatever improvement you have done in cane or in efficiency should be made public.

President.—The question of pooling of information has been definitely raised and will be considered by the Board. I gather that the point of trouble between the manufacturers and the Association is Clause 8.

Mr. Mulji.—That is so. Last year when we met we asked them to improve clause 8 and said we will again meet. They had agreed to take away the option clause; I have got a letter. In the first note they had agreed and then they sent me a corrected note.

President.—The present position is that clause 8 is not considered satisfactory by the merchants. What improvements would you suggest?

Mr. Mulji.—The proviso should be taken out.

President.—What are the actual words in the clause to which you object? "Or due to the inherent qualities thereof or atmospheric influence or other causes over which the seller has no control", are those the words to which you object?

Mr. Mulji.—I can give you instances this year. I have got correspondence with me to convince the Board that the mills are still treating us in the worst way. One consignment of 125 bags arrived in Bombay and I immediately wired that the quality was much inferior and they wired me to send 125 samples, one from each bag. How is it possible? 10 or 15 per cent. of the samples might be taken out. It is not humanely possible to draw samples from all bags which are piled up. In this way the arbitration is delayed and the survey is delayed. We first of all calculate the amount of sugar required for consumption and on that calculation we import. If the quality is not up to the standard, we make a representation. When they delay the surveys, we get tired and tell them "All right, if you don't come to survey, we leave it to you to settle. Then they offer two annas a maund". I can show further instances if you like. For 3 years what they did was this. In their first contract with the Mills Association there is a clause that a Tribunal of Association will work the arbitration. This contract existed for 3 years, but the Tribunal of Arbitration never existed though the clause was there. I had once some trouble with one of the millowners. I immediately wired to him to institute a survey. He wired me to say "you approach the Association. The surveys will be done by the Tribunal of the Association under the rules and regulations. It is your business to get it done through Sugar Mills Association". I at once wrote to our Association and our Association wrote to the Sugar Mills Association saying "our members are doing large business. Kindly supply us with the rules and regulations and the names of panels of the arbitrators". The Secretary of the Indian Sugar Mills Association wrote to our Association that the Tribunal doesn't exist. The millowner is going on asking me to go to the arbitration or tribunal which never existed and prominent people have done like that. I am prepared to show the whole correspondence.

President.—Are there no surveyors appointed?

Mr. Mulji.—No. I got it surveyed by Lloyd Surveyors of Indian sugar samples and sent the survey reports. They wrote back to say "you have not surveyed according to the terms of the contract and therefore we are not bound by it". We approached our Solicitors who said that there were so many irrelevant clauses in the contract that we were bound to take anything and everything. The plaint was drafted by the Solicitors to file a suit, but I was told that my case was doubtful on account of the fact that I had signed such a contract. I sent the Report to the Government Sugar Technologist and enquired and I have got a copy of his letter. There is a wide gulf of difference between the qualities. Still no survey was done. Another instance was that I purchased 60,000 bags from a mill. 5,000 bags arrived and we took delivery of the same and found the quality inferior. I wired and said "quality backward; such large quantities cannot be kept unsold for long". The Agent wrote to us to say that his boss was in Nanital and that they were consulting him by telephone. I waited for 8 days and then I wrote a letter that we could not wait any longer. I received a telephone message: "as we are friends, let us mutually settle". On that assurance we took delivery in order to sell quickly in the falling market, as I wanted to settle anyhow. If this matter was kept hanging, I would have to lose, more in falling market. Then I had to take further 55,000 bags. So I wrote to them a letter "what quality are you going to deliver me. Please give me samples so that I may know what quality will be coming". They said there is no clause under the agreement by which samples could be provided with the result I had to take delivery of 55,000 bags. For each and every consignment surveys were held and I got awards in all cases. One of the Directors of the Company told me that we should refer this to one arbitrator. I agree and even after the award they gave me plenty of trouble. The money was not given to me at all. The mill-owner tried his best to avoid payment, but he could not. Lastly I even offered to accept the principal foregoing the interest. There are such people with whom we have to deal. All that the merchants want is a fair and equitable treatment.

Mr. Shah.—On the subject of contract may I draw your particular attention to one important matter and that is this: even if the Association agrees to a particular form of contract, the Members, as a rule, do not follow the contract. They say that the Association is recommending to the Members. It is very surprising to the trade, that even if the Association adopts a particular form of contract, the members do not follow. If the clause is remedied they say that it is only a recommendation and it is not at all obligatory.

Mr. Rahimtoola.—Under the constitution of any Association of this character the Association can only recommend to its members there can be no legal binding, I understand that the contract is entered into between a merchant and a mill and it is binding on both the parties.

Mr. Shah.—Supposing there is a standard form for all contracts.

Mr. Rahimtoola.—Is it your point that the Association should be legally responsible for the fulfilment of contract?

Mr. Mulji.—No. Whatever resolution is passed by Members, they should act according to that.

Mr. Rahimtoola.—The resolution of the Committee of the Association when passed should have a legal binding. How can that be?

Mr. Mulji.—Our suggestion is that for all Indian sugar there must be one standard contract form. To-day there are 50 contracts. Certain other instances I shall give. You know very well that the mills are situated in villages. In the case of Ramkola mill it is said in one of the clauses that in case of dispute arbitration will be held at Ramkola by the merchants of Ramkola. Ramkola is a village which doesn't consist of more than 500 souls. There are no competent merchants for arbitration. To-day even such contracts exist. It means denying arbitration. Therefore when such a body is acting in the interests of the industry, as a body they must force the members to adopt a form of contract which may encourage the trade.

Mr. Shah.—Call it a moral binding.

Mr. Mulji.—The members of the Managing Committee who were present and who had agreed have got separate forms of contracts. What has to be said of that?

President.—In this matter I think you will understand that it is not the function of the Tariff Board to decide who is in the right and who is in the wrong. We can only state the facts and draw attention to the fact that there are disputes between the Indian Sugar Mills Association and the Merchants' Association and say that it is very unfortunate. The only recommendation we can make is that they must come to an understanding between them.

Mr. Mulji.—When the industry is protected, should not the merchants also be protected?

President.—I do not know what the arguments of the Millowners' Association are. They may say "very well, we are prepared to get on without merchants".

Mr. Mulji.—Whatever their suggestions may be, it comes to this that you will be throwing the merchants to the wolves in the shape of sugar mills. Because they don't agree, we have to submit to whatever they say or get out of the trade. We also want our position in the sugar industry and for that we must be protected. I am for a just, fair and equitable arrangement. There are very many members, their own friends whose names I have suggested as arbitrators. They are well known people who are in the Assembly always pleading the cause of protection. I have mentioned their names and they have not agreed. I can show the correspondence to the Board if necessary. If we were unfair, we would not have suggested such names.

President.—I am not suggesting that either party is in the wrong or in the right. That is not our function.

Mr. Mulji.—People of reputation, people of knowledge who have been considered by every one as fairminded, have been suggested as arbitrators to settle the disputes between the industry and the trade. The Indian Sugar Millowners do not want anybody's interference like dictators.

Dr. Jain.—Is it not in their own interests that there should be some settlement between the two parties?

Mr. Mulji.—I am always for settlement. Unfortunately some people who are neither fit for trade nor industry have come into the Sugar industry and that is our trouble. We suffer because they do not all agree. There are many landlord manufacturers in the Sugar industry who are neither competent to run a cotton mill nor any other mill.

Mr. Rahimtoola.—Is competence the only consideration for the starting of a factory?

Mr. Mulji.—They themselves being landlords have supreme power over the tenants. Their second qualification is money and third qualification is there is no loss. In Great Britain it has been provided under an Act that trade should also be looked after. In each and every country it is held that the industrialists and merchants are both of value, but here in this country merchants are not at all valued.

President.—The terms of reference of the Tariff Board are limited and the point you have raised is beyond our scope.

Mr. Mulji.—You could make a suggestion.

President.—The best suggestion I can make is that the two parties should come together before the Tariff Board submit their Report.

Mr. Mulji.—The prices remain low, because the contract is not good. If the price of sugar is not based on the price of cane, every one will suffer. The labourer will suffer, the canegrower will suffer. Therefore I think that the Tariff Board can recommend that the trade also suffers. That is one reason for the lower rates of contracts. In that way every one be protected.

Mr. Rahimtoola.—Your point is that though there is a clause for arbitration, the arbitration does not exist.

Mr. Mulji.—The arbitration clause is again replaced in this way that members of Chambers of Commerce will do the arbitration. But the question is thus there being no bye-laws regarding conditions of arbitration, the work is delayed. By delaying arbitration the buyer is a loser, because his capital is locked up. In Java within 3 hours arbitration is held and judgment given.

Mr. Rahimtoola.—You are acquainted with the standard Java contract forms.

Mr. Mulji.—Yes, they are based upon exports. Java itself doesn't consume all the sugar it produces. Conditions in India and Java are different. They deliver their goods at the ports. Here our clerks are now despatching sugar from the mills. If our clerks are there, the damage occurs only to the extent of 3 per cent. Where we have not been able to send clerks, there is damage to the extent of 30 per cent. In the name of insufficient supply of wagons, delivery is delayed. In January or February there was a good demand for sugar and at certain places there was want of sugar and mills had stock. We had purchased sugar for quick despatch, but mills wrote to us saying owing to the insufficiency of wagons they are unable to despatch sugar. They send their own sugar to sell at the ports, because they know that the rates are better there. All the Station Masters in those (out of the way) places are patronised by the factory people. They accept goods even in wet condition and give receipts with remarks "liable to sweat" and the railway company gets out of its liability and the merchants suffer. In the long run the industry suffers when the trade suffers. We cannot suffer always. We are reducing our business—thus reducing the volume of our business. The refusal of merchants to enter into large contracts brings down prices. This year the prices would have much improved in March. All the merchants were feeling bullish because the prices were lower. In spite of these circumstances we were not in a mood to make big contracts. Certain speculators in Calcutta who were never sugar merchants speculated for differences and burnt their fingers in sugar. They now understand what troubles have to be faced in this business. We are at present buying sugar from them. When the consignment was not in order surveys were asked for to which the mills did not agree. We are having *ex-party* surveys and filing suits against mills. If these things go on every day, is it not that the trade is paralysed? I am prepared to prove this statement in their presence. I am not speaking behind their backs. I have facts and figures and can show you the correspondence if necessary.

President.—Perhaps you would care to be present when the public examination of the Millowners Association takes place.

Mr. Mulji.—Yes.

President.—That will be from Tuesday the 28th September.

Mr. Mulji.—My being present at the meeting is not going to do any good. On account of these troubles no merchant of any capacity can take delivery of sugar in time because as regards further consignments there is trouble and disputes are not easily settled. Take the case of those people in Calcutta who bought sugar on speculation, and from whom we purchased it. Mill manufacturers think that they are not responsible for these merchants because they have not taken delivery in time. Whatever sugar is lying at the mills in a depreciated condition is delivered to the merchants in Calcutta from whom we have purchased. Really speaking the mills ought to have given the depreciated sugar only proportionately. Suppose there are sixty thousand bags of which 10,000 bags have depreciated. If a man asks for 6,000 bags, he should be given 5,000 bags good sugar and 1,000 bags depreciated sugar. Instead of doing like that, they are delivering 30 to 40 per cent. depreciated bags because the buyer has not been able to take delivery in time. What is the reason for not taking delivery in time? They never pause to consider that. They at once go to the merchant and say

that the sugar will be sold in auction in his name. If the name of the merchant is disclosed at the time of putting the sugar to public auction, his credit in the market will be spoilt. He is helpless in the circumstances and so he says that he will take delivery of the goods as it is. The mills say that he will have to send a letter saying that he will raise no objection. In his unfortunate position he does not know what to do. Like a villager who borrows money from a Pathan, he signs a document to the effect that he will raise no objection. The millowners may say that the merchants have failed. But what is the reason for their failure? That is a matter which should be first looked into.

President.—We shall pass on to another matter. During the course of our tour, we made enquiries into these matters. We also inspected sugar in godowns. We have been informed by small dealers that there had been disputes in the past but owing to the general all round improvement in the quality of sugar in 1936-37 the disputes have been far less.

Mr. Mulji.—To that I agree. To-day they can sell sugar even on standard. But these hopeless people do not know whether sugar is or is not to the standard. They do not care to know that. At present 70 per cent. of the mills can sell their sugar according to Indian Sugar standard. I can prove that before their own eyes.

Dr. Jain.—That is very satisfactory.

Mr. Mulji.—These people having made enormous profits do not care for anything.

President.—We shall come to the question of standard presently. Passing to the question about present prices, what would you say is the present difference in price between imported sugar and Indian sugar in Bombay or Calcutta?

Mr. Mulji.—In our representation we have given the price of Java sugar as Rs. 6 (No. 25 c.i.f. Calcutta or Bombay). To-day the price is Rs. 5-10-0. The price has come down by 6 annas. The prices of Indian sugar have gone up by 4 annas. Instead of Rs. 6-12-0 it is now Rs. 7. The difference is nearly Rs. 3-8-0 to-day.

President.—With that difference Java sugar is practically unsaleable.

Mr. Mulji.—Yes. It is unsaleable. I am talking of the same quality of sugar. There is more difference in the case of inferior sugar. There is a considerable difference between Java sugar and Indian sugar and if they unite there is a good margin for them. Therefore in determining the amount of the import duty, the present price of Indian sugar is not the only thing to be taken into consideration. The manufacturers do not join together and it is their duty to do so. Suppose they join to-day as they already passed a resolution at the meeting of the syndicate that the organisation should remain for another year. They will try to raise the price up to Rs. 3-8-0 if possible. As the manufacturers are treating their merchants and cane-growers, in the same way they are not honestly trying to stand by the agreement. I have myself purchased sugar from the members of the syndicate at lower rates, not from one but from more than one. How far the syndicate will last and what is the standing of the syndicate I cannot say. It is built upon sand, so far as I can see. But their aim is there to exploit as much as possible, to go as near Java if possible.

President.—That brings me to a further point. With the difference of Rs. 3-8-0 there is no market for Java sugar.

Mr. Mulji.—No.

President.—If the difference is Re. 1, would there be a market for Java sugar on account of its superior quality?

Mr. Mulji.—There is no chance for Java.

Dr. Jain.—Is Indian sugar as good as Java in every respect?

Mr. Mulji.—Java has got an agreement for 5 years not to export more than a limited amount. Java cannot export more than 1,050,000 tons. They have got their other markets.

President.—You don't think that Java is interested in India.

Mr. Mulji.—No.

President.—Do you think that there is no possibility that Java will reduce their prices?

Mr. Mulji.—Their capacity is to produce more than 3 million tons but they are producing only 1½ million tons. Their cost has not improved.

President.—As regards question 24 about the carry over, I take it you will agree that in the interests of the trade generally there should be some carry over from one season to another because there might be shortage in production in the next season. What do you think is a reasonable carry over from one season to another?

Mr. Mulji.—In whose hands should that be? Who should hold that is the question.

President.—The mills or the merchants?

Mr. Mulji.—Stocks can be held by stronger people and the mills are stronger than merchants.

President.—In other countries like the United Kingdom, stocks are far higher. Do you think that 100,000 tons is a reasonable figure?

Mr. Mulji.—Let us take today's stock. It is 353,000 tons. Although the consumption is more, still stock is very large.

President.—Stock must be related to consumption naturally.

Mr. Mulji.—Yes, and it must be in stronger hands and distributed in an equal monthly requirements. It should not be a burden upon the trade.

President.—Do you think that it is inadvisable for the factories to carry stock?

Mr. Mulji.—They must organise themselves. As soon as the mills are closed in May, immediately they know what the production is. Every factory should keep 10 per cent. of its production and not to be sold. In every country that is being done. Only here each and every factory owner is competing. He wants to sell quicker than his neighbour. That is the reason why prices are crumbling.

President.—Your view is that each factory should carry a minimum stock at the end of every season and it should not be below 10 per cent. but may be more.

Mr. Mulji.—Yes, roughly 10 per cent.

President.—I take it that it would be proportionate to their production.

Mr. Mulji.—Yes.

President.—As regards questions 25 and 26 about European firms, under the Government of India Act, they cannot be excluded from the trade.

Mr. Mulji.—The industry is protected for the nationals of the country. When we are deprived of our bread, should we not ask our Government to do that?

President.—I am afraid that that is beyond our scope. We cannot make any recommendation on that subject.

Mr. Mulji.—We have mentioned that because it is our grievance.

President.—It is rather a political question into which we cannot enter.

Mr. Mulji.—Everything is political. We are looking at it from the point of view of economics.

President.—Coming to question 28, regarding standardisation, I take it from your answers that you think that the quality of Indian sugar has so improved recently that standardisation is now a feasible proposition if it is limited to a small number.

Mr. Mulji.—Yes.

President.—Would you like fixed standards for the whole of India?

Mr. Mulji.—Yes.

President.—Mills now sell on samples.

Mr. Mulji.—Yes.

President.—And you would like to have fixed standards.

Mr. Mulji.—Yes.

President.—How many standards should there be and on what basis?

Mr. Mulji.—In white sugar there should not be more than two standards. In Java, there is only one standard so far as white sugar is concerned. From 8 to 24 is brown sugar. Then comes molasses sugar or assorted sugar. White sugar is No. 25. The whole question is this. All other countries who are selling on standards try to fix the standards in such a way that there can be no complaint afterwards. Take the case of Java. They are selling white sugar on the basis of No. 25. Actually No. 25 standard is inferior to what they deliver. They keep a lower standard but deliver better quality so that there is no complaint at all and they try to deliver always better than the standard. Similarly our Indian mills should keep a uniform standard for white sugar and all mills should produce on that basis and should not deliver sugar of lower standard.

President.—Do you think that Dutch Standard 25 should be adopted?

Mr. Mulji.—Yes. Here in India they do not supply to standards. There are reasons for that. Suppose one mill produces good sugar No. 1 quality and if the quality turned out is a little better, it changes the No. 1 quality to Special and takes 2 annas more. Therefore the mills do not stick to standards, and there are as many as 150 names. Really speaking the manufacturers must always supply the trade with a better quality than they bargain for. Then confidence will be created and the buyer will buy more sugar in larger quantities without any trouble.

President.—You know the Sugar Technologist in Cawnpore has evolved certain standards. Do you think they are quite suitable?

Mr. Mulji.—Yes. In that there is colour and grain both. The standard should be one. In Java in 150 mills all sugar is not of one quality. There are small grains and big grains, better in colour, and vary in colour. But mills do not try to make the quality inferior than 25. They seek to make better sugar than the actual sugar standard basis. That should be the case here. Here sugar which cannot be even called as white sugar they manufacture and deliver as white. There must be difference between brown and white sugar. Below certain standard sugar should be called brown. Here all mills mark No. 1 sugar out of which one sugar is to-day fetching Rs. 5-14-0 and the other top sugar which is fetching Rs. 6-4-0 there should not be such gap. The difference should be only 2 annas by statute. They should not be permitted to delivery brown sugar in place of white sugar.

President.—What is the quantity of brown sugar actually delivered?

Mr. Mulji.—Now it is very small and every day it is being eliminated but what I personally feel is that what is not white sugar must not be delivered as white sugar; that ought to be stopped by statute.

President.—In England and other countries brown sugar is popular for certain purposes and is sold in large quantities; in India you say it is very little used. What is the reason for that?

Mr. Mulji.—In England brown sugar is generally refined. They all use highly refined sugar and for that brown sugar is imported to encourage the refining industry and to supply standard quality of refined sugar to the nation. Brown sugar on the continent and in England is consumed in coffee and chocolates and such things but brown sugar is not consumed in tea or cakes for which they use highly refined sugar. In England coffee is consumed in larger quantities than in India. In India we consume more tea and in tea white sugar is used. In the time of Java imports there was importation of brown sugar to the extent of 35,000 tons of which Government was buyer of 25,000 tons for troops.

President.—Why should not brown Indian sugar be used similarly?

Mr. Mulji.—The consumption can be increased. But first of all there must be a difference in price. In Java between brown and white sugar there was a difference of a shilling and so here there must be a difference of 12 annas at least.

President.—There is no reason why brown sugar should not be consumed?

Mr. Mulji.—It can be consumed but not to a large extent.

President.—There is the question of treacle which is used in Europe and England. Golden syrup is consumed in India and it is all imported stuff?

Mr. Mulji.—Syrup import is not large. Refineries can make syrup but we have not got large refineries here. Until we have refineries it is difficult to make treacle. After taking the first refined sugar from the balance they make syrup.

President.—Do you think there would be a market for it?

Mr. Mulji.—Syrup is consumed to a great extent in this country specially in summer but that syrup is made from white sugar.

President.—Is there any reason why market should not be created for treacle?

Mr. Mulji.—I do not find any difference between jaggery and treacle. As far as I remember our Government at Coimbatore or at Pusa, I do not remember exactly at which place, had experimented on the manufacture of treacle and as far as I know they succeeded. Even in jaggery we had export business for Persia, Arabia and Africa, but we have lost all that business because sugar became cheaper. The price of sugar and jaggery was the same in India for many years and it was not available for export from 1920 to 1930. Now that jaggery has become cheap if we try again we might create an export market for it but nobody has tried so far.

President.—In paragraph 29 you touch on the question of export of sugar. You understand the difference between Dominion Preference and Colonial Preference; one is really in the nature of a subsidy to the West Indies Islands. It is not very likely that that kind of subsidy will be granted to India. Do you think India would be able to compete with ordinary preference?

Mr. Mulji.—Today we are not in a position to compete, but suppose for some reason sugar prices go up, at that time if we are open for export we may have a chance.

Dr. Jain.—Do you think export of gur is possible to some extent?

Mr. Mulji.—Yes. If the Central Government or provincial Government tries to help us as other governments are doing in regard to export then there are possibilities in that direction. I have myself exported Java gur to the Straits, China and Japan.

Mr. Rahimtoola.—You have not given any serious thought to the question of export of sugar?

Mr. Mulji.—I have made calculations.

Mr. Rahimtoola.—What is the retail price of sugar in the London market?

Mr. Mulji.—Mauritius sugar gets Colonial preference and they have a quota. Mauritius sugar is not sold retail even in England. Almost the whole of it is purchased by the T L P and I think the major portion of it goes for refining.

Mr. Rahimtoola.—I do not think you are in a position to tell us what the prices are, what about freight, insurance and so on?

Mr. Mulji.—A few days ago I read an article by a very prominent man and I worked out the figures. The whole article was based on 96° polarisation sugar which India does not produce.

Mr. Rahimtoola.—Is there difficulty in producing that quality?

Mr. Mulji.—No. The price of that 96 per cent. polarisation will realise less. Generally when you are talking of export many do not know that the United Kingdom is importing even white sugar of the Mauritius quality and the duty is on 99 per cent. polarisation.

President.—In paragraph 30 you talk about 4 annas a maund as the minimum price for cane in United Provinces and Bihar. Is that 4 annas delivered at the factory?

Mr. Mulji.—For delivery at the gate there should be a higher price. Our contention is this that it should be subject to the cost of cane and the welfare of the cultivator. Whatever price is fixed there must always be from the beginning a minimum price fixed. It will be 4 annas or 6 annas or anything. But the minimum price must be fixed in such a way that there should not be a fall in the price of sugar because of the fall in the price of cane.

President.—I imagine you have not investigated the cost of cultivation? The Imperial Council of Agricultural Research have been conducting enquiries during the last two years on the cost of cultivation and their report will be shortly published, and I might say that during our tour we are also looking into the details.

Mr. Mulji.—Our contention is that a minimum price must be fixed.

President.—I see you stress the point that the forecasts must be reliable. We are looking into it to see what improvement is possible. What other points have you in mind that you want to raise?

Mr. Mulji.—On the question of packing the millowners passed a resolution that the bags should weigh 2 maunds 28 seers and 12 chhataks. In many parts of the country sugar is not sold by weight but per bag. 12 chhataks or whatever is allowed in a bag our 2 maunds 28 seers price will be realised. Really speaking they ought not to have passed a resolution about the bag weighing 2 maunds 28 seers 12 chhataks. These people do not know the conditions at the ports; they go on passing resolutions as they like. They pass pious resolutions but who is going to put a uniform weight. The uniform weight must be 2 maunds 28 seers which is the weight of the Java bag. And selling as bag is advantageous to the factory, advantageous to the trade and there is no cheating. Another complaint is that in Java we get drop in scale. But here they do not give like that. Why Java has allowed this is that by allowing an ounce or 2 ounces of sugar they do not lose much but to the trade it does mean a saving in invisible loss so our request to them is to put an extra lump of sugar, say $\frac{1}{2}$ seer, on to the scale and the invisible loss to the trade will be saved.

Mr. Rahimtoola.—What will be the normal invisible loss percentage?

Mr. Mulji.—From my experience I can say that the average loss last year was three fourth of a seer per bag. In some bags we get a little more. In some bags we get less.

Mr. Rahimtoola.—Bag of what size?

Mr. Mulji.—We get bags of 2 maunds 20 seers and 2 maunds 28 seers and also some chhataks more.

Mr. Rahimtoola.—The average will be 2 maunds 28 seers.

Mr. Mulji.—Yes. We want one packing of 2 maunds 28 seers.

President.—You say there should be double gunny bags. Would it not add to the cost?

Mr. Mulji.—It will cost a little more, but it will yield a better price. We want to save the loss in transit and the deterioration which is causing havoc. The price of the gunny when outer bag taken out gives half the price nearly. Therefore the loss will be 2 annas per bag. They can charge half an anna more per maund. The deterioration will be less and the loss in transit will be nil. There will be no other disputes. At the time of preparing memorandum, many merchants of India were in Cawnpore and we discussed that

matter fully whether we should have a double bag, because it adds to the cost. After careful discussion we thought that in the long run it would be helpful to the trade and to the industry and save many disputes.

Dr. Jain.—Was that the case with Java sugar? Did you have double bags?

Mr. Mulji.—No, in single bags we received Java sugar. When it had to be sent by the railways from ports in interior India, double bags were used.

Mr. Rahimtoola.—What is the price of a gunny bag?

Mr. Mulji.—4 annas a bag. 2 annas a bag is again realized as second-hand.

Mr. Rahimtoola.—But the mills don't get that refund.

Mr. Mulji.—They can charge for that. Just as other costs are added, they can add the cost of the additional bag. The loss in transit will be saved and there will be less disputes.

President.—We shall pass on to the question of protection. You say "That protection be accorded by reducing the import duty to Rs. 7-4-0 per cwt." As you know the import duty has been made up partly by protective duty and partly by surcharge. When you say that it will be reduced to Rs. 7-4-0, do you mean altogether?

Mr. Mulji.—Altogether. It is now fixed duty of Rs. 9-4-0.

Mr. Shah.—Supposing the surcharge (as in other commodities) is reduced, on sugar it will be Rs. 9-4-0. There is no reduction because it is an accumulated duty. It is a lump duty and not separate surcharge.

Mr. Rahimtoola.—The protection recommended by the Tariff Board and accepted by the Government of India is Rs. 7-4-0 per cwt.

Mr. Mulji.—Yes.

Mr. Rahimtoola.—The duty has been increased due to the excise duty.

Mr. Mulji.—Yes.

Mr. Rahimtoola.—Therefore the duty is Rs. 9-4-0 per cwt. Your contention is that Rs. 7-4-0 per cwt. protective duty should continue.

Mr. Mulji.—Excise duty ought to be reduced.

Mr. Rahimtoola.—You are asking for a reduction of the import duty.

Mr. Mulji.—Yes a reduction in import duty and reduction in excise duty. Instead of Rs. 9-4-0 there ought to be Rs. 7-4-0—means Rs. 2 less.

President.—The total import duty should not be more than Rs. 7-4-0.

Mr. Mulji.—Yes. There is a great difference in price in Indian and Java sugar today, and if the import duty is kept at a higher level, they may organise and raise prices to Java parity.

Mr. Rahimtoola.—I have not still understood your point. At present there is Rs. 7-4-0 duty plus Rs. 2 excise duty. Your point is instead of Rs. 2 excise duty, it should be Rs. 1-4-0 per cwt.

Mr. Mulji.—Yes.

Mr. Rahimtoola.—Does your proposal mean 8/8 import duty.

Mr. Mulji.—When protection was recommended, it was suggested that for the first period the duty should be Rs. 7-4-0 and for the second period Rs. 6-4-0.

Mr. Rahimtoola.—Do you want the last Tariff Board's recommendation to be given effect to with a reduction of 4 annas?

Mr. Mulji.—No. One rupee four annas less.

Mr. Rahimtoola.—You want to keep it at Rs. 7-4-0.

Mr. Mulji.—Rs. 7-4-0; import duty on the other side Rs. 1-4-0 excise duty.

President.—The total import duty whatever it may be called will be Rs. 7-4-0.

Mr. Mulji.—If Rs. 1-4-0 is excise duty, it is deducted from that.

President.—You want the duty to be Rs. 7-4-0.

Mr. Mulji.—Yes if you put in the excise duty including the counter-vailing duty of Rs. 1-4-0.

President.—It is not an excise duty on imported sugar.

Mr. Mulji.—We have simply put it. There ought to be a total import duty of Rs. 7-4-0 against Rs. 1-4-0 excise duty.

President.—Rs. 7-4-0 on imported sugar and Rs. 1-4-0 excise duty on Indian sugar.

Mr. Mulji.—Yes.

President.—It doesn't really mean Rs. 6 on imported sugar.

Mr. Mulji.—Quite so.

President.—The amount of protection will be reduced to Rs. 6. That is a different question.

Mr. Shah.—In any case we don't want more than a total import duty of Rs. 7-4-0 if you keep excise Rs. 1-4-0.

Mr. Mulji.—At present we are now reaching a stage of over-production and it doesn't require high rate of protection. We have always understood when protection is granted that the industry should be self-supporting after some years. I consider now that the industry is not a baby. It doesn't require everyday nursing. It has grown up to a seven year old boy.

President.—Supposing the excise duty is maintained at present level, what should be the import duty?

Mr. Mulji.—Whatever import duty is put up, the industry is not benefited.

Dr. Jain.—Are you suggesting that the import duty should be Rs. 7-4-0 even if the excise duty remains at its present level?

Mr. Mulji.—What I personally think is this. The import duty should be Rs. 7-4-0. Whether the import duty is Rs. 9-4-0 or Rs. 15, it doesn't affect internal prices. We have a very wide gulf between the Indian price and the foreign price. Somebody suggested that the import duty should be Rs. 15. I would not have minded it. It is just the same. Why I say that the import duty should be Rs. 7-4-0 is that I want to see that the consumer is not exploited.

President.—With an import duty of Rs. 7-4-0 a cwt. Java sugar cannot come in even if the excise duty is maintained at the present level.

Mr. Mulji.—It is impossible. Cannot come.

President.—Rs. 7-4-0 per cwt. how much does it come to per maund?

Mr. Mulji.—Rs. 5-5-0.

President.—What is the c.i.f. price of Java sugar today?

Mr. Mulji.—Rs. 4-2-0 per maund. If we add Rs. 5-5-0 duty to that, it would come to Rs. 9-7-0.

President.—There is a gap of about Rs. 2 per maund.

Mr. Mulji.—Yes.

Mr. Shah.—One of the reasons why we have suggested is this: now that they are pooling together, we are afraid that there might be a tendency to raise the price of sugar.

President.—They would not be able to take it higher than Rs. 9-7-0.

Mr. Mulji.—They may not take to Rs. 9-7-0. They may take it to Rs. 9.

President.—At a difference of 8 annas Java sugar may come in.

Mr. Mulji.—It is very risky for merchants to import, because it takes one month for Java sugar to arrive here and in the meantime Indian sugar may be reduced to 8 annas. So there is no chance at all.

Mr. Shah.—Still we have given a fair margin.

Mr. Mulji.—No sane merchant thinks that there is a possibility of any foreign sugar. Soft sugar may come in, but in negligible quantity.

President.—Do you want to keep out foreign sugar completely?

Mr. Mulji.—Yes we being nationalists.

President.—At the very end of the memorandum you say: "The excise duty on sugar refined from "gur" be reduced to half of the present level. . . .". Why do you make that proposal?

Mr. Mulji.—I want to give some encouragement to the gur industry. Today the excise duty is the same on gur refineries. That doesn't help gur. If the excise duty on this is reduced, it will be helpful. What happens is this that certain mills produce 70 per cent. first class sugar and 30 per cent. inferior sugar. They grind inferior sugar and sell as crushed sugar. This crushed sugar is competing with sugar refined from gur. Therefore the crushed sugar is replacing gur sugar. If excise duty is reduced on this gur sugar, more gur will be refined and it will be giving some help to the gur industry. There will also be an indirect check on the exploitation of the consumer in respect of white sugar.

President.—What sugar is actually being imported at present?

Mr. Mulji.—Soft sugar less than 2,000 tons a year. Its price is very high. If it is manufactured in India the consumption of soft sugar could be increased to 10,000 tons at once.

President.—Is there any reason why it should not be manufactured in India?

Mr. Mulji.—Nobody (manufacturers) wants to take the trouble, because they are making easy profits.

President.—Is any other class of sugar imported?

Mr. Mulji.—Holland sugar, big crystals—that also is imported. Bombay is importing about 2,000 tons of that sugar. 1,500 tons goes towards toddy adulteration. Government are stopping that. So that import will end now.

President.—Why is it specially useful for toddy?

Mr. Mulji.—It is very clean. For toddy adulteration they require that sugar. Very recently we are selling Pachruki sugar which is replacing Holland sugar.

President.—That has gone.

Mr. Mulji.—Yes.

President.—There remains only soft sugar.

Mr. Mulji.—Yes in very small quantity.

President.—That is used in the sweetmeat trade.

Mr. Mulji.—Soft sugar requires less ghee. To make any sweet with sugar they require some other thing namely ghee which is clarified butter. Instead of one lb. of ghee in making sweet they require $\frac{3}{4}$ lb. of ghee when mixing soft sugar. Therefore it is being used for the sake of economy. Higher price is paid for the sake of economy in ghee.

President.—What is the third class of sugar?

Mr. Mulji.—It is cube which can be easily manufactured. Up till now nobody has found difficulty in disposing of this sugar.

President.—A good deal of cube sugar is being imported from Hongkong.

Mr. Mulji.—That is in very small quantities. Everything is now disappearing slowly and gradually. Fruit industry is gradually being developed and looking to our conditions, if the sugar manufacturers want to increase their sales of sugar, they must help these fruit and syrup industries. Today nobody cares. I do not know whether they know, at present Indian sugar is being consumed. I can give you a few instances. At present chutneys and pickles are being exported to England. These people were buying Java sugar. I told them, "Why don't you buy Indian Sugar. You will get

a refund of the duty". Now they are buying Indian sugar. I do not know whether the millowners know this.

President.—We have raised that point in our questionnaire definitely.

Mr. Mulji.—Yes.

President.—We shall now go on with the second questionnaire. I notice in regard to question 8 you say that for one sugar factory machinery was manufactured in Calcutta. Which one is that?

Mr. Mulji.—Meerut sugar factory: a 300 ton factory.

President.—As regards the question of zoning, that matter is under the consideration of the Governments of Bihar and the United Provinces. I have no doubt you have seen the bill which has been published. It is not much use discussing that because the matter is under their active consideration. I see that you are in favour of the zoning system.

Mr. Mulji.—Yes.

President.—As regards the question of quota do you think that there is at present so much production of sugar that a quota is necessary?

Mr. Mulji.—We are over-producing sugar. We are not in a position to export. Before trying to export, we shall have to improve in many respects. What is to be done with the over-production?

President.—Is there any over-production?

Mr. Mulji.—This year there will be a surplus balance of not less than 125,000 tons personally speaking. The invisible stock which ought to remain will remain and in the next year production will not be less. New factories have been and are being erected. Capacities of existing factories have been increased and I do not think that next year there will be any very great increase in consumption. Prices of commodities have gone down. The price of cotton has gone down by 25 per cent. Cotton growers will receive Rs. 25 crores less than they used to get. Therefore they will buy less cloth, less sugar and less everything. We have seen in this country consumption jumping up in prosperous years and going down in lean years.

President.—You estimate that there would be an over-production of 125,000 tons.

Mr. Mulji.—Yes.

President.—I think you have said somewhere that the normal carry over would be 1 lakh of tons. So, there is not very much over-production.

Mr. Mulji.—Last season there was over-production to the extent of 75,000 tons, on account of which prices have come down by Rs. 2. Nobody (manufacturers) wants to keep it with himself. Who is to keep it then?

President.—In answer to question 67, you say "The factories generally with some exceptions delivered such damaged sugar to merchants as sound sugar against their contracts and has ruined the whole trade". But a good many factories often do recondition their damaged sugar.

Mr. Mulji.—Very few mills have reconditioned damaged sugar.

President.—A good many have.

Mr. Mulji.—I can give the names of factories who deliver that kind of sugar to merchants.

President.—I daresay there are some. Then, regarding your answer to question 69, do you think that there is a good deal of damage in transit?

Mr. Mulji.—Yes.

President.—You estimate the damage as much as 50 to 70 per cent.

Mr. Mulji.—25 per cent. But this year the damage is less. Railways are giving more care and attention to the matter. Damage is generally caused at Junctions and also by the connecting railways. We have represented to them and the railways are trying to do something in the matter.

President.—In transshipment?

Mr. Mulji.—Yes. The manufacturers having given up their responsibility for despatching sound sugar, they themselves are interested in delivering any sort of sugar. Therefore whatever we may say the railways do not agree to and they say that we are not the shippers and that the factories are the exporters who have accepted those conditions. Until the factory owners and merchants co operate in the interests of the trade to save the loss due to damage in transit, the railway will not take the risk. We are prepared to allow the railway to take an insurance against damage in railways.

President.—And in steamers?

Mr. Mulji.—Almost all consignments arrive in Bombay even in dry season 25 per cent. damaged in steamer. We are told by chemists whom we consulted that it is due to sugar not being properly cured. It is a technical term and I am unable to explain it. I am told that on account of double sulphitation sugar gets more moist and it becomes damaged. More than 85 per cent. of the mills are on sulphitation process. But our mills are more on sulphitation process and that is no excuse. Even as things are today packing is very defective. If everything is attended to, there will be much less deterioration.

President.—Is the carbonitation sugar better?

Mr. Mulji.—It is a little better.

President.—As regards your answer to question 70, I am glad to see that there is one point on which the Sugar Merchants Association and the Indian Sugar Mills Association are unanimous, and that is about the supply of wagons. It think both representations exactly agree that it is very irregular. I may say that we met a representative of the Railway Board in Simla and had some discussion with him on the subject. We told him the difficulties of the trade in regard to this matter; in fact we made a note of all the complaints or grievances against the railways contained in the representations sent to us and told him what they were. He has promised to look into the matter.

Mr. Mulji.—The inter-competition amongst the factories themselves for wagons is also responsible for the present state of affairs. The best people do not get wagons while the worst people are getting more wagons, because they become friends of Railway Staff.

President.—I think you said the other day that good people did not pay money while bad people did.

Mr. Mulji.—That is a fact. It has demoralised the railways.

President.—The question of manufacturers and dealers we have already dealt with and we need not go into that again.

Mr. Mulji.—Quite so.

President.—Clause 8 of the contract form we have already discussed.

Mr. Mulji.—We have complaints also against the ways in which they do business. They must sell their sugar to merchants only and not to brokers even. Very recently I read a speech made by manufacturers at Lucknow in which they say that they are trying to follow NIVAS. We are very glad to hear that. NIVAS only sell to Merchants doing business in Java only. Similarly these people should do. They should deal only with wholesale merchants.

President.—If they deal with merchants, would you object to factories having their own organisation?

Mr. Mulji.—We have never objected to their having a selling organisation. Nor do we say that it will not bring any good to the industry. In this country a different sort of selling organisation is required in view of the differences in costs and markets. I am convinced that unless the manufacturers combine in four or five groups they will not be able to bring about much economy in their costs of production. If they do that, there will be less competition in selling. At present there are too many small economic

units operating. Salvation lies in the formation of groups. By reading various reports of different countries I have come to the conclusion that in such a vast country as India it will be very difficult to have a single seller. They are talking of Java. They do not know the conditions of Java, where all the factories are near the ports. We know how they have economised and how they are working. By closing down uneconomical factories and concentrating their production on best factories, they are bringing about best results. Here each and every factory owner considers himself a big man and thinks he knows better than anybody else about the industry. I have discussed many things with them and I know each has no love for the other. In my opinion the salvation of the industry lies in their forming certain well defined groups. Then only will they be able to stand competition; otherwise there is no chance for the industry. That is my personal opinion from my study of the sugar industry in many places.

President.—In short you advocate rationalisation of the industry.

Mr. Mulji.—Yes.

President.—In certain groups according to provinces and parts of provinces.

Mr. Mulji.—Yes. I know that in Deccan some improvements have been effected in certain types of cane by one or two factories. Other people want to know about this improvement. While the factory keeps secret from the other such things should not be allowed in the case of a protected industry.

President.—With reference to your answer to question 87 about the wide fluctuations between wholesale and retail prices, I want to point out that the Tariff Board did not make any insinuations. They only asked for information.

Mr. Mulji.—We have not taken it in that sense. There are in our opinion no wide fluctuations between wholesale and retail prices.

President.—We have been told in certain places that the margin between the two at one time was very much larger than it is to-day. The margin between the wholesale price and the retail price as sold in the bazar is less today than it used to be even three or four years ago. Do you agree to that?

Mr. Mulji.—The margin is very small.

President.—It is less today than it was four or five years ago.

Mr. Mulji.—In Java sugar the margin was not large, but it was very easy to sell Java sugar.

Mr. Rahimtoola.—Usually there is a small margin.

Mr. Mulji.—Yes.

Dr. Jain.—The margin has narrowed down now.

Mr. Mulji.—The margin has gone down. Generally many dealers keep sugar in their stock because when a merchant from the interior comes to buy other things, he will also buy sugar. If he offers sugar at a lower price, he will buy other commodities also from him along with sugar. Generally the dealer keeps a very small margin.

President.—We understand that in certain cases the profit to the wholesale dealer is 9 pies and it is slightly less in the case of the retail dealer. Does the man who sells sugar by seers keep the bag?

Mr. Mulji.—We have taken the retailer to be one who sells each bag and not each seer. Smaller grocers we have not taken into consideration.

President.—The usual practice is that the man who opens the bag keeps the bag.

Mr. Mulji.—He must be getting a little more profit.

President.—Part of the profit consists of an empty bag. Is that correct?

Mr. Mulji.—Yes.

President.—Apart from ports, are there any big godowns in upcountry stations barring factories?

Mr. Mulji.—There are good markets in Amritsar, Jullundur, Ahmedabad, and in such places stock is being kept from 10,000 to 25,000 bags.

President.—In Cawnpore is there much sugar stored?

Mr. Mulji.—No, because factories are very near. Suppose a merchant wants 500 bags a week, he will order at the rate of 500 bags a week. Generally it is costly to stock sugar. As far as possible we always keep smaller stock.

Mr. Shaḥ.—There are no warehouses here as in Bombay. They have only private godowns. In a city like Cawnpore sugar deteriorates rapidly.

President.—You don't think there is anything to see in Cawnpore?

Mr. Shaḥ.—None except private godowns.

President.—What has been your experience of how the sugar manufactured in the last season has kept this season?

Mr. Mulji.—This year the sugar has stood better than last year. The reason is that last year there was over-crushing throughout the mills but this year on account of fall in price crushing is normal and therefore the sugar is better made and stands the climate better.

President.—Have you any practical experience as to how long Indian sugar keeps?

Mr. Mulji.—Indian sugar will not keep so long as Java sugar. If properly stored and properly watched Indian sugar will keep for 6 to 10 months. We have no long experience of storing Indian sugar.

President.—40 per cent. of the Indian sugar manufactured last season is up to the Java standard?

Mr. Mulji.—It is more than 60 per cent.

President.—In answer to question 92 you say "The Committee would point out that the season of manufacture of sugar now extends to six months and not to one-third of the year as stated in the question". The question was quite correct. We were not dealing with the present season but the average. Even if this season it is six months, the average may be not more than four months. The average is about a third so our statement is correct.

Mr. Mulji.—That is what we judged from last years crushing season.

President.—I see that you advocate a Central Marketing Advisory Committee. How would it work?

Mr. Mulji.—What we have said is that simply granting protection is not proper. There must be a supervision Board during the period of protection and the Board must consist of Government experts, sugar manufacturers, sugar merchants and other interests concerned with sugar such as the cane grower, and every now and then they will look after the industry, improvements in methods of production, marketing and so on. It will be on the same lines as has been done in the United Kingdom last year by the Act of 1936. There is a strong Board and on the Board there are technical men, merchants and manufacturers.

President.—I have already asked you about standardisation of Indian sugar, there is only one other point and that is the price of sets. The price of sets issued by the Government Technologist is rather high, is it not?

Mr. Mulji.—As far as I am aware very few people buy it as the cost is high.

President.—If the cost was reduced you think dealers and merchants would buy and keep the bottles?

Mr. Mulji.—In dealing in Java sugar in Bombay one or two merchants used to keep sets. What I feel is that as soon as the manufacturers begin

to maintain the quality nobody would care even to look at the standards. When we were doing business with Java these standards cost us 55 gilders and here it is Rs. 50 (fifty.) As far as I am aware the bottles are imported from Holland because the finest bottles are required and for preparing and all these things the cost must not be lower here. I think that if the price is reduced it will be better for all concerned. But it is the business of the manufacturers and I doubt whether all the manufacturers have bought these although it was prepared with their co-operation.

President.—I will pass next to the question of a Futures or Terminal Market. What are your views about that?

Mr. Mulji.—A terminal market is a great necessity to the trade. We have no place to hedge; there being no terminal market merchants are not covered by hedging. In every part of the world in sugar there is a terminal market but in India we have been trying to start one but owing to the quality trouble we have not been able to do so. We passed a resolution; we are anxious to have a terminal market but we have no co-operation from the mills. There must be uniform standard before we can start a terminal market.

Dr. Jain.—Once that happens there is no difficulty?

Mr. Mulji.—We can work from tomorrow.

Dr. Jain.—There is no danger of speculation?

Mr. Mulji.—There will be fortnightly clearing and so on and whatever speculation there is, there is no danger for the merchant doing the business. Suppose I think that the market would go up, I purchase 100,000 bags Java sugar: after 10 days I see my calculations are wrong, I want to clear off and I do it. In the case of Indian sugar once purchased it is impossible to clear it up soon. If there is a terminal market we can hedge in two hours the whole of the stock. Another thing: India is not only Calcutta and Bombay; there are other places. The small dealers want to buy 100 or 200 bags: where are they to buy? If there is a terminal market all these people will go and buy in the terminal market according to requirement, will take delivery and take to their place of business and sell. And so a terminal market is a great necessity to the industry.

President.—It has been suggested to us that a terminal or futures market is more suitable for other products than sugar, which is entirely for home consumption at present.

Mr. Mulji.—Take wheat which is exported. Only this year we exported wheat, but for four years we did not export any and still there is a terminal market for wheat in Karachi, Bombay, Hapur and going on very well. We want it only for hedging operations. There are people who bring in the argument that there are speculations. I say there may be speculation but there won't be any wide speculation.

President.—About the question of export of sugar to Afghanistan, Kashmir and Nepal, it is also to some extent possible to Persia?

Mr. Mulji.—We were looking into the figures of imports to these places and I find that Iran imports 70,000 tons, Afghanistan 15,000 and Arabia 30,000 tons nobody knows what quality. I have been to Persia, Baghdad, Basra, Teheran: the majority of them are importing high refined sugar and crystal sugar only in small quantities. This year I went to Iran, Baghdad and other places and had talks with people interested in the sugar business. I enquired what they want and whether we shall be able to make that quality. I found that Afghanistan do import crystal sugar but only 3,000 tons while the consumption is 15,000 tons. Persia is importing mostly Russian cane sugar, so is Baghdad. If we want to export to the near countries we must go and find out what they want. There is a chance in Nepal and Kashmir and there are chances in Afghanistan. There are ways to do it but it is for the millowners to go into it. Personally what I do not like is that they always depend upon Government and do not unite and do things themselves. I am very keen about the supervision board

which is a great need in the industry. It should be on the lines of the Board in England and America reporting to Government how protection is working, advising manufacturers how to improve qualities, looking to the interest of cane growers; bringing in harmonious relations between various interests whenever they are strained. The other point is about the question of contracts. We approached you on the subject but you probably think that to go into it is beyond your provinces. The impression here amongst the Indian Sugar Millowners appears to be that Government have given them a blank cheque to be cashed in whatever form they want. That is not proper.

President.—I think you have not quite understood the position of the Tariff Board in regard to these questions. We shall state the difficulties, but it is not our function to make recommendations except in a general way.

Mr. Mulji.—Our request is we have been helpless because of protection and we have to go to them. When they don't understand and they don't come to a reasonable agreement, where are we to go? What is the remedy? If we are fair and just, Government can help us or we get out of it.

President.—That may be the function of the Supervisory body. I think you meant some statutory body.

Mr. Mulji.—Yes.

President.—That is beyond our scope.

Mr. Rahimtoola.—In view of what you have stated I want to know whether you want the Supervisory Board to have some sort of legal control over the industry.

Mr. Mulji.—The Supervisory Board reports to Government. If the Government think that their advice is right and necessary, then Government may take immediate steps.

Mr. Rahimtoola.—They must have power to act immediately.

Mr. Mulji.—Yes.

Mr. Rahimtoola.—In that case Legislation will have to be undertaken.

Mr. Mulji.—Government will give some wide powers.

Mr. Rahimtoola.—They will have to legislate for a body of this character, an advisory body cannot achieve such a result.

Mr. Mulji.—In England an Act has been passed.

Mr. Rahimtoola.—I would now like to run through some of your answers to the questionnaire. I think the Board is grateful to the Association for the manner in which they have put the case before the Board. The Board will give full consideration to all the points that have been urged. There are two or three points however which require further elucidation. In paragraph 3 you have stated that 25 per cent. surcharge was a windfall and it gave to the industry an additional protection of Rs. 1-13-0.

Mr. Mulji.—Yes.

Mr. Rahimtoola.—I would like to know the price of Java sugar at that time in order to corroborate this statement the Tariff Board recommended protection on the basis of a minimum price Rs. 4 a maund for Java sugar and that if the price went down, then for every eight annas, there should be an increase in the protective duty.

Mr. Mulji.—Only 8 annas.

Mr. Rahimtoola.—For a reduction of 8 annas. At that time they contemplated that the price may go down to Rs. 3-4-0.

Mr. Mulji.—On the day the surcharge came into force, the price was not below Rs. 4 at the port *ex-duty*.

Mr. Rahimtoola.—I have seen a lower figure than that.

Mr. Mulji.—This bill of Rs. 1-13-0 came in September 1931 not at the budget time, but six months after the budget.

Mr. Rahimtoola.—This came in as a result of the second finance bill.

Mr. Mulji.—It was a financial measure and that upon all the imports the surcharge was put and the windfall came to the sugar industry. If you will kindly read the Budget speech of the Finance Member introducing the Emergency Duties, it is plainly stated that as soon as the Government finances improve, surcharges would be taken off.

Mr. Rahimtoola.—I am not disputing what you are saying. Can you give me the price of Java sugar on the 1st of September?

Mr. Mulji.—Rs. 4-2-0.

Mr. Rahimtoola.—If we include the duty, it comes to Rs. 9-7-0.

Mr. Mulji.—Yes.

Mr. Rahimtoola.—In September 1931 when the surcharge was put it was Rs. 9-3-0 that means less than Rs. 4 per maund.

Mr. Mulji.—Yes.

Mr. Rahimtoola.—Let us pass on to the question of production of sugar. I understand it is just below 12 lakhs tons.

Mr. Mulji.—Yes.

Mr. Rahimtoola.—If you take the total production *plus* imports, it comes to 12,80,000 tons whereas the normal consumption is 12,00,000 tons with an increase of 30,000 tons increase every year so that there may be a likelihood of over-production in the near future.

Mr. Mulji.—This 12 lakhs contains khandsari sugar. Production direct from cane was 11,29,000 tons.

Mr. Rahimtoola.—10,31,000 tons.

Mr. Mulji.—I am speaking of this year. You can get the correct figure from Mr. Srivastava.

Mr. Rahimtoola.—We are meeting Mr. Srivastava on Monday.

Mr. Mulji.—It is 11,29,000 tons this year.

Mr. Rahimtoola.—May I read a paragraph from the representation of the Sugar Merchants' Association, Bombay? "Last season there was a carryover of about 90,000 tons and this year owing to bigger production there may remain carryover of about 50,000 tons in spite of heavy consumption. Such a carryover looking to the volume of sugar business is insignificant. In case of Java sugar, Indian merchants were always carrying over a stock of 50,000 to 100,000 tons and this in trade we call invisible stock. With the co-operation of merchants, Indian sugar Manufacturers can well distribute their carryover in 7 lacs villages in India and convert the visible stock into invisible."

Mr. Mulji.—This estimate was based upon the estimate of 1,072,000. Afterwards the estimate has been increased by 60,000 tons.

Mr. Rahimtoola.—If it is so, then you would consider that as normal consumption.

Mr. Mulji.—Normal consumption is 12 lakhs of tons.

Mr. Rahimtoola.—Plus 30,000 tons.

Mr. Mulji.—In certain years it may increase and in certain years it may not increase.

Mr. Rahimtoola.—At present according to the estimate given to us the total comes to 1,218,000, whereas according to your figure if comes to 1,235,000 tons. There is very little difference.

Mr. Mulji.—Yes.

Mr. Rahimtoola.—With regard to the question of protective duty, it is a recommendation of our Committee that Rs. 7-4-0 per cwt. should be the protective duty and that the excise duty should be reduced to Rs. 1-4-0. I find however you have modified these recommendation to a certain extent.

Mr. Mulji.—I did not modify that. My idea is that the import duty should remain at the maximum of Rs. 7-4-0 and the excise duty should be Rs. 1-4-0.

Mr. Rahimtoola.—According to you the total import duty should be Rs. 8-8-0 per cwt.

Mr. Mulji.—No. The maximum import duty should be Rs. 7-4-0 as against an excise duty of Rs. 1-4-0.

Mr. Rahimtoola.—The excise duty is Rs. 2 per cwt. According to the recommendation of the Fiscal Commission, any imposition in the shape of excise duty on an Indian article should have a corresponding countervailing duty on the imports.

Mr. Mulji.—My idea is that the maximum import duty should be Rs. 7-4-0, the excise duty remaining at Rs. 1-4-0.

Mr. Rahimtoola.—If there is to be an excise duty of Rs. 1-4-0, the import duty comes to Rs. 8-8-0 per cwt.

Mr. Shah.—We want Rs. 7-4-0 as the import duty. If you want to include the countervailing duty, you may do so and call the protective duty as Rs. 6.

Mr. Rahimtoola.—At present the protective duty is Rs. 7-4-0 and an excise duty of Rs. 2. At the moment the total import duty is Rs. 9-4-0 per cwt. Now let me understand what your proposal amounts to. First of all you are asking the Board to recommend a reduction in the excise duty from Rs. 2 to Rs. 1-4-0.

Mr. Mulji.—Yes.

Mr. Rahimtoola.—Secondly you want that Rs. 1-4-0 should be deducted from the present import duty.

Mr. Mulji.—Yes.

Mr. Rahimtoola.—According to you the excise duty should be Rs. 1-4-0 and the total import duty Rs. 7-4-0.

Mr. Mulji.—We want the total import duty to be fixed at Rs. 7-4-0. It means that the net protection is Rs. 6.

Mr. Rahimtoola.—That is not the recommendation of your Conference.

Mr. Mulji.—It is.

President.—Effective protection would be Rs. 6 though the actual protective duty would be Rs. 7-4-0.

Mr. Mulji.—Yes.

Mr. Shah.—Supposing you keep Rs. 2 as excise duty, then it would be Rs. 5-4-0 effective protective duty and Rs. 2 excise.

President.—Your proposal is that Rs. 6 should be the protective duty.

Mr. Shah.—We do not calculate that way.

Dr. Jain.—The present import duty is Rs. 9-4-0 and the excise duty Rs. 2. So, the present effective protection is Rs. 7-4-0.

Mr. Mulji.—The effective duty will be Rs. 6.

Dr. Jain.—That is not quite clear from your representation. It is open to the interpretation which my colleague is putting on it. You say "Protection be accorded by reducing the import duty to Rs. 7-4-0 per cwt. subject to (1) the excise duty being reduced to Rs. 1-4-0".

Mr. Shah.—I do admit that the sentence is not correctly worded. What we want is that the import duty should be Rs. 7-4-0.

Dr. Jain.—The Board is not asked to do away with protection. The only question is the measure of protection.

Mr. Mulji.—We have not asked you to do away with protection.

Dr. Jain.—I want to know the amount of protection you are recommending.

Mr. Mulji.—The protection I am recommending is the most effective protection.

Mr. Rahimtoola.—I want the view of the Conference.

Mr. Mulji.—What I am explaining now I have already explained to my colleagues on the Committee. This has been drafted by me. When drafting what I thought was Rs. 7-4-0 would be the maximum import duty and Rs. 1-4-0 the maximum excise duty. If you take the effective protection, you may do what you think proper.

Mr. Rahimtoola.—I am not yet clear in my mind. It is a very important point. At present as I have told you, the protective duty is Rs. 7-4-0 per cwt. You want that in future it should be Rs. 6 per cwt.

Mr. Mulji.—Yes, the effective duty.

Mr. Rahimtoola.—The excise duty should be Rs. 1-4-0 per cwt. and the import duty should be (protective duty Rs. 6 plus excise duty Rs. 1-4-0) Rs. 7-4-0 per cwt.

Mr. Mulji.—Yes.

Mr. Rahimtoola.—If to-morrow the Government of India decide to do away with the present excise duty, the protective duty would remain at Rs. 6, whereas you want that the import duty should not be reduced below Rs. 7-4-0 per cwt.

Mr. Mulji.—It should not go down below Rs. 7-4-0. Whether the excise duty is taken off or not, the import duty should be Rs. 7-4-0.

Mr. Rahimtoola.—Exclusive of excise duty you want the import duty to be maintained at Rs. 7-4-0 per cwt.

Mr. Mulji.—Yes.

Dr. Jain.—If the excise duty instead of being removed is increased to Rs. 5, do you still want the duty to be Rs. 7-4-0? You will, I think, be landing yourself in greater difficulties.

Mr. Mulji.—The import duty should not be less than Rs. 7-4-0, which will serve as protection against foreign competition. The excise duty is not intended to be protection against foreign competition. If there is more excise duty, the profits will be reduced further and if there is less excise duty, profits are increased.

Mr. Rahimtoola.—You want the import duty of Rs. 7-4-0 to remain in tact for the next seven years.

Mr. Mulji.—Yes, against foreign sugar.

Mr. Rahimtoola.—The excise duty may be adjusted by the Government of India according to their revenue requirements.

Mr. Mulji.—Yes.

President.—Suppose the excise duty is raised to say Rs. 5 per cwt., would not foreign sugar come in?

Mr. Mulji.—At that time, that question may be considered.

President.—If the excise duty was raised to Rs. 5 per cwt. then presumably the price of Indian sugar would be above the price of Java sugar.

Mr. Mulji.—At that time quite a different situation will arise. The protective import duty against foreign sugar should not be less than Rs. 7-4-0—neither more nor less than Rs. 7-4-0; that is what we submit now, as a compromise.

Mr. Rahimtoola.—The Board is anxious to have your views. There is no question of compromise. The Board has not committed itself to any

proposal. The Board cannot come to a decision unless they calculate the fair selling price.

Mr. Mulji.—You have to consider many things.

President.—I want to make it absolutely clear that you are prepared to leave the protective duty at Rs. 7-4-0 even if the excise duty is raised to Rs. 5. If the excise duty is raised to Rs. 5, there will be no effective protection.

Mr. Mulji.—We will never agree to the excise duty being raised to Rs. 5.

President.—It is not a question of your agreeing to it. It is a question for the Finance Member of the Government of India. Of course Rs. 5 is very unlikely. Suppose it is raised to Rs. 5?

Mr. Mulji.—In the second stage, the industry does not require the same amount of protection. It is now a grown up child and no longer a baby.

Dr. Jain.—Instead of a nurse, it wants a guardian.

Mr. Shah.—Not necessarily in India.

Dr. Jain.—You don't want the child to come to grief. It still needs looking after. The seven year old child should not be left to itself.

Mr. Rahimtoola.—As regards the storage of sugar I think you gave us to understand that only 10 per cent. of the stock is held by the mills. I did not quite get at your point. Generally the Tariff Board allow a certain amount of interest on stocks held by the mills. It may be 3 or 4 or even 6 months output according to the nature of the industry. That is a separate question altogether.

Mr. Shah.—What we said was with reference to carry over. We proposed a carry over of 10 per cent. by every mill. As a sort of insurance against crop failure or anything like that, certain amount of carry over must be allowed and it must be kept so that there may not be a shortage in the succeeding year. That is why we suggest that a carry over of 10 per cent. must be allowed.

Mr. Shah.—Do I understand that you allow 3 or 4 months charges to factories?

Mr. Rahimtoola.—It is the interest on working capital I am referring to, as you know protection is for the whole of the Industry and it is not for the factories in Bihar and the United Provinces only nor for the cultivators of these provinces.

Mr. Mulji.—This is for the United Provinces and Bihar.

Mr. Rahimtoola.—You will have to increase the figure if you take the whole of India into consideration.

Mr. Mulji.—In other parts, factories have their own plantations.

Mr. Rahimtoola.—Even then it costs them something to produce cane.

Mr. Mulji.—We have simply mentioned this figure as the minimum price that should be paid to the cultivators who grow cane.

Mr. Rahimtoola.—There are very few factories which are self supporting.

President.—There are actually three.

Mr. Mulji.—As regards the cane price, we shall leave the matter to you. We simply want that there should be a minimum price.

Mr. Rahimtoola.—You want the interests of the cultivators to be safeguarded by means of a minimum price.

Mr. Mulji.—Once the minimum price is fixed, it should not be brought down.

President.—You want that the minimum price should be based on the cost of production.

Dr. Jain.—You say “The manufacturers should provide dwelling houses for their skilled and unskilled labour and fix minimum wages, i.e., to unskilled labour not less than Rs. 10 per month and for skilled labour not less in future than what they may now”. I take it you are satisfied with the rest of the welfare arrangements?

Mr. Mulji.—I say housing must be provided. There are many other things. Once or twice when I visited factories I saw hundreds of labourers squatting on the open ground which is extremely hard on them in the summer of United Provinces and in the severe cold which prevails there in winter. I therefore feel that factories should provide dwelling quarters for both skilled and unskilled labour. My clerk went to a certain mill and he wrote to me to say that he was given a quarter of which the roof was made of grass and water was coming into the room. If rooms for clerks are such, you can imagine what the condition of unskilled labour must be in those places.

President.—You want the whole of the labour to be housed even if they come from the adjoining villages?

Mr. Mulji.—I think the whole of the labour should be housed. They will always like it. Some of the mills upcountry have provided accommodation for the whole of the mill staff and they are staying in those houses quite contented and there is no strike at all. Looking to the climatic condition of United Provinces and Bihar it is absolutely necessary.

Dr. Jain.—You say the wages of the unskilled labour should not be less than Rs. 10 per month. I take it you are satisfied with the wages paid to the skilled labour?

Mr. Mulji.—When we wrote this I had no idea of the wages of the skilled labour. Afterwards I found that they are very poorly paid and I should certainly revise my statement now.

Dr. Jain.—In answer to question 24 (b) on the point of licensing you say “Licenses of new factories are necessary and no licences should be given for a new factory in the United Provinces and Bihar and no factory should be allowed any new extension of capacity”. Do you mean that in no circumstances should a factory be allowed to extend?

Mr. Mulji.—The present position of the factories is this, that if they get sufficient cane they can crush and produce about 200,000 tons of sugar more. Therefore it is not necessary now to start new factories or extend existing factories. We have calculated 30,000 tons per year more consumption during the next 8 years.

Dr. Jain.—This struck me as rather a rigid statement. Can't you conceive that there may be cases in which many of the existing factories may go out and new factories may be started. There is plenty of cane available and the existing factories may like to rationalise and one way of rationalisation may be the extension of the existing factories?

Mr. Mulji.—In United Provinces and Bihar there are a sufficient number of factories already existing and further extension is not necessary now. There are other places where there are more favourable circumstances and let there be more factories according to their requirements, as for example in Madras.

Dr. Jain.—Won't your point be met by saying that as a rule it should not be done but with proper safeguards it may be allowed?

Mr. Mulji.—For eight years I don't think it is necessary.

President.—In the Moradabad district there is no sugar factory at present.

Mr. Mulji.—The question should be considered on its merit. Let it be left to the Board.

Dr. Jain.—About the excise duty of 1934 and the addition made in 1937 you say “the consumer and the retail dealer declined to bear the burden

of the duty and the wholesale dealer had to do the same. The enhanced rate was therefore to fall on the manufacturer which is well borne out by the budget speech of Sir James Grigg" and so on, and then you make the point that the whole of the excise duty was transferred to the cane grower. From this you deduce that the manufacturers have made larger profits this season than in the previous season. You say "Reports are current that the manufacturers have thus made larger profits this season than in the previous season. These reports will require verification but on the basis of the facts stated they seem to be credible".

Mr. Mulji.—I have said that the reports are current in the market that they made larger profits. We have got to see what their profits were before the excise duty. The season commenced in December. We have to see their profits in December, January and February. We have also to see what their profits were in March. We have also again to see what their profits were after April 1st, when the cane price was reduced from 4 annas 9 pies a maund to 3 annas a maund. It requires 11 maunds of cane to make one maund of sugar. On 11 maunds at a difference of 1 anna 9 pies a maund, it comes to about Re. 1-3-0. The cane price has been reduced by so much, but the sugar price has not been reduced similarly.

Dr. Jain.—The recovery rate was not as high.

Mr. Mulji.—Half a per cent. less.

Dr. Jain.—It was more than $\frac{1}{2}$ per cent. less.

Mr. Mulji.—When the recovery rate fell below 8·50 per cent., I heard they stopped working the mills.

Dr. Jain.—As a matter of fact you yourself say that the factories wanted to close down, but that they were forced to continue working.

Mr. Mulji.—They passed a Resolution, but they have not given notice to the clerks that they are going to close. We do say that a Resolution was passed to bring pressure upon Government to reduce the price of cane. The Resolution was passed with many motives.

Dr. Jain.—Let us not enter into the motives.

Mr. Rahimtoola.—The price never went as low as 3 annas until recently.

Mr. Shah.—Not only it went down to 3 annas but we heard that it went down to 2 annas and sometimes not even that much.

Mr. Mulji.—We have heard reports that only a lump sum was paid for each cart.

Mr. Rahimtoola.—Is it correct to say that it was as low as 2 annas.

Mr. Mulji.—Yes. The canegrowers took their cane to the factory and sold their cane for whatever price the factories paid, because they thought anything was better than burning the cane.

Mr. Rahimtoola.—This might have happened in the Gorakhpur area.

Mr. Mulji.—Yes and in Bihar also it happened.

Mr. Rahimtoola.—85 per cent. of the mills are in these two Provinces.

Mr. Mulji.—Yes.

Dr. Jain.—From all that you say are you justified in drawing the conclusion that factories made greater profits this season than they made in the last season in view of the fact that the prices came down gradually? As a matter of fact the current rumour is that they did not make as much.

Mr. Mulji.—There was a reduction of Rs. 1-3-0 in their price of cane, but there was not a corresponding fall in the price of sugar.

Mr. Rahimtoola.—Even if you took Re. 1-0-6, it was a gradual and not a sudden reduction the excise duty came into force at the end of February and the prices began to go down since the 1st of March.

Mr. Mulji.—Yes.

Mr. Rahimtoola.—If they got a rupee from the reduction in the price of cane, they had to pay the additional excise duty of 11 annas.

President.—The price was not reduced in April.

Dr. Jain.—You did not stop by saying that rumours are current, but you go on to say that they seem to be credible. That is why I am forced to ask this question.

Mr. Mulji.—The canegrowers themselves were offering cane.

Mr. Rahimtoola.—That may be a private arrangement.

Mr. Mulji.—Our information is based on what we heard from the Gorakhpur area.

Dr. Jain.—This is a statement which will not be easily accepted.

Mr. Mulji.—You can take it for whatever it is worth.

Mr. Rahimtoola.—You yourself say that it is a market report and so we had better leave it at that. As regards the question of export to United Kingdom, you have taken the Calcutta price of Rs. 7. Do you consider that a fair selling price? Export should be based on the fair selling price of the industry and not on the ruling price of the market. Besides the export will be of Raw Sugar.

Mr. Mulji.—We were simply considering whether there was any scope for export or not at current prices.

Mr. Rahimtoola.—As I have said the question of export trade in raw sugar should be based on the cost of production and not on the ruling prices of the market. We don't know what the cost of production is.

Mr. Rahimtoola.—Do you consider Rs. 7 as the fair selling price for 1st grade sugar?

Mr. Mulji.—That is the market price.

Mr. Rahimtoola.—We cannot consider the question of export trade on the basis of a market price.

Mr. Mulji.—Quite.

President.—Are there any points which you or any other member of your Association would like to raise with us?

Mr. Parekh.—We have mentioned everything in our representation. We request you to consider along with the question of protection our difficulties regarding standardisation of contracts and other things.

President.—All those points will be considered by the Board.

Mr. Mulji.—We want to make one thing perfectly clear to the Board. Whatever we have written has been written purely with the improvement of the industry in our mind. We have absolutely nothing personal against the manufacturers, individually or jointly. We feel that the policy pursued by them at present is a shortsighted one. The consumer has borne the burden cheerfully and we think the time has come when the industry must set its house in order.

Mr. Rahimtoola.—I want to know whether you think that the fair price to be paid for cane should be 6 annas per maund.

Mr. Dayal.—Yes.

Mr. Rahimtoola.—I don't suppose you have any first hand knowledge.

Mr. Mulji.—We haven't got any direct knowledge.

SUGAR MERCHANTS' ASSOCIATION, BOMBAY.

**Evidence of Messrs. J. U. MULJI, SANKALCHAND G. SHAH,
I. T. PAREKH, MADANJEE RATANJEE recorded at
Bombay on Wednesday, the 4th August, 1937.**

President.—Mr. Mulji, your Association has not replied to the Board's questionnaire but you have given your views in a subsequent letter.

Mr. Mulji.—We have sent our reply to the questionnaire through the All-India Sugar Merchants' Conference. We are part and parcel of that body. We submitted a memorandum to that body and they have already informed you that the views of the Bombay Sugar Merchants' Association are being represented by them.

President.—And their replies to the questionnaire represent your views?

Mr. Mulji.—We prepared a memorandum and then we went to Cawnpore, discussed this matter for three days with the All-India Sugar Merchants' Conference; then we prepared a draft and after it was approved by all the associations, the All-India Sugar Merchants' Association sent in the replies to the Board's questionnaire.

Mr. Rahimtoola.—Your Association is affiliated to the All-India Sugar Merchants' Conference and the views of that Association are also the views of the Bombay Sugar Merchants?

Mr. Mulji.—That is so.

President.—Then we had better examine you on this representation: but you sent us a separate letter in reply to our letter No. 357.

Mr. Mulji.—Yes. We thought you would require information as regards the business condition in Bombay and we gave in that letter information as regards the local conditions prevailing in the market.

President.—From this letter I understand that the happy days of the merchants were those when Java sugar was sold!

Mr. Mulji.—In those days business conditions were better.

President.—You say "The sugar is always sold on c.i.f. Indian ports basis, that is, the buyer has to pay the Duty" You have to pay the landing charges as well I suppose?

Mr. Mulji.—Yes, he has to pay all charges including duty.

President.—Your letter is very clear and there is not very much more that we can ask. There are however one or two points that I want to clear up. I understand that up to 1933 there were no real difficulties, but from 1933 onwards difficulties began and increased as years passed.

Mr. Mulji.—Yes.

President.—The Board would like to hear a little more about what happened on the outbreak of the Abyssinian war. It led to a certain amount of speculation, did it not?

Mr. Mulji.—Along with our memorandum to the All-India Sugar Merchants' Conference we sent a letter which we had written to the Indian Sugar Mills Association on 31st January 1936, and I think you have got a copy of that letter. The position is this. Foreign sugar business is generally confined to the ports and we have in our memorandum narrated the whole history of the sugar business in Bombay. This business is not merely located in Bombay or near Bombay. Bombay business people are selling sugar in the whole of the west coast of India as far as Cochin, Calicut, Murmagoa, Tellichery and so on.

President.—And in the north of Bombay?

Mr. Mulji.—Up to Karachi. Several times we have sent consignments to the Afghan Government through Karachi.

President.—Could you tell us something about the storage arrangements in Bombay?

Mr. Mulji.—I think we have written in our memorandum about storage also in reply to question 88.

President.—In Bombay where is sugar mainly stored?

Mr. Mulji.—In bonded warehouses and also in our private godowns. I should say 60 per cent. in bonded warehouses and 40 per cent. in private warehouses.

President.—Where are these bonded warehouses situated?

Mr. Mulji.—In the Port Trust premises.

President.—Are there any points on which you would like to make a statement?

Mr. Mulji.—I understand the Deccan sugar manufacturers want to have special conditions as regards freights. They complain about the freight rates allowed to sugar coming from Northern India to Bombay, and they have made a representation about that.

President.—I might say that we have received similar representations from Madras, Mysore and Bengal.

Mr. Mulji.—I want to explain the position about Bombay trade. It is a very sad thing that these people write about these things. Bombay is a sea port. Our sugar can be imported by sea. The only difficulty is that sugar sent by steamer sweats and it keeps better if sent by rail. That is the reason why we prefer to have sugar sent to us by rail. Special rates for sugar are allowed for large places like Bombay, Ahmedabad, Madras, that is to big distributing centres and then it is re-exported from these centres to other places. Bombay may buy at a time 200,000 bags from the mills and this will have a good effect on the market. But if big centres are converted into small ones and are localised it will affect the demand on the trade. That is an important thing. We have long experience in the sugar trade—we were importers of foreign sugar since a long time—we know the distributing: we know what sort of sugar a particular province requires and if such a big centre disturbed by increase in freight it will give a blow to the general condition of the sugar trade. Then there is the fact that in and around Maharashtra where the Deccan factories are situated, the consumption is much more than what they produce.

President.—Where does most of the Indian sugar come from?

Mr. Mulji.—From the United Provinces and Bihar.

President.—Not much from Deccan?

Mr. Mulji.—About 500 tons a year. What Deccan produces at present is almost all consumed there. Railway freight from Bombay to the interior is the same and the consumers have to pay higher when sugar is re-exported from Bombay. So it means that the Deccan factories have still got an advantage in their markets because they consume what they produce in the Deccan and the nearby districts. Therefore, until they overproduce they have no ground for complaint. In my opinion they are on the wrong track because we can import from anywhere we like, this being a sea port. Then there is another thing. They forget that there is overproduction in United Provinces and Bihar and if the railway freights are increased it will affect prices there and it will in its turn affect the cane growers. It will affect many people. Similarly Bengal has, I think, asked for it and recently Mysore Government has also asked for it.

President.—They had something to say about that. We have already seen the Mysore people.

Mr. Shah.—Besides, this creates provincial jealousies.

President.—I am afraid it is very much in evidence already.

Mr. Shah.—Is it the result of Provincial Autonomy?

President.—It rather follows from that to some extent.

Mr. Mulji.—The Deccan gur is the finest in the whole of our country and the production of gur in Deccan is not much. The acreage in Deccan is, say, about 100,000. Out of that the production of 20,000 acres will be consumed by the Sugar Mills and the balance is for gur.

President.—I think your figures are wrong.

Mr. Mulji.—100,000 is the acreage.

President.—I think the total in Bombay is

Mr. Mulji.—Except Deccan the acreage in the rest of the Presidency is about 10,000.

President.—The acreage in the Deccan area is 40,000 speaking from memory and I think that is correct.

Mr. Mulji.—There is practically no cane in Sind.

President.—We are not talking of Sind at all.

Mr. Mulji.—The three cane tracts in the Bombay Presidency are Guzerat, Deccan and Kanara Districts.

President.—In the Deccan the acreage is about 70,000.

Mr. Mulji.—The factories do not consume more than 20,000 acres' production. That does not contain Kolhapur. That does not contain Sangli. Kolhapur has a factory in Deccan.

President.—It is not on the Deccan Canal.

Mr. Mulji.—This is British India Deccan. There are others such as Phaltan and Kolhapur. Kolhapur is not included; also Sangli is not included.

President.—Kolhapur is included.

Mr. Mulji.—It is lift irrigation. Ravalgaon factory is not on the canal. It is lift irrigation. Roughly speaking the acreage is nearly 80,000.

President.—No, about 60,000 acres only.

Mr. Mulji.—40,000 to 50,000 acres is purely for jaggery industry. If special railway freight concessions are granted for gur as for sugar to important consuming centres in Guzerat and Kathiawar, then there will be an increase in the consumption of Deccan jaggery to the extent of 20 per cent. Ultimately it will bring 60 per cent. increase in price. So the gur industry will be in a happier position. At present on account of the low price of gur the Deccan Agriculturists had to part with their best lands on the canal area to the factory owners for a nominal rental. I am speaking from the point of view of the gur industry as a whole and it should be considered as part of the Sugar industry. Gur is only raw sugar.

President.—Certainly the Board are enquiring very definitely into the gur industry. On that point about the rental, the mills complain that they have to pay too high a rent per acre. I am not saying that they are correct.

Mr. Mulji.—Up to 1926 the rental on the canal area was from Rs. 50 to Rs. 70 and to-day it is Rs. 6 to Rs. 10.

President.—I don't think that that coincides with the information we have got.

Mr. Mulji.—I am prepared to prove before them. That is the condition. The sugar industry of Deccan has not helped the agriculturists; at least that is what I want to say.

President.—I see the point.

Mr. Mulji.—To help the agriculturists is to help the industry.

President.—I don't quite follow exactly how the gur industry will be helped by this arrangement.

Mr. Mulji.—Special railway freights for gur and the reduced canal rates for farmers who produce gur. To-day the canal rates are the same for the agriculturists as for factories.

President.—You want to give special rates to people outside the factory area?

Mr. Mulji.—Yes.

President.—Because in the factory area the same rates will be paid by everybody.

Mr. Mulji.—What I want to say is this: the rates of those who produce cane for gur should be lower than those paid by factories.

President.—Factories buy some cane from private growers.

Mr. Mulji.—Very little.

President.—They do buy some?

Mr. Mulji.—Nominal.

President.—Would you have the same rate for all people who supply cane to the factory?

Mr. Mulji.—For farmers a special rate should be given.

President.—That is the point I want to know.

Mr. Mulji.—The factory owners of Deccan must be forced to buy cane at a certain price from farmers.

President.—You are in favour of fixation of price by the Local Government?

Mr. Mulji.—Yes.

President.—As you know in certain parts of the country it is done.

Mr. Mulji.—They should be forced to buy.

President.—Can you tell us how far sugar is replacing gur? That is a matter of individual opinion?

Mr. Mulji.—It depends upon the difference in price. If the difference in price between sugar and gur is, say, about Rs. 2 or Rs. 2-8-0, then the consumption of either is not affected, but if the price of gur is lower which is the case to-day, then the consumption of gur goes up.

President.—At the expense of sugar.

Mr. Mulji.—Yes. In the case of sugar there is one point which should never be forgotten: sugar is consumed in tea, coffee and other drinks. If sugar is used for making sweets, along with that ghee is required which is very costly. One anna worth of sugar requires 4 annas worth of ghee. Poor people haven't got 4 annas and therefore they cannot consume more sugar. Sugar is consumed in tea and coffee drinks, but its consumption in sweetmeats is not increasing as it ought to. This year on account of the low price of sugar, the consumption of sugar has been very good, but we don't think the consumption will go on increasing as this year.

President.—Although the price of sugar is low, the price of gur is almost lower in proportion.

Mr. Mulji.—Yes. This year the prices of other commodities were very high. The poor people had postponed for the last two years marriages and many other ceremonies. When these people get some money, they do celebrate them. So this year the consumption has been more than expected by anybody. These things will not be repeated.

President.—Owing to the price of cotton.

Mr. Mulji.—Yes, seeds and other commodities. The consumption of sugar depends upon the prosperity of the people.

Mr. Shah.—They have got sufficient money to spend this year.

President.—The consumption of sugar has been larger than usual.

Mr. Mulji.—Unusually higher, but that it does not mean that it will be the same in future years.

President.—Not if the price of cotton continues at the level of the last few days.

Mr. Mulji.—Except the expansion which will take place with the increase of population.

Mr. Shah.—May I also add this: it is also due to the improvement in the standard of living and people naturally like to eat more sugar, unless of course there is a very big difference between the price of sugar and the price of gur.

President.—There is one other point I would like to ask: as a result of the recent selling organisation by the Mills' Association, prices have gone up slightly.

Mr. Mulji.—Yes about a rupee a bag. You must have got a copy of this letter (handed in). What is the idea behind the Syndicate?

President.—I don't think I have seen it.

Mr. Mulji.—You can keep it. The idea is to raise the prices up to such a level as to reach the Java sugar price.

President.—I do not know what their idea is.

Mr. Mulji.—Upon this the Indian Syndicate is formed. This is their original letter and then they have combined, at least some of them.

President.—It has a temporary effect of raising prices.

Mr. Mulji.—Yes.

President.—I do not know what is going to happen.

Mr. Mulji.—We do not know the statistical position of our sugar. If we know the statistical position of our sugar, we can give a correct forecast.

President.—That is a matter we are looking into and is engaging our particular attention. I hope that the Tariff Board will have some better idea of the carry over than has ever been had by anybody before.

Mr. Shah.—That last Tariff Board recommended that and it had no effect.

President.—There is no penalty imposed under the Act.

Mr. Shah.—One of the main points is to devise means in such a way that they may be compelled to submit returns.

Mr. Mulji.—In many countries manufacturers themselves publish statistics. In Java it is done by their own organisation. Here the mills want everything to be done by Government. That is our case.

President.—I may tell you we are looking into that matter very definitely.

Mr. Shah.—In the absence of statistics, trade is dislocated.

Mr. Mulji.—Bombay is in a better position to start a terminal market. There are very experienced people. On account of handicaps of all the contracts and qualities, etc., we have already passed resolutions from our Association that a terminal market be started, but we have postponed it. If we start a terminal market now, there might be many troubles. We may buy on one contract and sell on another contract. That terminal market cannot go on under those conditions. We are waiting now. If these things are settled, even in the interests of the manufacturers themselves, our co-operation may be much better and more useful to them.

Mr. Rahimtoola.—As the President has told you, most of the questions of general policy will be dealt with at Cawnpore when we examine the All-India Sugar Merchants' Conference but I would like to go through the question of prices, because Bombay, is, one of the big markets. Are you still importing sugar from Java?

Mr. Mulji.—Not for Bombay, not for British India consumption. We have our connections still, because certain of our members have got offices in Colombo, Pondicherry and Karikal; sometimes Marmagoa is buying; Aden is also buying and all the ports in Persian Gulf are buying from us c.i.f. Basra, c.i.f. Bahrein. Those who have got offices either on the West Coast or Persia or Iraq have got their Head Offices or branches in Bombay. And all these are our buyers of Java Sugar.

Mr. Rahimtoola.—What is the membership of your Association?

Mr. Mulji.—Our membership is about 40.

Mr. Rahimtoola.—What is the tonnage that is being dealt with by the Association?

Mr. Mulji.—We have given that in our Memorandum.

Mr. Rahimtoola.—That is very general.

Mr. Mulji.—All the business is carried on in Bombay by the members of our Association, those who import and others who are not members, the whole volume of business is curs.

Mr. Rahimtoola.—I want to get a clear idea as to the percentage of business done by your members as compared with the imports into Bombay.

Mr. Mulji.—All business is done by our Association Members.

Mr. Rahimtoola.—All sugar is imported by your members.

Mr. Mulji.—Yes imported by anybody whether meant for our members or not. These importers are importing on just like indenting system. We are indentors.

Mr. Rahimtoola.—You are also dealing in Indian sugar, are you not?

Mr. Mulji.—Yes.

Mr. Rahimtoola.—As you know, Indian sugar is not at present standardised.

Mr. Mulji.—No.

Mr. Rahimtoola.—The three qualities of sugar which are coming in, even to a small extent, are 23 Dutch Standard and above, 16 Dutch Standard and below, 15 Dutch Standard and below.

Mr. Mulji.—Yes, of foreign sugar.

Mr. Rahimtoola.—I am now talking of foreign sugar. I want to compare it with Indian sugar. How much of the Indian sugar would you classify as first class?

Mr. Mulji.—Do you mean the class of sugar?

Mr. Rahimtoola.—The 1st grade Indian sugar as compared with foreign sugar.

Mr. Mulji.—If you take the Dutch standards, all sugar below No. 25 in Java is called brown sugar. Even No. 24 is brown sugar, whereas in India all the sugar that is produced is called white sugar. Even brown sugar is called white sugar. Therefore in contracts made in India nobody mentions whether it is white or brown sugar because it is all white sugar. We can give you a rough idea and that has been given in our memorandum. About 50 per cent. of the sugar now produced in India is above Dutch Standard No. 25.

Mr. Rahimtoola.—We shall look into that. We now find that you have dealt with that question exhaustively in that memorandum. You are appearing to-day before us as Bombay Associations representatives.

Mr. Mulji.—Yes.

Mr. Shah.—The following is the reply given in answer to question 91 by the All-India Sugar Merchants Conference:—"About 40 per cent. of the Indian sugars manufactured in season 1936-37 are equal to the quality of Java sugar No. 25 Dutch Standard or equivalent imported sugars. The remaining 60 per cent. sugars are inferior in colour, grain and keeping capacity".

Mr. Mulji.—I may say this that even in regard to that 60 per cent. is similar to No. 25 Java Dutch Standard and only 20 per cent. is about 23 to 24 Dutch Standard.

Mr. Rahimtoola.—Do you deal in Beet sugar?

Mr. Mulji.—Yes.

Mr. Rahimtoola.—How does beet sugar compare with cane sugar?

Mr. Mulji.—Nobody can say, if he is not told previously, that this is beet sugar and that is cane sugar, if simply samples are given. Merchants can say which is beet and which is cane sugar but an ordinary consumer will not be in a position to distinguish between Java sugar and beet sugar.

Mr. Rahimtoola.—Is there no difference between the two in grains?

Mr. Parekh.—Beet sugar is refined sugar. Java sugar is produced according to different standards. It is not considered as refined sugar as white sugar is produced direct from cane. Beet sugar that is coming into India is refined sugar.

Mr. Rahimtoola.—Still an ordinary buyer cannot distinguish between the two.

Mr. Mulji.—No. The difference between Java sugar and the other is this. The former is a direct product of the factory, while beet sugar is refined sugar.

Mr. Rahimtoola.—Is Bhurrah sugar coming now?

Mr. Mulji.—No, but soft sugar is coming in. Bhurrah sugar is powdered sugar. What is coming now is soft sugar, which contains moisture. It is Hongkong sugar. A small quantity is also coming from Japan. The total imports will not be more than 3,000 tons.

Mr. Rahimtoola.—What is that used for?

Mr. Parekh.—In making sweet balls. It is mixed with flour.

Mr. Mulji.—If this quality of sugar is used, less ghee will be required in making sweets.

Mr. Rahimtoola.—As you have raised that point, I want to know what the position is.

Mr. Mulji.—It requires less ghee because it contains moisture.

Mr. Rahimtoola.—How does it compare with cane sugar in respect of price? Is it lower?

Mr. Mulji.—No, the price is higher because it is highly refined and very white.

Mr. Rahimtoola.—What about cup sugar?

Mr. Mulji.—That is jaggery—Java gur.

Mr. Rahimtoola.—Is it coming?

Mr. Mulji.—No.

President.—What about loaf sugar?

Mr. Mulji.—It is coming. It is used for tea and so on.

President.—Is that made in Hongkong?

Mr. Mulji.—It is coming from the United Kingdom, Holland and Hong Kong but mostly from the United Kingdom.

President.—Is there any other sugar coming from Hongkong to Bombay?

Mr. Mulji.—Only soft sugar and loaf sugar (cubes). There is one sugar which is coming from Holland known as Cossipore sugar. There was a factory in Cossipore (Bengal) which was producing that quality. From that it is known as Cossipore sugar.

Mr. Rahimtoola.—That is Holland sugar.

Mr. Mulji.—Yes, it is highly refined.

President.—Does it actually come from Holland or from Germany?

Mr. Mulji.—Actually from Amsterdam. The factory is in Amsterdam. The total imports will not be more than 2,000 tons in a year. About one-fourth of that quantity is used in the adulteration of toddy.

Mr. Rahimtoola.—It is also used to a certain extent, you have told us, in sweetmeat trade, in making lozenges, etc.

Mr. Mulji.—Now for that purpose some class of Indian sugar is used. The difference in price is so much as to encourage the consumption of Indian sugar.

Mr. Rahimtoola.—With regard to prices which you have given, are these f.o.b. prices?

Mr. Mulji.—Yes, Java port.

Mr. Rahimtoola.—What do you add to make it c.i.f.?

Mr. Mulji.—8 annas per maund to convert f.o.b. prices into c.i.f.

Mr. Rahimtoola.—What will you add for landing charges?

Mr. Mulji.—1 anna 6 pies per maund.

Mr. Rahimtoola.—I find from the list that as recently as November 1936 the price touched Rs. 1-15-6 per maund.

Mr. Mulji.—Yes.

Mr. Rahimtoola.—Between May 1934 and January 1937, the prices have ranged from Rs. 2-11-0 or Rs. 2-10-0 to Rs. 1-15-6 and the prices have only gone up since March.

Mr. Shah.—You mean the material improvement.

Mr. Mulji.—The improvement began from December 1936.

Mr. Rahimtoola.—In December 1936 it was Rs. 2-4-3.

Mr. Mulji.—It meant an improvement of 5 annas a maund or 8 annas a cwt. From Rs. 2-4-3 it went up to about Rs. 2-8-0. There was an improvement of 8 annas in December, and four annas in January; in February it was stationary and there was a further improvement in March.

Mr. Rahimtoola.—The real improvement came somewhere at the end of February.

Mr. Mulji.—Yes. Do you want to know the reason?

Mr. Rahimtoola.—Yes.

Mr. Mulji.—Because Java wanted to sell off the accumulated stock and so the prices were low. After February when they had cleared their stocks prices were raised. They were raised not only to Bombay but to all destinations.

Mr. Rahimtoola.—Is there any difference in the prices at the ports east and west of Suez?

Mr. Mulji.—At the time of the previous enquiry that was the case, but not now. The special rates are now for Singapore, Straits Settlements. The rate for Siam is higher. The rates for West Coast including Ceylon are the same. At this price last business was done. Ceylon buys every month 5,000 to 6,000 tons at this price. If their prices are artificially higher, Ceylon will have imported from other sources.

Mr. Shah.—The Sugar Conference has something to do with it.

Mr. Rahimtoola.—These prices are prices converted from Guilder Exchange.

Mr. Mulji.—Yes. 68 guilders are equivalent to Rs. 100.

Mr. Rahimtoola.—One guilder is equal to how many rupees?

Mr. Mulji.—Rs. 1-7-6.

Mr. Rahimtoola.—Have your members still got offices in Java?

Mr. Mulji.—No. But we have our agents there from whom we get telegrams regularly.

Mr. Rahimtoola.—Can you tell us what is the cost price of Java Sugar?

Mr. Shah.—At the end of 1935 I was in Java. At that time I made special enquiries. I think that their cost price would be 4 guilders per 100 kilos.

Mr. Rahimtoola.—That is ex-factory.

Mr. Shah.—Yes. Their efficiency is increasing. They have taken steps to reduce prices.

Mr. Rahimtoola.—Have you any idea of the reduction that has taken place since then?

Mr. Shah.—No.

President.—Did you say 4 guilders per 100 kilos?

Mr. Shah.—Yes.

Mr. Mulji.—To-day their cost is not more than 3 guilders. What they did was that all the uneconomic factories had been closed down. Only the factories situated near the ports are being worked. Their cane condition is better and everything else is better and so they have been able to reduce their cost.

Mr. Rahimtoola.—I think guilder is equal to florins?

Mr. Mulji.—Yes, They are the same.

Mr. Shah.—It is only in Holland that they call florins. I wish to point out one thing and that is the Java mills raised their prices because they wanted to show that they were not inclined to dump their sugar. They did not take any step with a view to dumping their sugar in India. The rise in price is absolutely normal.

Mr. Rahimtoola.—The Java prices had gone down and I wanted to find out whether it was profitable for them to sell at the rates at which they were selling in the past.

Mr. Mulji.—At that time, they had accumulated stock and they wanted to clear the stock. Otherwise their position would not improve. There is one thing which we must not forget and that is they are also business people. They know that India is nowadays over-producing. They have no chance of sending their sugar to India. We are in close touch with people who often come here and make all enquiries. I may say that they are in touch with the local position in such a way that they know better than the Indian Sugar Millowners know of the statistical position in this country.

Mr. Rahimtoola.—You must not forget that as they are alert they will be able to come back to India when they get a suitable opportunity.

Mr. Mulji.—That is natural.

Mr. Rahimtoola.—Having regard to the fact that the Java sugar prices have gone as low as the figures indicated by me, it is necessary to see that if stocks are accumulated again, whether such a position would not arise again.

Mr. Shah.—I made special enquiries about that aspect of the matter. There was not the slightest idea of dumping sugar in India.

Mr. Rahimtoola.—I am not talking of dumping at all. I am only saying that if Java is able to sell for such a long period at such low prices as I have just now indicated, there may be a danger of such a situation arising again.

Mr. Mulji.—Java has now entered into an international agreement for 5 years and their quota for export is only 1,050,000 tons including Holland. If we go into their exports, there are such countries as Siam, Straits Settlements, etc., where nobody can compete with them at that price.

President.—Does Siam grow sugarcane?

Mr. Mulji.—Very recently a factory has been started in Siam by the Siamese Government. It will go on increasing. In that 1,050,000 tons mentioned by me India is not taken into consideration at all. Where can they bring their sugar from to export to India?

Mr. Rahimtoola.—They can produce more sugar.

Mr. Mulji.—Their export is prohibited.

Mr. Rahimtoola.—Not to India.

Mr. Mulji.—They have other markets to dispose of their 10 lakhs tons which are exclusively their markets.

Mr. Shah.—I do not think that there is any possibility of Java coming out to sell in India again in the quantity they have done in the past because, firstly, they have committed themselves in the Conference and then again price will be so uneconomic that I don't think they will care to send any sugar to India, not at least in very large quantities.

Mr. Rahimtoola.—You say in your representation that "selling Java sugar was just like converting currency note into rupees". That was the position in Bombay in regard to sale of Java sugar in the past?

Mr. Mulji.—What we mean by that is that the quality was such that it could be sold without any difficulty. We used to do Java business without looking into any sample whatsoever and we could do Java business within half per cent. profit.

Mr. Rahimtoola.—However good the quality may be, the contract has a great deal to do with it?

Mr. Mulji.—The contract contains a quality clause.

Mr. Rahimtoola.—To-day according to your statement about 40 per cent. of the Indian sugar is equal to Java quality. With that 40 per cent. there should be no difficulty in selling?

Mr. Mulji.—That 40 per cent. they do not sell on standard. They do not guarantee a standard supply. We will however refer to this point in detail when we meet at Cawnpore.

Mr. Rahimtoola.—I am only confining myself to Bombay because Bombay is a very big market and also a port.

Mr. Mulji.—If they sell the quality on standards it will be easy for them to sell Indian sugar just like changing currency notes into rupees!

Mr. Rahimtoola.—To-day there is no relationship between Indian sugar prices and Java sugar prices? How are prices governed now?

Mr. Mulji.—By supply and demand and internal competition.

Mr. Rahimtoola.—There was a point in the last enquiry that there was a certain amount of rebate given to the sugar sold in India. Is there anything like that now?

Mr. Mulji.—That has gone since the last five years.

Mr. Rahimtoola.—What do you mean by second hand buyers?

Mr. Mulji.—Second hand buyers are our customers such as commission agents, direct sugar merchants, direct consumers and smaller middlemen.

Mr. Rahimtoola.—Commission agents situated in Bombay?

Mr. Mulji.—Situated in Bombay and outside for distribution. Sometimes they resell. When they think prices have gone up and it is no use taking delivery to sell on the spot, they resell.

Mr. Rahimtoola.—What is the reason for the second hand buyers having withdrawn from business?

Mr. Mulji.—Nobody is assured of the quality and of fair treatment from the sugar mills regarding contract. I wish we were placed face to face with the mills and put our case. I am sure we shall be able to prove from correspondence and everything else that the contracts made are not fair. I may say that we are very much misunderstood. We are in fact very anxious to co-operate even in our own interest. What we want is improved trade.

Mr. Rahimtoola.—You also deal in sugarcandy? What is that used for?

Mr. Mulji.—It is refined sugar. There is a sentiment amongst the people that it is better than sugar and that it has medicinal properties. It is also used in religious ceremonies because it can be distributed by hand.

Mr. Rahimtoola.—Where does it come from chiefly?

Mr. Mulji.—Most of it is made locally. Foreign sugarcandy has almost disappeared. They have now no chance of coming into the Indian market.

Mr. Rahimtoola.—Are they made in factories?

Mr. Mulji.—It is practically a cottage industry.

Mr. Rahimtoola.—And the quality is as good as the foreign quality?

Mr. Mulji.—Not so good because the method of cleaning is different because of religious sentiment. In Japan they use bone charcoal, eggs and so on to clean it.

President.—The Collector of Customs, Bombay, told us that there was some importation of sugarcandy in 1936-37.

Mr. Mulji.—It was a small quantity lying in the godown but imported in 1935.

Mr. Shah.—A small quantity of Chinese sugarcandy is coming in, about 500 bags a year.

Mr. Rahimtoola.—What is the price?

Mr. Mulji.—The price to-day is Rs. 18 per cwt. in Bombay. It is being used only by vaishnavas in the temples and by some people in Indian medicines.

Mr. Rahimtoola.—Is its consumption increasing or decreasing?

Mr. Shah.—Decreasing.

Mr. Rahimtoola.—What is the price of Indian sugarcandy?

Mr. Shah.—Rs. 12 to Rs. 14 per cwt. according to crystal.

Dr. Jain.—Do you deal in sugarcandy?

Mr. Mulji.—We buy and sell.

Dr. Jain.—Only in small quantities?

Mr. Mulji.—Yes. I myself have two sugarcandy factories but I was forced to do it. I had a large quantity of damaged Indian factory sugar which could not be sold anywhere so I had to start a sugarcandy factory to get rid of that.

Dr. Jain.—Am I right in thinking that you are in favour of a terminal market in Bombay?

Mr. Mulji.—Yes. Bombay is a market where large terminal business is conducted. We have customers who can do very large futures business in this place.

Dr. Jain.—Would you consider Bombay more suitable than Cawnpore for this?

Mr. Mulji.—Yes. Our Bombay sugar merchants have offices also in Cawnpore and Calcutta. Therefore when we are talking of Bombay we are not talking merely on the basis of local conditions here. Terminal market can also be started in Cawnpore or Calcutta, but in Bombay it will be very easy to operate.

Dr. Jain.—The Indian Sugar Mills' Association do not consider that the time is ripe for such a market?

Mr. Mulji.—Unless they fix up standards. Unfortunately they have not enquired into this at all. If they investigate thoroughly I am sure they will be convinced that they are wrong.

Dr. Jain.—They say future markets are difficult to control.

Mr. Mulji.—It is for the merchants to control.

Dr. Jain.—They say "The Association considers that the time is not yet ripe for the establishment of a futures or terminal market. Futures markets are difficult to control. No amount of rules will secure proper control as the working will depend on the men and not the rule".

Mr. Mulji.—Their own defects they do not write about and that is that they are not prepared to sell on standard quality.

Mr. Shah.—May I add for your information that none of the sugar mills' representatives have ever visited Bombay to enquire into this question.

Dr. Jain.—In other words you hold the view that a terminal market should be introduced?

Mr. Mulji.—Yes. For the present we are uncovered; we cannot hedge our sugar.

Dr. Jain.—What place would you select?

Mr. Mulji.—Supposing we want to start it to-day nobody can prevent us, but the circumstances are not favourable and taking a long view of the case we have not started it.

Mr. Shah.—We have no standard quality.

Dr. Jain.—As soon as that is done there is no other drawback or hinderance to the starting of a terminal market?

Mr. Shah.—As soon as that is done there is no hinderance to starting a terminal market.

INDIAN MERCHANTS' CHAMBER, BOMBAY.

**Evidence of Messrs. MANU SUBEDAR, M. L. DAHANUKAR and
J. K. MEHTA recorded at Bombay on Wednesday,
the 4th August, 1937.**

President.—When your written answers are quite clear, we don't go into them again. The object of our examination is to elucidate the points which are doubtful. It is no good wasting your time by asking you to repeat what you have already written. I don't think there is a great deal on which we need ask you anything. Your replies are quite clear on most of the points. I see you have spoken about window dressing on page 4 of your memorandum.

Mr. Manu Subedar.—Yes.

President.—Could you elaborate that point a little more?

Mr. Manu Subedar.—Java had acted peculiarly in the past towards the Sugar industry in the sense that in 1934 for a short period they brought down prices very heavily. In 1934 prices went down to Rs. 2-9-3 per maund.

President.—That is the lowest price.

Mr. Manu Subedar.—Yes. People who have taken their price as low as that have in recent times put up the price a little at a time when Indian prices have dropped. Indian prices were fairly steady for 4 years from 1933-37 and recently they have had a very heavy drop.

President.—Roughly from November 1936.

Mr. Manu Subedar.—Yes. At the same time when Indian prices were dropping so heavily, Java prices had shown an increase of Rs. 1-11-0 from March 1937 to July, 1937. For this the only explanation which I find is the Java exchange which between this March and July is 66½ and 67½, but with reference to previous years has risen. For the rest it seems they are a controlled industry in Java according to our information and they are in a position to act as a single body. That is why we said that it may be with a view to prejudice this enquiry in order to show that the existing protection is really very excessive, whereas in our view it is not.

President.—It has been suggested to us that the explanation of very low prices in 1934 was that stocks in Java were so excessive that they had to sell at any price below the cost of production to get rid of them. Now the production of sugar in Java being very much reduced has reached its normal stage when sugar is no longer being sold at an unremunerative price as it was in 1934.

Mr. Manu Subedar.—Quite so. That may be the explanation, but if the Indian industry were exposed to that phenomenal reduction at any time during the next seven years, all the work which has been put up would be lost.

President.—On the question of exchange of course one would expect that they would be able to land sugar somewhat cheaper, if Holland went off gold.

Mr. Manu Subedar.—If Holland went off gold, there would be a glut of sugar in this territory and since France and America who were having enormous quantities of gold had for various reasons to go off, there is no knowing when Holland may be forced off.

President.—They have devalued their currency already.

- *Mr. Manu Subedar.*—To some extent, but that is always a sword hanging over the Sugar industry in India and while I am on that topic, may I suggest that whatever other recommendations you make, you should recommend that Government should arm themselves with power to meet any sudden emergency which may arise from subsidised sugar or sugar coming

very cheap through the exchange factor and glutting this market, displacing the normal activities of the local industry.

President.—That is certainly a point for consideration. I find that you have touched on the question of fixation of sugarcane prices and also the administration of the rules governing these prices. Of course in United Provinces and Bihar and in one or two Indian States, prices have been fixed. The question, as you will see from our questionnaire, has engaged our attention.

Mr. Manu Subedar.—We are very keen to see that the benefit of the protection is passed on in reasonable measure to the cultivator of sugar and that his distress does not become the opportunity of the industry. This remark of ours in the written memorandum arose from complaints which reached us of some factories dealing not quite fairly with some cultivators. I will make it quite clear that it is not a general charge. We thought that in your itinerary and from representations to you, you would have more precise information. If it was found possible for any factory owners to evade regulation of prices made by the Local Governments by any indirect means and working against the cultivator, certainly we would feel that it is not the intention of any authority and that it should not happen.

President.—Our attention has already been drawn to it and we propose looking into the matter further when we are in United Provinces and Bihar.

Mr. Manu Subedar.—My colleague having the experience of the Bombay Deccan sugar factories would like to say something on this point.

Mr. Dahanukar.—Regarding the fixation of cane prices, the cane prices are fixed in the beginning of the season at a particular level, say 5 annas, 6 annas or 4 annas. This year it so happened that they were reduced three times during the season and from 5½ annas in the beginning they brought it down to 3 annas or even 2½ annas. When prices are fixed for the season, they should not be interfered with either by any Government action or otherwise so that the agriculturist will know his position definitely. The fear of overproduction of cane also will disappear.

President.—You know the basis on which cane prices are fixed in United Provinces and Bihar. It is based on the price of sugar. Do you consider that satisfactory or would you suggest some better method of fixing prices?

Mr. Dahanukar.—There should be relation of course with the price of sugar, but there should be a minimum basic price which should not be subject to any changes.

President.—One suggestion which has been put forward is that a minimum price should be fixed at the time of planting say in February every year and that over and above the minimum price a bonus should be paid at the time of the delivery of cane if the price of sugar was then above a certain level. Supposing Rs. 7 was taken as the basic price, that is only an example, and the price went up to Rs. 7-8-0, the cultivator would get a bonus. Would you in your experience think that it would be possible?

Mr. Dahanukar.—It would be quite possible. When the marketing of the sugar industry will be organised, the prices of sugar will be fixed on standard lines and that it will be possible to ascertain the definite prices of various sugar factories or the zones.

Mr. Manu Subedar.—Speaking for myself and not for the Chamber the method which you suggest would seem to throw the entire risk of the Sugar trade on the poor cultivator who has to plant much ahead. If he had any apprehension that he would not get a certain price enough to cover his cost of cultivation, he would put his land to other uses. It becomes a speculation which seems to be very hard on that class of people instead of the trade bearing that. I would say that something should be done which would either distribute the risk between the manufacturer and the grower of sugarcane, otherwise it seems throwing the entire risk of the trade on the cane-grower instead of on the manufacturer or the merchant.

President.—I should have thought it the other way. In this a fair minimum price is fixed which he must get in any case.

Mr. Manu Subedar.—That part is very good. It depends upon the minimum price being something which will in any case cover the cost of cultivation.

President.—The minimum should be based on the cost of production and the bonus should be based on the selling price of sugar. It is combining two different systems.

Mr. Dahanukar.—My remarks which I made before were on that basis.

President.—Could you suggest any other method of fixation of prices?

Mr. Dahanukar.—I don't think there is any other method.

President.—Would you like to suggest any other method?

Mr. Manu Subedar.—I would like the sugar situation to be handled with a little more planning and with a little less of drift so far as sugarcane grower is concerned. It should not be difficult for some authority in 1937 to estimate how much the probable requirements will be next year and to recommend if not compel the cultivators to restrict the growing of sugarcane to the probable requirement. The maladjustment of sugarcane growth on the one side and of sugar production on the other side which would send down their price and therefore send down the purchasing power can be adjusted if there is a little less of drifting. If Government are for encouraging the sugar industry and if they regard the sugar industry as something worth from which they derive revenue, then this adjustment should not be very difficult to make either in the previous year or in the following year.

President.—Arising out of that answer, would you be in favour of a system of zoning as contributing towards the regulation of cane production?

Mr. Manu Subedar.—I speak, Sir, without any direct experience of the sugar trade myself, but I have seen a representation of the sugar manufacturers and they with their direct experience of the trade seem to favour that. It would be undoubtedly better, though the ideal system would be where the factories themselves grow their cane so that they know and they will certainly be able to adjust. In any case they will take the risk.

President.—That applies, speaking generally, to sugarcane cultivation in the Bombay Presidency.

Mr. Manu Subedar.—It is not possible in certain other Presidencies.

President.—Very few factories in other parts of India have that advantage.

Mr. Dahanukar.—For the same reason also because of the abnormal changes in price—lower prices—where the industry is mainly situated, viz., United Provinces and Bihar, the Sugar industry on this side is greatly affected, because here there is no scope for such reduction in prices and this is one of the reasons which should also be considered by the Board.

President.—On page 9 you have referred to the question of changes in the duty during the period of protection.

Mr. Manu Subedar.—Do you want me to say something about it?

President.—I might begin by saying that some such proposal, if I am not mistaken, was made by the last Tariff Board which was turned down by the Government and which was known as the deferred duty.

Mr. Manu Subedar.—The point is this: after the question of protection has been carefully considered, if a certain level is fixed, it is fixed in expectation of normal events. But if there is any catastrophic event, any turning of tide, any special activity by foreign Governments subsidising, any great fluctuation in exchange, unforeseen, then while your industrialist, working under the stimulus of protection to the efficiency which you have yourself laid down, might be there, all his *bonâ fide* effort would be undone by this sudden and unforeseen course of prices and in such cases we would have

regarded it as a normal adjunct of the protective policy that protection must protect. When the level which you have put down with a definite intention to attain certain results fails to do so, you must intervene. I say some Government authority—may be the Board of Revenue—on a previous occasion we suggested Collectors of Customs—should have the power. When they see an invoice very much lower than the basic price, they should say “We won’t collect the duty from you now. Your case will be considered next week” and in the next week they can automatically increase the duty. This seems to us to be an intelligent way of handling the situation instead of having a costly elaborate enquiry by a class of people whose opinion is very valuable, fixing up a level and then leaving it to fate, for the whole machinery to be swept off by some world event or other which may be very short lived—may be for three months as Java did during 1934. That is why we feel some such provision should be made and if Government have rejected it on the last occasion, we still urge this Tariff Board to make that recommendation and we feel that it is a very essential thing in the scheme of protection.

Dr. Jain.—Could you give us any instances in which this is done in any other country?

Mr. Manu Subedar.—The only instance I can give is one which, if my memory serves me right, arose in the case of sugar and it was this which induced the Government of Lord Curzon which was not a protectionist Government, which had not laid down protection as a definite State policy, to take such a step in India. They used certain powers which Government had—all Governments have reserve powers—under the Act mentioned by us. Under Section 4 of the Indian Tariff Act, Government have power and Government had in the past used that power in the case of sugar.

Dr. Jain.—When I asked you that question, I was thinking more of other countries than of India.

Mr. Manu Subedar.—The British Safeguarding of Industries Act is one in which the Board of Trade levies a duty at the first instance which may be 20 or 30 per cent. But the Board of Trade has been known in the case of photographic lenses and glasses to increase the duty from 30 to 300 per cent. without any further reference to Parliament. In France, there was recently the case when England went off the gold standard, all exports from India to France were taxed at a differential duty. All that was done straightaway. Every Government in the world retains that power.

Mr. Rahimtoola.—But that power exists with the Government of India.

Mr. Manu Subedar.—It does exist and it should be used. It is our request to the Tariff Board that they should recommend that it should be used in order to attain the purpose which the scheme of protection has.

President.—The question of manufacture of power alcohol is one on which there is unanimity of opinion. I cannot recollect any one who has not suggested that. It is a matter into which we need not go further. I may say that we had been to the Mandya Factory and seen them manufacturing power alcohol and using it.

Mr. Manu Subedar.—The prohibition in British India against such manufacture mystifies us unless it was for fear of losing some excise by illicit work and so on. But under a strict system of licensing and declarations of penalties and things of that kind, the system should work well.

President.—That is a matter which will be considered by the Board. Section 4 of the Indian Tariff Act says:—

“The Governor General in Council is satisfied, after such enquiry as he thinks necessary, that such duty has become ineffective . . .”

It depends on the sort of enquiry which he wants to be instituted before being satisfied.

Mr. Manu Subedar.—It may be on the representation of the trade or it may be on a report of the Customs officials.

President.—You have touched on this rather thorny question of contracts.

Mr. Manu Subedar.—Yes. We had complaints from merchants that the sugar manufacturers were not dealing fairly with them. When we turned to sugar manufacturing members, they made counter-complaints that sugar merchants were not behaving quite all right. When we tried to go a little deeper into it, we found that there were technical difficulties of grading at present which were causing some of these troubles. The manufacturer was not quite ready to give an undertaking which he would sometimes fail to carry out. The merchants on their part were in difficulties about selling to others because they had to sell on descriptions. We therefore requested that this question should be looked into by the Board, if there was in this a major issue which the Board could tackle as such; otherwise these are two complementary parts of the same trade and they should between them come to some arrangement. Whereas the merchants are disunited, the manufacturers have a powerful Association. If the manufacturers received protection from Government we as a public body must say that the Board should recommend that the manufacturers should be as generous and as liberal in their dealings with merchants as is physically possible. If it is beyond their power owing to some technical point, nothing can be said.

President.—This somewhat unfortunate controversy has narrowed itself down to clause 8, *viz.*, the question of quality. That is really the crux of the problem. Have you any suggestions on that point?

Mr. Dahanukar.—In this respect some standard numbers of different qualities have been fixed by the Imperial Sugar Technologist. The difficulty is that the industry is so new that it cannot reach in such a short time to a definite quality production. But since two years past, even merchants admit that there has been a great improvement in the quality and the standardisation as is requested or required. To-day there is only improvement and I think this year there have been very few complaints about the quality. But the standardisation on Java lines or on some other lines which would suit Indian conditions would take some little more time.

President.—You say "some little more time". Would you be a little more precise?

Mr. Dahanukar.—Two or three years hence, things would appear better.

President.—Do you think that standardisation at present is premature?

Mr. Dahanukar.—Yes, the industry is quite new. Some of the factories have not got good technical staff. They are also changing their staff from year to year and other difficulties are also confronting them.

Mr. Manu Subedar.—I do not know whether it would be possible in sugar as it is in steel where there is a standard material and there is a second material which is rejected material, which is less than the standard but quite good for various other purposes. In steel there is a grade material which is guaranteed and on which duty is assessed according to British Standard specification. There is another material which the Company themselves say is not up to that standard. Perhaps it may be possible to have this when we are in a position to produce quality goods.

President.—For instance, this is Dutch Standard 25 and above and the other is below.

Mr. Manu Subedar.—Those who have not reached that standard should say "We are grade 2".

Mr. Dahanukar.—It will be brought down from several grades to three or four in about a couple of years' time.

President.—Do you think that the number of standards suggested by the Technologist is too many?

Mr. Dahanukar.—I think so. I even suggested at that time that there should not be so many standards and they should be narrowed down to 5 or 6.

President.—On page 12, you say that you strongly recommend that sugar manufacturers should be compulsorily required to supply statistics of production.

Mr. Manu Subedar.—Yes.

President.—Of course they are supposed to supply them, but no penalty is prescribed for failure to submit the returns.

Mr. Manu Subedar.—Our feeling is that if an industry enjoys protection as sugar enjoys to an extent to which very few industries enjoy, the least that they could do is to assist the administration to watch the course of the industry, to mark the increase of efficiency and to see which way the whole thing is going. We certainly feel as an Association that there should be no hesitation on the part of factories in supplying figures provided there was adequate time given to them to prepare the returns and so on. They should have no hesitation to supply figures and if they did not supply, what to do? If your question implies there should be penalty, I think the penalty would come only if there was a licensing system. While the Chamber's representation says nothing on that, I may say, speaking for myself, there is a suggestion that Government should set up a licensing system in order to prevent an unhealthy growth in the number of sugar factories in this country. In case the licensing system was adopted with this main object in view, it would incidentally accomplish the subsidiary object. The party who fails to supply the figures would have his licence forfeited.

President.—I don't think that any factory would seriously object to giving figures of production. But rather the more difficult question is what further information they should supply—recovery rates and generally what might be called the pooling of information which is done in some countries but not much in India?

Mr. Manu Subedar.—The ground of hesitation was with regard to cost figures and that hesitation was not so much in supplying them to the Government as in supplying them to a small official from whose office they might find their way into the hands of a rival. This apprehension of manufacturers is very real in India, as anywhere else. No manufacturer would be happy at the prospect of information which he supplies to the rulers of the land finding its way into the hands of a rival who would make use of it. Whatever precaution the Board thinks proper in this regard should, I think, be there. The sugar people must feel they are being protected. They should be protected against misuse of the information which they supply to Government.

President.—Actually I believe in America all factories pool their information.

Mr. Manu Subedar.—They would if they had a powerful Association like what is being attempted to bring about and then it would be to their own interests to do so. The cement factories have pooled and have gone into actual merger, with this result that they have stopped production in two or three factories. They have brought down their costs of production and stopped competitive distribution. Whether that result can be attained soon in sugar, I cannot say. Our opinion is that the protected industry must give information. I lay emphasis upon it because at one time there was an industry which came to the Tariff Board for protection and when the Tariff Board asked for information they refused to give it and that was the petroleum industry. We do not want the sugar people to take that attitude.

Mr. Dahanukar.—The form which is at present adopted for giving this information is rather too elaborate. We personally believe that for the purpose of general statistics and administration by the Government such elaborate details are not necessary. Some modification of that form is possible and can be made and then there should be no objection to supplying the information. As my friend Mr. Subedar has suggested there should be protection against the information leaking out, and finding its way into

the hands of rivals. There may be several factories which may have different methods of production and it may be there is some trade secret also.

Mr. Manu Subedar.—We ask Government to do for us so many things. The industrialists in this country should be ready to give information whenever it is wanted.

Mr. Rahimtoola.—I would like to ask you a few questions with regard to the points contained in the memorandum, and to elucidate the replies you have given to the Board in your oral evidence. The first question is about prices. You have been good enough to draw our attention to the increase and decrease of prices to the extent of one rupee from 1934 to 1937. It is also mentioned at the end of page 4. My point is this: that as you are already aware, having appeared before the Board several times, the method which the Board adopts in arriving at the amount of protection necessary for an industry is to equate the fair selling price with the import price. What year would you like the Board to take into consideration if you think that the recent prices are abnormally high? I am confining myself to Java prices. In November 1936 the price was as low as Rs. 1-15-6 per maund and it is only after November 1936 that a rise has taken place. The June price is as high as Rs. 3-15-6 per maund.

Mr. Manu Subedar.—Yes. Having regard to the vicissitudes of the sugar industry, and particularly that of Java, I think it would be hazardous to fix on any one year as a standard. I think you should eliminate dips in Java prices as it dipped in 1934. In order to be fair you should take such prices as were prevailing in 1931, 1932, 1933, 1934.

Mr. Rahimtoola.—You know that protection was followed by an excise duty. It was after the levy of the excise duty that prices dropped and have continued to drop till the time when the second excise duty was levied. But since that time prices are on the increase rather than on the decrease and to-day they are higher by Rs. 2.

Mr. Manu Subedar.—Java prices do not reflect a single phenomenon; it reflects the combined effect of many tendencies in the world such as exchange difficulties.

Mr. Rahimtoola.—My point is this: do you consider these prices unremunerative for Java or do you think that the capacity of the foreign country is such that it might be a warning to India when arriving at a basic protection?

Mr. Manu Subedar.—Speaking for my Chamber I can frankly say that we have no information as to the costs in Java and it is the duty of the Board to get that. Our information as far as it goes is this, that the Java manufacturer has many advantages. We are told that his cane is superior, we are told that his extraction is very much better than in India, we are told that nothing is allowed to waste, that all bye-products are fully utilised, we are further told that they have the advantage of having a huge reserve built up from prosperous days and that their Government gives them a backing, everywhere and every time, as they have done in the last Sugar Conference. They have their own steamship and tramp ships and the manner in which they were enabled to bring their prices down to as low as Rs. 1-15-0 per maund would seem to indicate that their fighting power is enormous. If the Board took a year of particularly low prices as the standard, I think that would be very unfair to the Indian industry. I would therefore suggest that the Board should take 1931, 1932, 1933 and 1934 when there were no abnormalities and take the average price as a fair indication of the Java price.

Mr. Rahimtoola.—The last Tariff Board fixed the price of Rs. 4 per maund as the basic price for Java sugar.

Mr. Manu Subedar.—They assumed that which the Dutch have subsequently falsified.

Mr. Rahimtoola.—We want to know the views of the Chamber. On page 6 of your memorandum you draw our attention to the condition of

employment of labour and you say "Government may well consider the question of inducing the factory owners to see that, as far as possible, the labour employed by them is continuous". Have you heard of any complaints or have you any particular knowledge or is this only a general statement?

Mr. Manu Subedar.—It is a general statement but it is based on the suggestions which were made to us that factory owners are unable to give continuous employment to their men. There are some factories which I was told work for more than 250 days and there are others which work only for 125 days.

Mr. Rahimtoola.—If they employed their men continuously it might add to the cost of production?

Mr. Manu Subedar.—They would be only able to employ men continuously if they turn this labour to useful and productive purposes and we feel that it would be possible for a section at least of the entire staff to be kept up continuously. It might be found possible to utilise the bye-products or give them some kind of work which would give them some subsistence during the idle period. And I think it would be good for the industry to give them continuous job because the factory may then get them on lower wages. If you employ them seasonally you will have to pay fairly high wages.

Mr. Rahimtoola.—I understand the present protection meant by you is Rs. 7-4-0 per cwt.?

Mr. Manu Subedar.—Yes. Having regard to the tactics of the Dutch people it would be a great tragedy if all the capital sunk and the efforts made by Government were lost and the source of revenue to Government is weakened.

Mr. Rahimtoola.—The Board has been asked to keep in mind the question of Government revenue. The Government revenue has dwindled down. Can you suggest any means by which Government can get additional revenue?

Mr. Manu Subedar.—If you are thinking that Government should continue to get about ten crores of rupees as they did in one year from the Customs I think that is very excessive. Before 1931 my impression is that Government was looking forward to a revenue from sugar of about two crores and I think Government are now receiving three and this year they will be getting four crores. Revenue from Customs reached the peak of 10 crores during one year, 1930-31, but that was an exceptional period and it was unexpected even by Government themselves. But that should not be taken as the standard as to what Government should get from sugar. My submission is that Government were quite content with something in the neighbourhood of two crores of rupees from sugar before 1921-22 and they are now receiving something like three crores from excise which I expect would come to four crores next year and four crores of rupees revenue from sugar is much better than what they were getting before 1921-22.

Mr. Rahimtoola.—The Chamber has no views to offer with regard to the excise duty?

Mr. Manu Subedar.—We feel that Government must go on and there should be some money and if Government use the sugar industry as a means of collecting excise to replace the customs which is going away we have no objection to that being enforced in principle. The central excise is a recognised method of raising duty for the Central Government: particularly as the country grows towards more and more industrialisation Government must lose some of its customs revenue, and if Government finances have to be replenished it can only be done by means of excise, and therefore to excise as such as a means of raising revenue we have no objection. But that does not mean that excise could be levied at any rate at any time. Excise is a direct and heavy burden on the industry. It has to be found whether the industry can bear it or not. The excise duty which the manu-

facturer has to find, he has to find long before he has sold his stuff. He has to find it as soon as the goods leave the godown whether they are sold or not, ruined on the way, whether the money is collected or not. It is a burdensome duty and therefore there should be moderation in the levy of the duty. Those are the views of my Chamber. The levy of excise has to be watched with reference to prices very carefully and a levy which may have been correct when the prices ruling were Rs. 10 per maund becomes as a rule incorrect and most objectionable when prices dwindle down to Rs. 6. We therefore feel that while the method of taxation is all right in principle, if the amount collected by way of excise is not watched it could conceivably prove ruinous to the industry.

Mr. Rahimtoola.—Am I to understand that if protection is reduced as a result of fall in prices then the amount of excise duty should be reduced?

Mr. Manu Subedar.—I would go further and say that I can conceive of a position where not all the sugar manufacturers but some of them would probably this year have to find the excise duty not out of the price received by them but out of their capital. If they are compelled to sell their output at a loss and that loss goes up by a heavy rate of excise duty, that amount must come out of their capital, and it is quite possible that the price which dipped from Rs. 10 to Rs. 6 might take another 8 annas dip and you might find 50 per cent. of the factories in India paying excise duty out of their capital which is a result which neither the industry nor the Government contemplated.

Mr. Rahimtoola.—With regard to the manufacture of power alcohol I find the Chamber say “in some of the Indian States also, Mysore for instance, such alcohol is being allowed to be manufactured. If this freedom is denied to British Indian factories, their cost in relation to cost of factories in States would be higher” Do you mean that factories situated in Indian States are able to realise a better price for their molasses than factories situated in British India and that is why their cost of manufacture is reduced?

Mr. Manu Subedar.—If the molasses are to be thrown away then the manufacturer has to look for recouping the whole cost from sugar alone.

Mr. Rahimtoola.—Your point is that factories situated in Indian States and in British India should be treated alike?

Mr. Manu Subedar.—To equalise conditions and particularly to enable the factories to meet the disastrous fall in prices which has come about. I foresee that if something is not done prices may take a further dip and if they do so many of the companies will be ruined and how are they going to save themselves out of the situation if they do not turn to the utilisation of the bye-products? At present there is a regulation which prevents them from utilising them.

Mr. Rahimtoola.—You are urging it on the ground that it amounts to unfairness to British Indian factories.

Mr. Manu Subedar.—That is true. It enables the Indian States Factories to undercut the neighbouring factory in British India.

President.—It may enable them. At present it is not done.

Mr. Manu Subedar.—It would have a tendency to.

President.—If they did do it, there would be time enough to prevent it. In Mysore they are not selling. They are only experimenting.

Mr. Manu Subedar.—My fear is that the Indian State Factories are growing in number.

President.—It is a fear for the future.

Mr. Manu Subedar.—Yes.

Mr. Rahimtoola.—On page 10 it is stated “Representatives of some Indian States have proceeded to Java to negotiate for heavy imports of sugar in these Native States Ports in consideration of certain concession”. I was

not quite clear as to what exactly the Chamber wanted to convey to the Board.

Mr. Manu Subedar.—This is a rumour which reached us and we have stated it for what it is worth.

Mr. Rahimtoola.—I thought the tendency would be to encourage sugar production in Native States, because the whole of the excise duty goes to them and not to Government of India.

Mr. Manu Subedar.—In Indian States with regard to sugar there are two things to be considered: one is the Maritime States whose interest is not in the production and collaring of excise and whose interest is in the importation of sugar and collaring the customs. These people are trying by negotiation with the internal states and others to keep up the dwindling import of sugar. Their import of sugar is also affected, but they are trying up artificially to keep it up in order to collar the Customs Revenue. The other class of States located internally are trying to encourage the production of sugar in their own territory far in excess of their local requirements in order to get the entire excise on the production of sugar. So both these are attempts to divert income from sugar from British Indian Treasury into Indian States Treasury.

Mr. Rahimtoola.—The first class named by you are those who are unable to grow sugarcane in their States.

Mr. Manu Subedar.—More or less yes.

Mr. Rahimtoola.—It comes to that.

Mr. Manu Subedar.—They are primarily interested in the import of sugar.

Mr. Rahimtoola.—Therefore they are not in a position to grow sugarcane.

Mr. Manu Subedar.—There may be a coincidence. Most of the maritime states are interested at present only in the customs, but some of them might have land suitable for growing sugarcane, and they might go in for manufacture of sugar later on.

Mr. Rahimtoola.—This is at present only a rumour.

Mr. Manu Subedar.—Intensive negotiations with Java is a rumour. The rumour has sense in this that large buyers always get a special rate and if they could charter a boat, they could get a good rate and make a good bargain with Java people and may give extra local facilities like free godowns and so on. If as a result of these they were able to undercut Indian made sugar, they would not be able to undercut in the centre of India where sugar is made, but they would be able to undercut this at some outlying ports where Indian sugar had to be transported. If they were able to undercut like this, they would be inflicting an injury on the Government of India, because the Customs duty would be lost to the Government and inflicting an injury on the Indian manufacturer.

Mr. Rahimtoola.—The point I would like to understand is this: the imports of Java sugar have gone down due to the production of sugar in India. If there was a danger of Java increasing its imports by bringing sugar through maritime ports in British India, it may be a point for the Board to consider.

Mr. Manu Subedar.—While the Indian prices are very low on account of internal competition, perhaps these people will not get much success, but there is no limit to the uneconomic things which States and Governments can do. If the Java Government were to flirt with one of the Indian States here, that might bring down the prices still lower.

Mr. Rahimtoola.—Do you regard that at the present moment as something of a danger to be guarded against?

Mr. Manu Subedar.—As something to be kept in mind in fixing the import price.

Mr. Rahimtoola.—You mean fixing the measure of protection.

Mr. Manu Subedar.—That is right.

Mr. Rahimtoola.—On page 11 it is stated 'Another direction in which Government can help the industry is in the matter of rationalisation'. Can you explain more fully?

Mr. Manu Subedar.—This is a question which is difficult to answer. The Lancashire Textile Industry has been wanting to be rationalised and has been approaching successive Governments with some measure of control on the obstinate members of the industry who will not come into any common scheme. It is a difficult matter. In an industry if 90 per cent. of the people feel that something is wrong and therefore something must be done, there are always 10 per cent. who will say they will have nothing to do with it. At present the same is the case with the Jute Industry, and there are some people who refuse to co-operate, perhaps for their own immediate private purpose, but to the great disadvantage of the industry as a whole. I do not know whether the industry is working too much behind the shut doors, but if they have not shut the door, they ought to.

Mr. Rahimtoola.—We shall ask the mills on this point. I wish to know whether the Chamber has received any representation.

Mr. Manu Subedar.—We feel, however, that if the stage of excessive production is reached, some kind of elimination of the unfit would have to take place. It is better that this takes place by an internal arrangement than by the natural process of competition.

Mr. Rahimtoola.—On page 11 it is further stated "If the present excise policy is modified by allowing the molasses to be converted into alcohol, Government will get a greater excise revenue". Do you mean the production of Indian sugar would increase thereby?

Mr. Manu Subedar.—This is, I admit, a little loosely worded. The whole idea is this that if power alcohol is produced cheaply in this country, it could be put to a lot more uses than power alcohol imported at present is put to and if it came into a very much wider use, then whatever excise was leviable on it would yield Government a more magnificent revenue.

Mr. Rahimtoola.—There is no excise at present.

Mr. Manu Subedar.—There should be on power alcohol produced, because power alcohol would take the place of other means of generating power at present.

Mr. Rahimtoola.—That means an excise duty should be levied on power alcohol.

Mr. Manu Subedar.—There should be some future collection on alcohol.

Mr. Rahimtoola.—Is that the Chamber's opinion?

Mr. Manu Subedar.—The Chamber is not putting forward any scheme for the taxation of power alcohol as such, but it is natural that if Government is deriving revenue from one thing now and if something else is made in this country which takes the place of that thing from which Government will derive some revenue, then Government will safeguard its interest by taxing the new thing which will be brought into existence.

Mr. Rahimtoola.—Government is not deriving any revenue at the present time out of molasses.

Mr. Manu Subedar.—Not from molasses, but from petrol Government is deriving revenue. If something was done which would substitute petrol, Government will go out of their way to collect something which would be much cheaper than petrol. That was the idea.

Dr. Jain.—Your examination has been so thorough that there is nothing really left on my part to ask. On page 12 you refer to the Marketing Association. In paragraph 3, you say: "Government should assist the industry by bringing about such an organisation". What exactly have you in mind? How do you expect the Government to bring such an Association into being?

Mr. Manu Subedar.—Government can assist in many ways, not necessarily by a regulation or compulsion. If there are people in the trade who would not fall into line with others, they may not be amenable to advice from other quarters, but Government advice generally carries the day. I know that these sugar people are finding it extremely difficult to come to any common basis. They are afraid of each other. They are jealous of trade rivals. Their costs of production are so different that they feel that they cannot come together without harm. If they come together, they would not only not be harmed, but would be benefited. Government could assist them either by regulation or compulsory membership of the Association whose rules they must carry out or they could assist them by calling a Conference. The Commerce Member can call a Conference of sugar people.

Mr. Rahimtoola.—There is already a Sugar Committee of Imperial Council of Agricultural Research which meets regularly.

Mr. Manu Subedar.—But they have not yet been able to evolve a Marketing organisation.

Mr. Rahimtoola.—What more do you want Government do?

Mr. Manu Subedar.—They have not been able to evolve yet a marketing organisation in the sense of a selling pool and if they did evolve a selling pool, they would not cut each other's throat to the extent they have gone on to-day. Government could assist in this, because it is the goose which lays golden eggs. Government are collecting Rs. 4 crores of revenue and it is good for Government to encourage this industry to so organise its affairs that half of them will not be bankrupt, otherwise left to themselves owing to ruthless competition many of them will be eliminated.

Dr. Jain.—That Rs. 4 crores is on the present basis?

Mr. Manu Subedar.—Yes.

Dr. Jain.—Turning to the next paragraph where you refer to the interesting suggestion about the admission of students as apprentices on the same page, you say "It should also be laid down as under the Sugar Protection Act of Great Britain that as far as possible preference should be given to Indians in the employment of technical and managerial posts and labour". Is not that already the case? Are not factories giving preference to Indians?

Mr. Manu Subedar.—They are. That is to say the bulk of the men are Indians, but there are a certain number of Indians returned from abroad after a knowledge of Sugar Technology who have not found any good employment. There is a certain amount of heart-burning and I thought this was non-controversial.

Dr. Jain.—It is quite non-controversial. In fact it is being put into practice.

Mr. Manu Subedar.—What I feel is this if Government give encouragement to an industry, it is obvious that Government should be in a position to lay down a few things for the guidance and acceptance of the industry. One of them might be this.

Dr. Jain.—There is no harm in doing that.

Mr. Manu Subedar.—There is no harm in making that recommendation.

President.—Is there any other point which you would like to raise with the Board?

Mr. Manu Subedar.—Since the excise duty comes out as a net figure out of the gross receipts of the manufacturer, there are certain conditions. If the price is very low, when excise might be coming not out of the price received by him, but out of the capital, when such a situation is reached, as it is feared by the sugar manufacturer that it will be reached this year, the second excise duty of 8 annas per maund should be removed, if prices continue to be where they are now which is Rs. 6-8-0 to Rs. 7 in Cawnpore market. That is a suggestion which we would like to make.

President.—We shall take note of that.

INDIAN CHAMBER OF COMMERCE, LAHORE.

Evidence of Sardar P. S. SODHBANS, Hony. Secretary of the Chamber, Seth KAM RATTAN and Mr. H. S. BALHAYA, Members of the Executive Committee of the Chamber, recorded at Lahore on Monday, the 23rd August, 1937.

President.—We are very glad to see the representatives of the Chamber. What are the points you would like to emphasise to us in connection with the Sugar Industry in the Punjab especially?

Mr. Sodhbans.—As regards the industry in the Punjab that has been ruined by the excise duty. When the excise duty was originally levied, we sent a big communication to the Government of India protesting against this. The Vice-President of the Chamber who is now the President, Khan Bahadur Sirdar Habib Ullah moved also a motion in the Punjab Legislative Council as it was then constituted and a vote of censure was passed and the Punjab Government was against this excise duty, because it was not in the interests of the Industry as well as Agriculture. With the starting of many sugar factories, the agriculturists also started to grow cane. On account of the imposition of the excise duty, the industry has been killed and the agriculture has suffered. I present this communication which was sent at that moment. (Handed in). On account of this excise duty the manufacture of sugar from gur has altogether been stopped.

President.—Do you mean the open pan system of manufacturing sugar?

Mr. Sodhbans.—Yes. Take the case of Amritsar Sugar Mills. They used to get jaggery from Bihar and Orissa and used to manufacture sugar from that. That has already been stopped. Apart from that mills have closed, there was one mill which was started with the aid of the Government. The Punjab Government purchased a large number of shares.

President.—Do you mean Sonepat Factory?

Mr. Sodhbans.—Yes. Government was represented on the directorate.

President.—We have seen the Government representatives this morning and they have given us all figures.

Mr. Sodhbans.—Apart from that there are other mills like Bhalwal owned by the High Commissioner for India and one or two other mills. One projected mill was never started in the Montgomery District. The production has gone up and the prices have gone down. There is a terror everywhere. The sugar manufacturers do not make any profit. Though I am here representing the Chamber, I represent personally the agriculturists' interest. An Accountant I am by profession, but I am the President of an Agriculturist Organisation as well. In that way I am interested in both. We want that the agriculturists should not suffer and at the same time it must be remembered that the industrialists and financiers who have put in a large amount of capital should not suffer also.

President.—In your personal capacity would you say anything about the cost of cultivation?

Mr. Sodhbans.—This morning I have been looking at the cost of cultivation. I find some of the Indian Sugar Mills have already submitted a Memorandum in which the cost of cultivation has been given to some extent. I happened to be a member of the Board of Economic Enquiry. Our worthy friend Dr. Jain was also a member of the Board that has published the Farm Accounts for 1933-34. As far as the cost of cultivation is concerned, I find wages have been worked on a quite a different basis. It is rather difficult to find what the exact figures are. They arrived at

from quite a different point of view. In one place there is well irrigated area and at other the area is irrigated by canal. Here in the Punjab for ordinary trade these canes are sold by numbers and not by weight. That is another difficulty. The calculations have been made on that basis by Sardar Kartar Singh who is the editor of this book. He has given 16,704 canes at 116 canes per rupee and the cost is Rs. 144. In this way he has calculated the sale price.

President.—It is no good for us either. We want figures by maunds per acre.

Mr. Sodhbans.—I have been able to find out that the cost of production per acre in the Punjab is about Rs. 60 to 70. In one case it has been given is Rs. 80 and in another case as Rs. 54. The cost of production always changes in different areas. If it is well irrigated and canal irrigated, of course the quantity produced is higher. If there is a place like Sargodha District the cost of production is very high. Then in Gujranwala the land is irrigated by canals. The yield varies from 350 to 400 maunds. I have personal knowledge about this. Gujranwala sugar mills import their canes from my village situated about 22 to 25 miles. They are obliged to get their cane from that place, by road. The town to which I belong is situated on the bank of the river and it is a fertile place where very large quantity of cane is grown. The quality of cane also varies. The climate in the Punjab is a little bit different from other provinces. Here we have got most of the period a dry climate and if sugarcane is imported from long distances—22 or 25 miles—there is great loss due to dryage and the extraction is consequently lower in the Punjab as compared with other provinces.

President.—What about the sugar in the cane? We have been told that in the Punjab it is less than in the United Provinces.

Mr. Sodhbans.—That is also true. In 1935 there was a frost and practically the whole of the crop was damaged. Saharanpur, Meerut, Delhi; practically the whole tract of the Punjab was affected and therefore the yield was very much less. When we arrive at the cost of production, we have to take into consideration these facts. With regard to the transport of cane, we have not got any facilities. Of course the Punjab roads are the best in India—I am proud—and that is why we are taking a large portion of the Road Fund Contribution, but still the transport of cane by cart is rather costly.

President.—Is your cane sent in by rail to the factory?

Mr. Sodhbans.—By cart.

President.—To a distance of how many miles?

Mr. Sodhbans.—22 miles by road. By train it is round about. My town is situated 5 miles from the railway station. There they have to employ carts and instead of bringing the cart to the station and then loading it into the wagon, we find it much easier to carry the cane for 22 miles by cart.

President.—What is the cost of transport?

Mr. Sodhbans.—1 anna 6 pies per maund. The carts are generally owned by the growers because it pays them.

President.—In your neighbourhood do the cultivators have to borrow money for the cultivation of sugarcane?

Mr. Sodhbans.—There are two kinds of cultivators. There are peasant proprietors and there are tenants. The tenants generally have to borrow. So far as the peasant proprietors are concerned, they have to borrow if they are spendthrift, otherwise there is no necessity for them to borrow. During the course of transit there is dryage and consequently the extraction is as low as 8 per cent, as compared with 9 to 11 per cent. in the United Provinces and Bihar. There is another point with regard to molasses. For molasses no doubt we have some markets in Amritsar as there is a distillery.

As regards Gujranwala some quantity is exported to Rawalpindi and Kashmir particularly to the latter, because cane is not grown in Kashmir. They depend upon molasses from India. It is mixed with tobacco and is smoked. All the same the price we get here does not give us much consolation. In the United Provinces and other places molasses are practically thrown away. We made representation to the Government that spirit should be manufactured out of molasses so that it can become a profitable industry.

President.—Are you thinking of power alcohol?

Mr. Sodhbans.—Yes.

President.—On that point there is unanimity.

Mr. Sodhbans.—Export may be another outlet which has been stopped by the International Agreement. If we manufacture more sugar, we cannot export it.

President.—I am talking now of molasses.

Mr. Sodhbans.—Yes, that was a point which was raised some years ago. There are some powerful people who do not want this to be started, because their interests would be affected.

President.—It might affect the Government of India Revenue.

Mr. Sodhbans.—To some extent but not much. If they permit us to manufacture, they get revenue from us. If we make more money, they will get more in the shape of income tax. If they lose on the one side, they gain on the other. If the industry is more prosperous and if the income of those who are employed there is above Rs. 2,000, they will pay income-tax. I don't think that by adopting this method Government would be a loser. As regards the imposition of the excise duty, I shall tell you how it has affected the industry. The cost of production as regards Punjab is concerned ranges between Rs. 5-8-0 and Rs. 6-8-0 per maund.

President.—Including the excise duty?

Mr. Sodhbans.—Excluding the excise duty. If the excise duty is added, the price is higher than the market price. I shall just give you a concrete example of Gujranwala. Instead of making money, they are losing.

President.—We have got all the figures of Gujranwala and we saw Sir Gokal Chand Narang.

Mr. Sodhbans.—You will find that they are not able to make any provision for depreciation. The profit that is shown is made up of other items.

President.—Sir Gokul Chand explained to us in detail. You need not go into that point again.

Mr. Sodhbans.—My further submission is that if the Government really want that this industry should prosper and the millions of money which have been invested should be saved, the excise duty should be abolished altogether. They must also have a marketing organisation.

President.—What has been the effect of the syndicate which has been recently formed?

Mr. Sodhbans.—It has raised the price by 8 annas per maund.

President.—8 annas is something.

Mr. Sodhbans.—There was general panic but not now. The market is ranging between Rs. 6-6-0 and Rs. 6-13-0.

President.—I should like to ask you one question in your personal capacity in regard to cultivation. Do you know of any malpractices in regard to weignment of cane and so on by the factories?

Mr. Sodhbans.—I do not know. The Punjab people want more cane and therefore there is no likelihood of malpractices. The Punjab Zamindar is more intelligent than his confreres in other provinces. The Punjab Zamindars

have had some connection with the Army they have learnt how to tackle these things.

President.—You don't think there is much in it.

Mr. Sodhbans.—No. I am not going to say anything against my own Zamindars. I only say that they are very intelligent persons and there is nothing to say against them. They are all very shrewd persons and they can guard themselves against these.

President.—It is very satisfactory if they can.

Dr. Jain.—Would you like to compare the position of the industry in the Punjab with that of the industry in the United Provinces and offer any constructive suggestions?

Mr. Sodhbans.—I would like to give one instance. There are certain market difficulties which we are experiencing. Take the case of Gujranwala or Amritsar Sugar Factory. These mills are situated in the midst of certain markets. The sugar is produced by them is sold at the rate. The sugar produced in the United Provinces has to pay the railway freight whatever its cost of production is. But you will have to consider the percentage of yield to compensate as it is lower in the Punjab.

President.—The Punjab factories have a freight advantage.

Mr. Sodhbans.—Yes. The consumption in the Punjab is so high that they have to import sugar from other provinces because the Punjabees are a virile race.

Dr. Jain.—Have you any reliable statistics in regard to the consumption of sugar and gur in the Punjab?

Mr. Sodhbans.—No. You can ask the Agricultural Department.

Dr. Jain.—We have got some figures from them. I want to know if your Chamber has collected any figures.

Mr. Sodhbans.—No.

President.—Do you think that there is any possibility of export of sugar to Afghanistan?

Mr. Sodhbans.—Afghanistan like Kashmir is a hilly tract and cannot produce sugarcane. As the country is fast taking to modern ways of living, its requirements are met by imported sugar.

President.—By convention, the Afghanistan people can import Java sugar free of duty.

Mr. Sodhbans.—Yes.

President.—That is the difficulty.

Mr. Sodhbans.—The same applies to Kashmir. I gather that Kashmir also has a treaty with India by which it can import articles free of duty. Nepal, Afghanistan and Kashmir stand on the same footing as regards the import of Java sugar. Therefore we are feeling greatly handicapped. If our prices are reasonable, I don't see any reason why the Punjab sugar should not be sent to Afghanistan. I know something of the conditions in the Frontier. They never use sugar.

President.—There is not much Indian sugar going into Afghanistan.

Mr. Sodhbans.—It is only due to what I have said.

President.—Do you mean lack of demand?

Mr. Sodhbans.—Java sugar might be consumed.

President.—You cannot sell sugar at the same price in Kashmir as Java sugar.

Mr. Sodhbans.—No.

President.—Surely you can get a rebate on sugar exported to Kashmir.

Mr. Sodhbans.—We cannot get a rebate of duty.

President.—If you get the rebate of excise duty, you can compete.

Mr. Sodhbans.—Yes.

President.—We shall look into that.

Dr. Jain.—Are you in favour of exporting sugar to other parts of the world?

Mr. Sodhbans.—Why not to Persia, Arabia, Egypt and other places. We cannot send our sugar to East Africa, because Mauritius is closer.

Dr. Jain.—Has your Chamber considered the question of exports?

Mr. Sodhbans.—No. We have not critically examined that point. As far as the Punjab is concerned, we are importing sugar and not exporting sugar. It is for the other provinces which are manufacturing sugar in very large quantities or the Indian Sugar Mills Association to say on that point.

Mr. Balhaya.—If there is a possibility of export, 50 more factories could be started in India. As you know one crore of rupees worth of cane was burnt because there was no demand.

President.—Not as much as one crore. It strikes us that the Punjab has got a freight advantage in dealing with Kashmir and Afghanistan compared to Java sugar. There may be some possibility in that connection.

Mr. Sodhbans.—Yes, provided our cost of production comes down.

President.—The price of Java sugar has been put up slightly of late. The difference between the prices of Indian sugar and Java sugar is bigger than as it used to be and with some freight advantage it seems to the Board that it will be worth considering. If you get a rebate of the excise duty, there might be some possibility.

Mr. Balhaya.—The protective duty must remain at the same level.

President.—It is rather prohibitive because very little Java sugar is coming in.

Mr. Sodhbans.—Whenever we are invited to parties, we find invariably that cubes and other foreign sugar are served.

President.—There the manufacturers in India are a little backward and they should manufacture cube sugar to take the place of imported sugar.

Mr. Balhaya.—Our cost of production is much higher than that of Java.

Dr. Jain.—Are the imports of sugar into the Punjab generally by rail?

Mr. Sodhbans.—Generally by rail.

Dr. Jain.—Is sugar replacing gur in the Punjab?

Mr. Sodhbans.—To some extent because it has become the poor man's luxury. They like to have halwa and palao but still people like to have gur. We in the villages like to have gur. Even in the winter we have gur in the evening. A certain quantity of gur we always consume because it has some medicinal properties.

President.—It contains more molasses.

Mr. Sodhbans.—Yes. After our dinner we like to have the sweet dish in villages which is gur. In the evening instead of tea we like to have some gram with gur or parched wheat with gur.

President.—Is gur given to the cattle?

Mr. Sodhbans.—Yes.

President.—A lot of people chew sugarcane.

Mr. Sodhbans.—Yes. We buy one cane for one pice to one anna according to the size or quality of the cane. In the villages we do not have gandaris. In the cities we get in small bits with the skin removed.

President.—Is there anything Mr. Ram Ratan, which you want to say in your personal capacity as a factory owner?

Mr. Ram Ratan.—My only prayer is that the excise duty should be removed.

Mr. Sodhbans.—As regards transport I find sometimes cane is brought from a very long distance. The Gujranwala people have sometimes to get

their cane from places even as far away as 100 miles and therefore they have to pay a higher transport charge. Similarly in the case of Bhalwal when they used to work their factory, there was competition between Bhalwal and Gujranwala.

Dr. Jain.—That reminds me of the sugar factory at Batala which has been converted into one for producing starch.

Mr. Sodhbans.—Yes. The manufacture of sugar from gur has been stopped.

Dr. Jain.—All the open pan factories have closed down.

Mr. Sodhbans.—Yes. There is one other point I want to bring to your notice because it has affected very much the sugar factories. As soon as the excise duty was levied, the railway station masters and other officials played havoc with the sugar factories. They would not give wagons for the transport of sugar with the result that very large stocks remained at the factories on which they were obliged to pay the excise duty. Those stocks in sugar factories practically belonged to others who had purchased it on forward contracts and still the excise duty was levied. I consider that there has been a sort of—I might use a strong word—conspiracy between the Finance Department and the Railway Department. The factories wrote to the railways for wagons and the railways instead of supplying the required number gave only a wagon or two. That is how the things happened at that time. The factories made their forward contract at a lower rate and then came the increase in the excise duty. There has been litigation going on between sugar mills and purchasers.

President.—We have heard of that. We have had some discussion with the Railway Board on this subject.

Mr. Ram Ratan.—Last time when the Financial Commissioner of Railways came here I told him all this. The railway freight is very high. The freight from Calcutta is almost the same as that from my mill (Maholi) though the distance from Calcutta is almost double.

President.—Have you anything to say about the illegal gratification for procuring wagon?

Mr. Sodhbans.—That is a general complaint. The railway authorities are trying their utmost to eradicate this evil but they will not be able to remove it altogether. I was for four years a member of the Railway Advisory Committee. Dishonesty in the Railway Department is ingrained in their blood due to certain factors. There are different types of officers and different types of subordinates. First the dasturi (tip) system was started when the Englishmen came to India. It was a question of habit with them and they used to give tips. Their object was something else. The system which they introduced was quite different, but subsequently it became a vice with the subordinate staff. Apart from that I have definite information that the booking or the goods clerks get from public by way Dasturi a share of which goes to the inspectors and other officers. These inspectors have become transportation or commercial officers and once having acquired that habit when complaints are received against the staff they ignore the complaints. I do not say that officers who are directly recruited whether they are Europeans or Indians would ever do that, but promoted subordinates do this kind of thing.

Dr. Jain.—Have things improved as a result of your representation in Simla?

Mr. Sodhbans.—Very little improvement. There is a complaint book at the station but complaints are not recorded there. If I want to record a complaint in the book there is a great hue and cry and people are implored not to enter any complaint and are told that the complaints will be remedied but subsequently nothing is done.

BENGAL NATIONAL CHAMBER OF COMMERCE, CALCUTTA.

**Evidence of Messrs. D. N. SEN, B. P. DALMIA, B. C. GHOSE,
N. C. GHOSH and J. N. SEN GUPTA representing the
Bengal National Chamber of Commerce recorded
at Calcutta on Thursday, the 16th
September, 1937.**

President.—Does your Chamber contain any factory owners as members?

Mr. Dalmia.—Yes.

President.—The case of the factories will, I imagine, be put up by the Millowners Association

Mr. Dalmia.—That is so, but there are some points of special interest to this Province which perhaps the Millowners Association may not represent.

President.—I am just trying to see on what particular points we can have useful discussion with you. We have already examined the Indian Sugar Merchants Conference at Cawnpore. You might have seen their evidence in the papers.

Mr. Dalmia.—Yes.

President.—Are there any special points which you wish to put forward?

Mr. B. C. Ghose.—We have a special point of view to put forward from the standpoint of Bengal. It is elaborated in our memorandum. This province has not developed the industry for various reasons mentioned therein. We feel the position of the sugar industry is not quite satisfactory and that it should be placed on a satisfactory footing. At the same time we feel that the adoption of quota or licensing would not be conducive to the best interests of the industry,—at least from the point of view of this province, because we have not developed it. The resources are very great here and the consuming capacity of this province is also large. In these circumstances we hold that the adoption of any of these devices would be suicidal from the point of view of Bengal, as it will not only curtail the development of the existing factories but also put a restraint on new entrants. There may however be some sort of licensing. Suppose a particular company develops a certain area by putting in capital, bringing together labour and providing stimulus for the cultivation of sugarcane. Another man should not be allowed to come and put up a factory in that area.

President.—Licensing can be looked at from two points of view. The general point of view is to restrict the production in India as a whole. It is an all India question. There is also the local question which you have raised possibly in connection with zoning, and that is, it may be desirable to restrict the number of factories in a particular local area. So, the question of licensing has to be considered from those two points of view. I understand that you are against all India licensing, but you would not object to local licensing.

Mr. B. C. Ghose.—What I mean is this. I should not like to restrict the number of factories as such or say that there should not be any more new factories. But there may be licensing just to see that factories are not put up where they should not be.

Mr. Sen.—It is not only that. The principle is this. When protection was granted to the sugar industry there was no factory at all in Bengal. So, Bengal had not the opportunity to take the fullest advantage of this protection. That is the first point. There was, as far as I remember, in 1913 or 1914, a factory in Bengal and that went fit. Since then there was a feeling in the province that the sugar industry was not possible in Bengal. Added to that, the Report of 1932 was a pessimistic report

and capital felt shy to start any factory in Bengal. The net result was that when tariff protection was given to the industry there was absolutely no sugar made in my province and our people could not avail themselves of the advantage of protection. You may say "That was because there was no factory. Why complain now"? We are now complaining for this reason. We are just starting to develop the industry and if this measure of licensing is to be introduced now, it will be a great obstruction.

President.—Can you tell us what mills are in course of construction or projected?

Mr. Dalmia.—There is one under construction at Ramnagar and another near Calcutta.

Mr. Sen.—It has taken a definite shape and will be started soon.

Mr. Ghosh.—There are other small concerns too.

President.—Do you mean open pan concerns?

Mr. Dalmia.—Vacuum pan concerns.

Mr. Sen.—The main point is this. The consumption of sugar is more in Bengal than we produce, and we can produce more. We have every claim to develop the industry in Bengal. The inhabitants of Bengal are all sweet tempered and that is why they are eating more sugar; and we want to increase our production. By the introduction of the licensing system you want to restrict us.

President.—You are not justified in saying that. We do not want to restrict anybody. We only want your views on that question.

Mr. Sen.—It might sound very bad in these days. It is a sort of communal argument that I am putting forth now: my province for myself and his province for himself. I cannot help it because Bengal has suffered a lot. It has not been able to take the fullest advantage of protection. We are the biggest consumers. The plantation of sugarcane could be developed here. Further, the most important point is that the Government, as you all know, have been trying to increase the plantation of sugarcane which is a very good substitute for jute. Now comes the question of restriction upon the starting of new factories. That is very hard. Of course, I must admit that there has been no spectacular expansion of sugar mills here as there has been in Bihar and in the United Provinces. But that is no reason why the growth of the industry should be restricted by any artificial process like licensing and fixing of quota.

Mr. B. C. Ghose.—Even from economic considerations, if factories could be started on an economic basis, it would be to the ultimate benefit of the consumer.

President.—Can sugarcane compete with jute at the present level of prices?

Mr. Sen.—There is no question of competing. Government want to restrict the cultivation of jute as there has been over-production of jute. The cultivator must earn his living. He cannot grow jute and can grow the alternative crop which is sugarcane. As regards the question of over-production of sugar, there is over-production if you take the whole of India into consideration; there is no over-production so far as Bengal is concerned.

President.—Bengal is an importing province.

Mr. Sen.—Bengal is consuming 130,000 tons and producing only 23,000 tons. There is ample scope for the development of the industry. Who knows in future some day probably Bengal may be the biggest sugar producing province. Take the case of the cotton industry. At one time Bombay was the biggest producing centre of cotton textile goods. Now the centre of gravity has shifted to Ahmedabad. At present Northern India is producing a very large quantity of sugar. Sometime in future the centre of gravity may shift to Bengal. What we urge therefore is: let the process continue and let us find out where the centre of gravity is. So

far we have been producing only 18 per cent. of our requirements. We can produce much more. The Industrial Research Bureau and the Imperial Council of Agricultural Research might help us a lot in improving the quality of sugarcane. So far, they have not done anything.

President.—I think the Imperial Council of Agricultural Research do contribute to the Station at Dacca?

Mr. Sen.—That again is another point.

President.—We will come to that. We will take note of the point that you are opposed to restriction of factories in Bengal.

Mr. Sen.—Yes.

President.—What is the next point you wanted to raise?

Mr. Sen.—Our next point is with regard to the Imperial Council of Agricultural Research and the Provincial Agricultural Department. The results so far achieved are not at all satisfactory. We want that research should be undertaken in such a way that it would help the growth of sugarcane and improve the quality of the cane itself.

President.—We have been told that the sucrose content in the Bengal cane is somewhat inferior?

Mr. Sen.—That point has to be seen. There is diversity of opinion on this. I have just read a book on sugarcane growth and it has been stated that there is ample scope for development of sugarcane crop here and improvement in quality and sucrose content.

Mr. Dalmia.—So far as potentiality is concerned, there is no doubt that Bengal has natural advantages for the growth of sugarcane. But unfortunately experiments and research so far carried on are very limited. In Bengal sugarcane has been treated as a secondary crop and therefore very little work has been done at Dacca on it and the present results are not very encouraging. We have been manufacturing sugar for the last five years and we find that although we had based our hopes on the evidence tendered by officers of the Agricultural Department before the last Tariff Board, in actual practice we do not find that there is very much difference between farm cane and cane grown by the cultivator on experience based on farm canes and in fact the farm cane is inferior, and that in spite of the fact that the cultivation in Bengal is not so much developed as in Bihar. The results so far achieved are not very satisfactory but there is no denying the fact that the soil is very good and the irrigation facilities are there.

President.—We have been informed in Bihar recently that cultivation there is very backward!

Mr. Dalmia.—But in Bengal it is still more backward.

Mr. Sen.—If we get help from Government this backwardness can be removed. Nothing has been done out of the excise duty by the Agricultural Department and the grant is small also.

Mr. N. Ghosh.—There was a great prejudice that sugarcane cannot be made a success in this province and that was the reason for the backwardness.

Mr. Dalmia.—There is only one variety that has been introduced in Bengal, namely Co. 213. In Bihar and other provinces there are late and early ripening varieties but here there is no experiment uptill now on a commercial scale on early and late ripening varieties. The potentiality of the province is there; the natural condition of the soil and the climate are all helpful.

Mr. N. Ghosh.—I may also submit that as big consumers of sugar we should have a bigger share of the contribution by the Government of India for research work.

President.—I take it the argument is that Bengal has got an alternative cash crop in jute whereas there is nothing in Bihar.

Mr. N. Ghosh.—As regards licensing, it may be done in Bihar and United Provinces so that there will not be overlapping of factories.

President.—Do you think that the research and development work in this province is comparatively backward and therefore more money ought to be spent?

Mr. Sen.—Yes.

President.—In what directions you think more money ought to be spent?

Mr. Dalmia.—There are two or three directions in which more money can be spent. First is the development of research on varieties which may lengthen the season here.

President.—Do you want more sugarcane stations or something of that kind?

Mr. Dalmia.—Certainly more stations.

President.—Where?

Mr. Dalmia.—Just in the areas where there are factories established and more sugarcane industry growing up. There are certain areas where the industry has already got a foothold.

President.—What are the principal sugarcane growing areas in Bengal?

Mr. Dalmia.—Rajshahi, Nadia, Dinajpur, Dacca, Munshiganj. At all these places factories have been established but there is no sort of experiment or research or demonstration work carried on except in ordinary demonstration farms which exist in those places. But they take lukewarm interest in sugarcane because that has not been the principal crop in Bengal. Research work is directed more towards paddy and jute. So far as I understand, the difficulty with the department lies in financing as they are getting a very small share of the excise duty.

Mr. Sen.—The principle of distributing this money should be equitable.

President.—What is the next point you want to raise?

Mr. Dalmia.—It is about the assistance which is being rendered by the Sugar Technologist and the Agricultural Research Bureau at Delhi. Our suggestion is this that this service may be organised on the lines of the Java Station. When the industry is faced with a big industrial problem, Government must appoint highly qualified technical staff which it is impossible for individual factories to do. In Java there is a common bureau where all sorts of technical advice on difficult points is available. For agriculture also they take the analysis of the soils to see what manures have to be used to improve these localities and what particular varieties of cane would suit these areas. In this way a good deal of co-operation exists between the bureau and the factories. But here there is nothing of the kind. It is only some compilation of figures and some sort of research work that are done here, but beyond that factories do not get any help at present. There isn't any sufficient and capable staff at the head of each line. It requires at least one capable man at the head of each line and then only will they be in a position to advise. If we approach them now we cannot get any expert advice.

President.—They have got a well equipped staff.

Mr. Dalmia.—I do not think so. If any such problems as I have mentioned are referred to them I do not think there is such a staff or organisation which can offer advice.

President.—We have been informed by the Sugar Technologist that he was consulted by a large number of factories and he gave advice on technical points. He advises about the lay out and so on.

Mr. Dalmia.—But the problems which the factories have to face are of a more technical nature.

President.—Do you maintain that the head of the Technological Institute . . .

Mr. Dalmia.—I do not mean any disrespect to the Sugar Technologist but still we cannot say that there is such a nice organisation as is available

in Java so that any technical question can be referred to them. The personnel which are employed there, I do not think, are highly qualified. Factories individually have got better staff than the Institute there; that I can say.

President.—What about the transport of cane?

Mr. B. C. Ghose.—As regards the transport of cane, the position is this that the rate on the Eastern Bengal Railway is very much higher than on other railways and their point is that they cannot possibly carry sugarcane at a lower rate. But if they do give us some facilities probably it would be to their advantage in the long run because that will give them more traffic which will recompense them for any loss they sustain now. I know that the Board can do nothing in the matter but if they can make some recommendation to that effect it would help the industry in Bengal.

Mr. Dalmia.—The whole system of transport in Bengal is bad.

President.—We had representations from certain factories on the subject and the Board will visit the areas and will no doubt hear more about it. But it is hardly open to the Tariff Board to recommend preferential treatment for one province against another.

Mr. Sen.—If the East Indian Railway rates are high, the Eastern Bengal Railway rates are much higher. I had occasion to discuss this matter at the Railway Agents' Conference and I placed this matter very strongly before them, when they definitely said that the cost of the Eastern Bengal Railway was higher. What I proposed is this "Your costs may be higher, but if you give us cheaper freight rates you get more freight from certain areas from where you were never getting any freight at all". I think there is some ground for a reduction. For instance, the Bengal Nagpur Railway were charging the same rate for rice and paddy. I suggested to them "if you made a differential treatment in respect of the freight rates on rice and paddy, rice being a finished product and paddy being a raw material, you will see that there will be more movement of paddy and you will get more freight". I am glad to say that the Agent of the Bengal Nagpur Railway had to admit that what I said was true, and that is my submission in this case also. The Railways should be persuaded to give us some concession in freight rates. That would give them more traffic from quarters from where they have been getting very little freight. In our case they are getting it twice, once for carrying the raw material and getting it again for carrying back the finished product. We want some consideration which would mean a lot to us and will enable us to send our finished goods to places where we never thought of sending it.

President.—We will remember that point. There is the question of a futures market for sugar.

Mr. Dalmia.—So far as we are concerned we take the view that until and unless we have an export market the existence of a futures market may not be helpful because the tendency may be bearish and that will affect the whole industry and agriculture.

President.—You think a futures market is only suitable for a commodity which has an export market?

Mr. Dalmia.—Certainly, because the principle is that if there is no outlet for the sugar then in that case there will be more sellers than buyers and the result of that will be to depress the price. It is not that any *bonâ fide* business has been done. It has been observed in many other commodities.

Dr. Jain.—For instance?

Mr. Dalmia.—In cotton market also it exists on a very large scale and well organised. I was a member of the East India Association for three years. I know from my experience the general tendency of the market people who are not engaged in *bonâ fide* trade—neither exporting nor manufacturing anything—but simply dealing in futures; it is their practice to

confine themselves to the bearish side of the business for the simple reason that it requires some capital to hold a commodity. If one only deals in future sales, he can conveniently do so. He has to stake nothing.

Dr. Jain.—Has there been no trouble over cotton markets?

Mr. Dalmia.—There have been troubles.

Dr. Jain.—On the whole it has worked satisfactorily.

Mr. Dalmia.—The cotton future market has been existing for a very long time. The export market is also there. It is principally an export commodity. Not even 50 per cent. is consumed in the country and the bulk is going outside. Here in the case of sugarcane the crop is extensively used in the country and there is no market outside.

Dr. Jain.—The Merchants Association are definitely of the opinion that it is in the interests of the industry there should be a futures market.

Mr. Dalmia.—What the merchants need is some sort of contract which will serve the interests of both parties, the factories and merchants. There are certain misunderstandings between these which ought to be removed, but I don't think the futures market will help them in any way.

Dr. Jain.—That is your view.

Mr. Dalmia.—That is our view. The conditions must be standardised. In one respect they are quite right. At present there is no standardisation of contract. Every factory more or less has its own private contracts, though they are based on the form approved by the Sugar Mills Association.

President.—There is the standard contract form.

Mr. Dalmia.—Yes, but the sales are made on orders and the orders are generally transacted in the upcountry. The practices differ from factory to factory to a certain extent, and if these are standardised, it would be better. Of course the Sugar Mills Association are making an effort in that direction. The position has improved since being better than what it was.

President.—What other points would you like to raise?

Mr. Dalmia.—The other question was the general question of transport.

President.—You have touched on that.

Mr. Dalmia.—We have touched on the Railway side. The road has also to be improved. The excise duty has hit very badly both the cultivators and manufacturers.

President.—On whom in your opinion has the recent additional excise-duty fallen?

Mr. Dalmia.—On the industry and on the cultivators.

President.—Do you mean the manufacturer when you say the industry?

Mr. Dalmia.—Yes.

President.—Nothing on the consumer.

Mr. Dalmia.—Nothing, because the prices have not responded.

Mr. Ghosh.—But for the excise duty the price would have been lower and the consumption would have increased.

President.—That is a point that could be argued.

Mr. Sen.—I would like to say that those who are just beginning to start a sugar mill in Bengal have no reserve and so they have to pay excise duty from the very beginning. If the excise duty is lowered, they get an advantage.

Mr. Dalmia.—Not only that. In Bengal we have to face various handicaps and difficulties.

Mr. Ghosh.—There was no established industry in the province. We have had to organise cane plantation and the whole system was set up from the very start. For that reason our costs were higher than those in the United Provinces. Added to that we have had to pay the excise duty. As soon as the factories began to be started, the excise duty came in and

it was enhanced subsequently. The factories didn't get a chance to build up any profits. So far as I am aware two or three factories have lost money instead of making any profit. In Bihar and the United Provinces they had the chance to make certain reserves and profits and they are comparatively in a better position to stand this than we here in Bengal are. Of course we started late and there was no industry existing and we had to organise.

Mr. B. C. Ghosh.—There is a general agreement that India should be allowed to export. There has been a protest all over the country against the ratification of the convention.

President.—We understand that it is going to be debated in the Assembly on the 20th September, 1937.

Mr. Sen.—There is one point more and that is the propaganda for more consumption of sugar.

President.—We look to Sir Vijayaraghavachariar in that matter.

Mr. Sen.—I am supplying from my factory thousands of cups containing the words 'Drink more Tea'. The words 'Eat more sugar' may be added.

Mr. N. C. Ghosh.—As a matter of fact when we started the propaganda for the restriction of jute, we started the campaign for eating more jaggery so that the cultivation of sugarcane might be benefitted.

Mr. Rahimtoola.—Mr. Sen, what is the membership of your Chamber?

Mr. Sen.—About 400.

Mr. Rahimtoola.—How many mills have you got as members?

Mr. Sen.—We have 3 mills as members.

Mr. Rahimtoola.—Out of 6.

Mr. Sen.—Out of 4.

President.—There are 7 mills on the list.

Mr. Sen.—We have three mills as members.

Mr. Rahimtoola.—I have got a list consisting of 6 mills.

Mr. Ghosh.—Others are all smaller mills like Deshbandhu Sugar Mills, East Bengal Sugar Mills, and Dayamoyee Sugar Mills. The biggest one is the North Bengal Sugar Mills.

Mr. Rahimtoola.—Apart from these how many more mills have you got?

Mr. Dalmia.—The biggest mill is the North Bengal Sugar Mills at Gopalpur. Another mill is at Sitabganj and another in Barabanki.

Mr. Rahimtoola.—There are six mills.

Mr. Dalmia.—Yes, there are others in course of erection.

Mr. Rahimtoola.—The grievance made is with regard to the consumption and production. When did these factories start? Did they start after the protective scheme came into force.

Mr. Dalmia.—North Bengal Sugar Mills started first and Sitabganj started in December, 1933.

Mr. Rahimtoola.—Did they start working in December, 1933?

Mr. Dalmia.—In December, 1934. In that very year the excise duty was imposed.

Mr. Rahimtoola.—It came into force in April, 1934.

Mr. Dalmia.—That was the first season.

Mr. Rahimtoola.—You started operation at the close of 1934.

Mr. Dalmia.—No, at the close of 1933.

Mr. Rahimtoola.—When had you to pay the duty.

Mr. Dalmia.—After three months.

Mr. Rahimtoola.—The industry has been started since last three years. I want to know what is your experience with regard to its working here.

Mr. Dalmia.—In what respects?

Mr. Rahimtoola.—The point of view you have put forward to the Board is that you would like to develop the Sugar industry in Bengal and that

is why you are opposed to the licensing of factories and the quota system. I want to know the progress of the industry in Bengal after the protective scheme in order to see whether there are any future prospects for expansion.

Mr. Dalmia.—The grey silt soil is fertile.

Mr. Rahimtoola.—What kind of soil have you got?

Mr. Dalmia.—Grey silt soil.

Mr. Rahimtoola.—Have you made any investigation whether that is the best soil?

Mr. Dalmia.—We are advised that this is the proper soil.

Mr. Rahimtoola.—Did the Provincial Government appoint any special officers or conducted any investigation?

Mr. Dalmia.—The Provincial Government have not appointed any special officers for this. Of course they have published information and also furnish information on enquiry. They think that this grey silt soil would be quite suitable for sugarcane.

Mr. Rahimtoola.—How far is your cane area from the factory?

Mr. Dalmia.—I can only answer with reference to North Bengal Sugar Mills about which I know. We get our cane supplied from within an area of about 50 miles.

Mr. Rahimtoola.—Have you no gate cane?

Mr. Dalmia.—We had to cart only that portion which was available in the vicinity of the factory. That which was located at a longer distance we had to bring by rail. It is carted to the railhead and transported by rail.

Mr. Rahimtoola.—Most of your cane comes by rail.

Mr. Dalmia.—At present we are getting about 50 to 60 per cent.; 50 per cent. by cart and 50 per cent. by rail in the case of North Bengal.

Mr. Rahimtoola.—A point was raised here with regard to transport. I want to ascertain the distance from which the factory is able to draw its cane.

Mr. Dalmia.—Within an area of 50 miles.

Mr. Rahimtoola.—What is the recovery that you get?

Mr. Dalmia.—8-99. It has been ranging up till now between 8-25 and 9.

Mr. Rahimtoola.—Which is your principal market? Do you bring it to Calcutta or do you sell in districts?

Mr. Dalmia.—We sell in Calcutta and districts in Bengal and Assam.

Mr. Rahimtoola.—Which sugar comes in competition?

Mr. Dalmia.—Bihar sugar, because their cost of production is lower. They have trained labour which we haven't got here. Of course we are newcomers, and that sort of facility we haven't got. The cost of transport is very high. The problem of road is very difficult.

Mr. Rahimtoola.—Was this sugarcane area developed, because there was a slump in the jute market or was it due to the protective scheme that came into being?

Mr. Dalmia.—I think both are responsible. Because there was protective scheme the factories came into being. There was little effort made by the Department of Agriculture to develop sugarcane in certain areas to any factory scale. There were patches here and there. Later on when the factory was established there was a demand for sugarcane and then the Bengal Government and everybody dealing in jute were all sympathetic and that helped also.

Mr. Rahimtoola.—Are the factories getting any assistance from the Local Government?

Mr. Dalmia.—Not directly. The jute propaganda has helped it to a certain extent.

Mr. Rahimtoola.—Whether they get anything in the shape of research grant apart for the Dacca farm.

Mr. Dalmia.—Apart from the little research done at Dacca, nothing much. The Department of Industries are very sympathetic. Beyond that nothing substantial has been done by them. They have not got the resources and means. They are not properly equipped.

Mr. Rahimtoola.—You know the protection is granted to the industry on an All-India basis.

Mr. Dalmia.—Yes.

Mr. Rahimtoola.—Your point of view leads me to believe that you want to provincialise the Sugar industry. Is that the object with which you are pressing your point of view about quota and licensing system?

Mr. P. C. Ghose.—Not that. Take any other industry. There must be some relation between demand and supply and that doesn't mean that the existing factories should not expand. At the same time there is some truth in what Mr. Rahimtoola has said. Take Great Britain and America. They want to a certain extent to restrict trade and produce everything within their own country as far as possible.

Mr. Rahimtoola.—You want to make India into so many Indias?

Mr. Ghose.—Not exactly.

Mr. Rahimtoola.—You are comparing Great Britain with India. I am talking of provinces.

Mr. Ghose.—On a smaller scale that is partially true, but mainly that is an economic consideration. Take the other alternative. Supposing you restrict, there is no further expansion and existing factories are there. Do you think that is a desirable proposition? You have got to have relation between demand and supply.

Mr. Rahimtoola.—Do you think it would help India to produce more than it can consume?

Mr. Ghose.—Yes if India can get it at an economic price or at as low a price as possible.

Mr. Rahimtoola.—To start cut-throat competition and thereby eliminate certain mills.

Mr. Dalmia.—I representing a factory differ in this matter from the Association.

Mr. Ghosh.—In a sense you are right, but that doesn't come into the whole picture. What is the alternative?

Mr. Rahimtoola.—The Board are not here to answer questions. The point of view I want to put before you is this. India at present is producing more than it is consuming and suggestions have been made how to deal with this problem. That is the reason why we want to have the views of your Association. The Board have arrived at no final conclusions in the matter. You are opposing restriction on the ground that Bengal is not producing as much as it is consuming.

Mr. P. C. Ghose.—If we are allowed to produce more, that will react on certain other provinces. But there is another point. Supposing we consume a certain quantity to-day, that doesn't mean we are not going to consume more, and if we do expand our consumption, it will not necessarily adversely affect other provinces. But if you do think and assume that the consuming capacity of the market is given and there is no possibility for expansion, then, what you say is perfectly right.

Mr. Rahimtoola.—The suggestion that has been made with regard to licensing and quota is to appoint a representative Committee on the lines

of the Tea Cess Committee with power to deal about the question of the increase of Production.

Mr. Sen.—You are perfectly right when you said that whenever there is overproduction, there will be cut-throat competition; but a certain province may have some special claim and if that province has put forward that claim, the Board has to examine it carefully to see whether there is any substance in that. We have put forward this claim to you. We are increasing the production of sugarcane, because it is being substituted in place of jute. Government are asking us to restrict jute production and are suggesting as an alternative to produce more sugarcane. If we are to produce more sugarcane, we are going to start more sugar factories and as a matter of fact sugar factories are being started. If sugar factories are being started, and possibly some more will be started in the near future, we will be handicapped if there is a sort of licensing and quota system. Every province is going by its own natural products. We are not allowed to produce more jute. We are asked to produce more sugarcane as having very good potentialities. We are now faced with the proposal of restriction not to start sugar factories.

Mr. Rahimtoola.—Government are encouraging you to produce more sugarcane. Is that your point of view?

Mr. Sen.—Yes. Jute is an important crop, the cultivation of which is being restricted because of overproduction.

Mr. Rahimtoola.—At what price are you able to get your cane for your factory?

Mr. Dalmia.—We get it at about 5 annas 6 pies per maund.

Mr. Rahimtoola.—Delivered at the factory?

Mr. Dalmia.—Yes.

Mr. Rahimtoola.—Including the cost of transport?

Mr. Dalmia.—Yes.

Mr. Rahimtoola.—I suppose there is no shortage in the quantity of cane required by the factory.

Mr. Dalmia.—Last year there was. Though there was a surplus in other provinces we were short of cane.

Mr. Rahimtoola.—What is the capacity of your factory?

Mr. Dalmia.—1,000 tons.

Mr. Rahimtoola.—What is the period of actual work?

Mr. Dalmia.—We worked last year from the 3rd of December to 20th April.

Mr. Rahimtoola.—With regard to the excise duty (page 14) is this the amount paid by all the companies together?

Mr. Dalmia.—No, only by North Bengal Sugar Mills.

Mr. Rahimtoola.—There are three factories who are members of your Association?

Mr. Dalmia.—Other factories could furnish the information, if desired.

Mr. Rahimtoola.—What is the capital invested in North Bengal Sugar Mills?

Mr. Dalmia.—The block capital is about Rs. 22 lakhs. The share capital is Rs. 20 lakhs.

Mr. Rahimtoola.—Rs. 19,180 is the dividend that was declared on Rs. 20 lakhs capital.

Mr. Dalmia.—That is the dividend declared in favour of preference shares. The preference share capital is Rs. 10 lakhs and the ordinary share capital Rs. 10 lakhs.

Mr. Rahimtoola.—Is it at a fixed rate of interest?

Mr. Dalmia.—Yes, 6 per cent.

Mr. Rahimtoola.—Your Committee's view is that present protection should continue for the next seven years.

Mr. Dalmia.—That is so.

Mr. Rahimtoola.—That means that the present protective duty of Rs. 7-4 per maund should continue.

Mr. Dalmia.—That must continue.

Mr. Rahimtoola.—With regard to the complaint you made about the Sugar Technologist at Cawnpore, did your factories or your Association seek any assistance?

Mr. Dalmia.—No, we did not.

Mr. Rahimtoola.—How do you say that they are of much help to the industry?

Mr. Dalmia.—We mean that the organisation they have and the personnel they have are not such as to be in a position to render the sort of technical assistance which the factories may need.

Mr. Rahimtoola.—Have you ever applied to them for assistance? Have you asked for any research work to be done?

Mr. Dalmia.—That is my personal impression.

Mr. Rahimtoola.—Personal impressions must be based on something. It is an Institute belonging to the Government of India and it is doing work with a view to help the industry. I want to know whether it has been of assistance to all provinces.

Mr. Dalmia.—That is not the impression of only myself. That is the impression of the industry in general. There does not exist in Cawnpore any highly qualified staff to render such technical assistance as is available, say, in Java.

Mr. B. C. Ghose.—There is such a feeling in the industry. And the industry is probably well advised not to act upon the advice of that officer.

Mr. Dalmia.—It is not by way of any particular complaint that we have made this remark. Our suggestion is that it requires to be improved to make it more serviceable.

Mr. Rahimtoola.—Your statement is based on mere impression.

Mr. Dalmia.—That is our impression based on certain facts.

Dr. Jain.—You say that there are great possibilities of extending the sugar industry in Bengal.

Mr. Dalmia.—Yes.

Dr. Jain.—Are you aware of the representation which six sugar mills made to the Hon'ble the Minister in June last? You have probably seen the representation.

Mr. Dalmia.—Yes.

Dr. Jain.—One of the points made in this representation is that the reasons for which Bengal has failed to avail herself of the opportunities afforded by protection may be summarised as follows:—

(1) Bengal capital is shy.

The representation goes on to say "it is not a compliment on our part to say that three big sugar mills are being successfully run, controlled and financed by non-Bengali capitalists who have invested about Rs. 40 lakhs in these concerns. (For want of proper finance it has not yet been possible to start a single mill of high tonnage purely by the Bengal capitalists." In the light of these statements, would you still want the expansion of the industry?

Mr. Dalmia.—That does not mean that Bengal has not got potentialities.

Dr. Jain.—That is your own representation. I only want to understand the position.

Mr. B. C. Ghosh.—The fact is that we have not taken advantage of protection.

Dr. Jain.—But you are hoping that Bengal capital will be forthcoming in the future.

Mr. Ghosh.—Yes. Deshbandu and Eastern Bengal Mills started only recently. They are purely Bengali concerns.

Dr. Jain.—One of the recommendations made by the six mills to the Hon'ble the Minister was the restriction of production of sugar on the quota system and the introduction of licensing system of new factories and expansions.

Mr. Dalmia.—I have already said that I personally differ from the view of the Association.

Dr. Jain.—About the excise duty, in answer to a question put to you by the President, you have said that the burden of the additional excise duty of 1937 has been partly borne by the manufacturers and partly by cane growers. What evidence have you to suggest that the burden has been borne by manufacturers?

Mr. Dalmia.—Because the price has not expanded.

Dr. Jain.—Then the whole burden might have gone to the cane grower. That is the view of some people. Your view is that it is partly borne by manufacturers.

Mr. Dalmia.—It is based on this. The price of sugarcane has not been reduced to the same extent.

Dr. Jain.—Not to the full extent of the duty.

Mr. Dalmia.—Partly it has been reduced. By that I mean some burden has gone to the cultivator.

Dr. Jain.—Is it to the cultivator that the burden has gone mainly and to a small extent to the manufacturer?

Mr. Dalmia.—It is divided between the two in my opinion. If the whole burden had been passed on to the cultivator, the price of sugarcane would have been reduced still more.

Dr. Jain.—You would not say that it is largely gone to the cultivator.

Mr. Dalmia.—I would not say that.

Dr. Jain.—You were making a suggestion that Indian Institute should be organised on the lines of the Java Research Station. I want to know if the advice given there is free.

Mr. Dalmia.—I think the industry makes some sort of contribution. That is a voluntary association organised by the industry itself. But in our case contribution is taken by Government in the form of excise to a certain extent. It may be organised by the industry or by Government. But the institution is a necessity. It may be organised by the co-operation of the two.

Dr. Jain.—Your suggestion is that now that the excise duty is levied it should be organised out of the excise revenue for the benefit of the industry.

Mr. Dalmia.—Yes.

Dr. Jain.—Although the industry is prepared to contribute, if necessary.

Mr. Dalmia.—Yes, if the industry is approached on the particular point. But the industry is already paying a heavy duty.

Dr. Jain.—Apart from that, the industry has to pay for the advice.

Mr. Dalmia.—If anybody consults, he has to pay for it.

President.—I should like to make one point perfectly clear. The fact that the Board has asked certain questions for instance about licensing does not in the least imply that the Board is in favour of licensing of factories. That point of view has been forward and so we have asked questions about that. We have not thought about it yet as a Board.

As regards overproduction in sugar, we have not yet considered that point at all as a Board.

Mr. N. C. Ghosh.—Regarding the complaint we have made, the general feeling is that these Government Departments have not yet been fully organised. When we wanted to start a Sugar industry in Gopalpur we asked for a list of sugarcane growing areas from the Department of Agriculture and they gave us a list. We toured round those places and found that they mostly proved incorrect. Our general feeling is that Government Departments are not properly organised.

Messrs. I. T. PAREKH & CO., BOMBAY.

Evidence of Mr. I. T. PAREKH recorded at Bombay on Thursday, the
5th August, 1937.

President.—I think you were present during the examination of the Sugar Merchants' Association. Perhaps it is hardly necessary to cover the same ground again. You have written a very interesting note on various points. Are there any particular points on which you would like to stress beyond the points we have discussed the other day.

Mr. Parekh.—I want to say something about the export possibilities. As we have got overproduction, I think without export there is no salvation for the industry and for that if we are given Colonial preference as it is given to Mauritius, even today we can export sugar.

President.—What do you think of the possibility of Ceylon as your market?

Mr. Parekh.—Yes, even Afghanistan we can do. But we have to negotiate with the two respective Governments. Without any preference we can't do it.

President.—Ceylon is part of the British Empire.

Mr. Parekh.—Yes.

President.—Possibly trade agreements with Ceylon might be possible.

Mr. Parekh.—They have not got the same tariff as British India.

President.—You have given some interesting figures on pp. 14 and 15.

Mr. Parekh.—Yes.

President.—To what other points you would like to draw the attention of the Board.

Mr. Parekh.—Standardisation of quality. As far as my opinion is concerned the number of standards prepared by the Sugar Technologist is not all right. It may be all right for College room or for academic purposes.

President.—For grading?

Mr. Parekh.—In Java, sugar standards are prepared on shades and not on crystals. Sugar after all is a cooking process on a bigger scale. Therefore you cannot expect uniform crystals every time. It is useless to have standards based on crystals and shades together. The standard must be based on shades only. In Java too in former times sugar was sold on certain factories' names. Until recently say about 1930 or so we were selling Java sugar on such names as T. M. O. and G. W., concise nomenclatures of factories that produced sugar.

President.—What standards would you suggest?

Mr. Parekh.—I would suggest that the Sugar Merchants Association, the Sugar Mills' Association or Government may ask for samples from all factories and select the medium grain sample as the basis on which contracts should be done. If there is a dispute, it will be easy for arbitration too. There is a further point which I want to stress. In Java we are doing business on Dutch Standard No. 25 and higher. They are always tendering goods higher than the minimum. They are not tendering even 25 and therefore there are no occasions for disputes.

President.—Do you think that one standard would be sufficient for India under present conditions?

Mr. Parekh.—They can have two standards: one for "Bold" and other for "ordinary crystal". Some people say that it is not possible to have a terminal market here and now. I think that is the only salvation.

President.—Would you like to have standardisation?

Mr. Parekh.—Terminal markets must begin to operate today.

President.—Without standardisation?

Mr. Parekh.—There is no necessity for standardisation. There may be a price fixing Board. If as we are doing in cotton, we can fix up off and on, it will be better for all concerned. Then it will be possible to say that your sugar being better and my sugar being of lower quality, I will get two annas less.

Mr. Rahimtoola.—There are surely standards in cotton.

Mr. Parekh.—Yes. But we can buy Oomra with certain "off" from Broach. In that way we can fix in the case of sugar also. We can fix a standard like Baitalpur.

Mr. Rahimtoola.—There must be some standard.

Mr. Parekh.—Yes.

Mr. Rahimtoola.—That is also the opinion of the Sugar Mills' Association.

Mr. Parekh.—It must be fixed—"off" and "on" to a particular standard.

President.—How many standards would you propose for all grades of sugar under present conditions?

Mr. Parekh.—One bold grain, one crystal No. 1. I don't think there is any consumption of brown sugar. I don't think there is any necessity for fixing grades for brown sugar. The other point I want to stress is this. Sugarcandy is a cottage industry. The manufacture of soft sugar is a cottage industry. Whatever protection has been given for sugarcandy must be given also for soft sugar. The duty on soft sugar must be increased.

President.—Do you want a special duty for soft sugar?

Mr. Parekh.—Yes as it has been done in the case of sugarcandy.

President.—What is the duty on sugarcandy?

Mr. Parekh.—It is Rs. 10-4.

Mr. Rahimtoola.—Your point is that at present soft sugar is being classified as sugar and pays a specific duty of Rs. 9-4 per cwts. instead of being classified as sugarcandy.

Mr. Parekh.—The same duty should be applied to both.

Mr. Rahimtoola.—Sugarcandy is classified as sugar, although it pays a higher duty.

Mr. Parekh.—It has been done recently after much propaganda by the sugarcandy manufacturers.

Dr. Jain.—Because of Japanese competition.

Mr. Parekh.—After devaluation of Yen they tried to dump sugarcandy in India.

President.—Where does the soft sugar come from?

Mr. Parekh.—Hongkong and Japan.

President.—And not from the West?

Mr. Parekh.—No. If Government want revenue, they may increase the duty on W. S. R. which at present pays duty of Rs. 9-4. They can increase duty even by Rs. 5.

President.—That may kill the import altogether.

Mr. Parekh.—Even then some fastidious people would go in for it.

Dr. Jain.—What does W. S. R. mean?

Mr. Parekh.—Concise nomenclature of the factory.

Dr. Jain.—What do the letters stand for?

Mr. Parekh.—It is coming from Holland. Formerly it has been called Britannia or Cossipore sugar. The illiterate people still call it Cossipore sugar. Formerly the same kind of sugar was coming from the United Kingdom. It was called Britannia sugar. Now it has stopped. Its place has been taken by W. S. R.

President.—That is classified as ordinary sugar.

Mr. Parekh.—Yes. It is selling here at Rs. 16-8, whereas our Indian sugar of the highest grade like Buland sugar (Rampur) is selling at Rs. 10-14. In spite of that people are eating it.

President.—What other points would you like to raise with us?

Mr. Parekh.—As regards contract, all other conditions are all right excepting those regarding quality and arbitration. As regards arbitration I would suggest there should be at every big centre a panel of arbitrators appointed.

President.—Do you agree with what the Association said the other day?

Mr. Parekh.—They have not suggested the panel. Here I have got an instance. I sold some sugar of certain mills which arrived in damp and damaged condition. The allowance was fixed, but it has been pending for more than a year. No payment of claim is made so far. In such circumstances it is no wonder that merchants become suspicious of the *bond fides* of mills.

Dr. Jain.—Have not things improved this year?

Mr. Parekh.—Once payment has been made, we are left in the lurch in most cases.

Mr. Rahimtoola.—As regards the question of Government revenue, you have been good enough to supply us with figures showing the additional revenue which the Government are getting today owing to protection. These figures are very important and I want to know the source from which these have been collected.

Mr. Parekh.—I have no very exact source of information. I have put Rs. 4,40 lakhs as being the income from excise duty. Taking a crop of 11 lakhs tons, it comes to that.

Mr. Rahimtoola.—Take the other figure—Rs. 70 lakhs income-tax from mills.

Mr. Parekh.—I have put down that amount after enquiring from certain mills and others.

President.—It is no more than an estimate, is it not?

Mr. Parekh.—Yes.

Mr. Rahimtoola.—Customs duty we can easily get from Government blue books. What enquiries did you make in regard to the extra income to railways?

Mr. Parekh.—We have based that figure on what Bombay is importing.

Mr. Rahimtoola.—Did you base your figures on rail-borne trade?

Mr. Parekh.—On what Bombay is actually importing, for the local consumption. So with Calcutta and other Ports.

Mr. Rahimtoola.—I suppose you have taken the through rate (Bombay).

Mr. Parekh.—Yes. We require about 9 lakhs of bags per year. I calculated the freight on that. Similarly for Calcutta, and Madras.

Mr. Rahimtoola.—These are roughly the basis on which the calculations have been made.

President.—As regards the sugar trade, when sugar was imported, the movement was from the ports to the interior. The present movement is from mills to ports. In the old days also sugar was paying freight. You have to set one against the other.

Mr. Rahimtoola.—In case of foreign sugar, freight had not to be paid. I think the President's point is correct. Nearly ten lakhs of tons were being imported from Java in previous years. The ports' needs used to be met out of imports. The internal markets' requirements were met from the stocks at ports through railways. Therefore that income to the railways has now been lost, and has to be deducted from the income they are now getting by the movement of Indian sugar.

Mr. Parekh.—I have deducted that amount.

Mr. Rahimtoola.—Another point which is very important is the carriage of cane.

Mr. Parekh.—Yes.

Mr. Rahimtoola.—With regard to the income of Rs. 5 lakhs due to the increased use of irrigation water, is that for all-India?

Mr. Parekh.—Chiefly United Provinces and Bihar.

Mr. Rahimtoola.—Have you taken the Bombay Presidency into account?

Mr. Parekh.—No.

Mr. Rahimtoola.—In the Deccan area before protection there was only one factory but from 1933 onwards 7 more factories have been started. The irrigation charges in Bombay are pretty high. That has not been taken into consideration.

Mr. Parekh.—No.

Mr. Rahimtoola.—At present the Customs revenue is Rs. 325 lakhs. The additional income according to your figures would be Rs. 620 lakhs. The total would be about Rs. 950 lakhs.

Mr. Parekh.—Yes.

Mr. Rahimtoola.—On page 4, you talk about damp proof godowns at transport stations. What stations have you in mind?

Mr. Parekh.—Bombay goods are being transported at Allahabad (Naini) and the goods from Calcutta are also transferred at Mokameh Ghat. At transfer stations there must be damp proof godowns provided either by private individuals or limited concerns. If that is done, it will be helpful. In that case, as in Java, all the goods will be stored not at factories but at transfer stations like Naini and others.

Mr. Rahimtoola.—On page 16 you have mentioned about higher clearing charges fixed by railways.

Mr. Parekh.—Yes, for Burma.

Mr. Rahimtoola.—That means it has reference to export of sugar to Burma.

Mr. Parekh.—These difficulties have arisen after the separation of Burma. Supposing I want to export sugar and I have stock at Calcutta, I cannot export it to Burma from Calcutta and get a refund of the excise. I can only claim refund if I despatch sugar from the mills direct to Rangoon. It means that the Calcutta stock cannot be used for export. Formerly it was being used.

Mr. Rahimtoola.—To whom should you apply for remedy, Government or the railways?

Mr. Parekh.—Government.

Mr. Rahimtoola.—You say that this is being fixed by the railways.

Mr. Parekh.—The railways have given contract to certain European Clearing Agents who clear and ship in the steamer to Rangoon. If I want to export to Rangoon, I cannot use my own clearing agent. For instance I ship goods from Bihta or Dehri, I shall get direct bill of lading to Rangoon from Railway Company. Clearing of goods from the East Indian Railway and shipping the same to Rangoon is done by contractors appointed by the East Indian Railway and the Steamer Company concerned. Therefore they are charging higher rates. They are also not taking proper care of the goods. There is a general complaint that the Rangoon merchants find great shortage in weight in their sugar at destination.

Mr. Rahimtoola.—Another point of importance is the question of export to London market under what we call Colonial preference in which you have estimated the price of Indian white sugar as Rs. 5-14 per maund.

Mr. Parekh.—Yes.

Mr. Rahimtoola.—Do I understand you to mean that this is the fair selling price?

Mr. Parekh.—No. When I prepared my report, it was the selling price. It was selling at Rs. 5-12. The same sugar is now selling at Rs. 6-2.

Mr. Rahimtoola.—If a certain price is ruling in the market, it does not necessarily mean that it is the fair selling price.

Mr. Parekh.—When there is internal competition, prices will go down unless there is an opening for it to be exported.

Mr. Rahimtoola.—When the industry ask for protection, it is with a view to get a fair selling price. If the fair selling price is higher than the export market-price you cannot export sugar.

Mr. Parekh.—That is what is being done in Germany and other countries. The Continental cost price is 10 shillings and even then by subsidy or by indirect rebate they are exporting even to India at 6 or 7 shillings.

Mr. Rahimtoola.—On page 6 you say “there is a general tendency on the part of mills to sell away all their productions during the crushing season itself, though it is admitted by all that what they produce in about one third of a year, is meant for being distributed the whole year round”. What is your specific grievance with regard to this point?

Mr. Parekh.—They produce sugar from December to May and they want to sell whole of their production immediately the goods are prepared thus depressing the market. Until last year merchants were taking interest and were willingly carrying mills’ burden on their shoulders in form of forward purchases.

Mr. Rahimtoola.—This is the practice generally applicable to all trades.

Mr. Parekh.—Why are all the mills selling at the same time?

Mr. Rahimtoola.—It does not mean that the whole production is coming to the market immediately.

Mr. Parekh.—It comes either in the form of ready or forward sales.

Mr. Rahimtoola.—It may be disadvantageous to the dealers.

Mr. Parekh.—I am talking from the point of view of merchants that when the season is at the peak they come out to sell and unnecessarily press the market affecting adversely the former holdings of the trade.

President.—These are the points which you wanted to discuss with us.

Mr. Parekh.—Yes.

President.—Are there any other points which you want to raise with us?

Mr. Parekh.—No.

Khan Bahadur SYED MOHAMED HADI, LUCKNOW.

**Evidence of Khan Bahadur SYED MOHAMED HADI recorded
at Lucknow on Thursday, the 2nd September, 1937.**

President.—I do not think we need go into the method of manufacture by your process because we have got sufficient information about that.

Khan Bahadur.—Conditions have changed. I have given them in my note. After that experience it was found necessary to bring out some system of manufacture which would suit present conditions.

President.—I gather from your note that with the present price of sugar you cannot manufacture at a profit?

Khan Bahadur.—We can manufacture at present prices too because the price of cane has done down at the same time.

President.—The Tariff Board and the Government have always been very much concerned with the fair price of cane to the cultivator, and the rate of cane to open pan factories is lower than the rate for the factories?

Khan Bahadur.—Yes, that is $\frac{1}{3}$ of the minimum fixed.

President.—Do you think that is a fair price to the cultivator? The present minimum price is about 4 annas; for the open pan the minimum is $\frac{1}{3}$ of that or As. 2-10. Do you think that it a fair price to the cultivator?

Khan Bahadur.—It won't leave him a fair margin, but he has been selling at this rate.

President.—In your note you say that in many cases the cultivators would not supply cane at that rate because they can supply to the factories.

Khan Bahadur.—When there are factories to purchase their cane they won't let you have it at As. 2-10, but where there are no factories to purchase their cane, they are prepared to sell at $\frac{1}{3}$ of the minimum price.

President.—That cannot leave much profit to the cultivator.

Khan Bahadur.—No, it won't; but at 3 annas it does and it is mostly at 3 annas that they sell cane in places not served by vacuum pan factories.

President.—Have you any figures about the cost of cultivation of cane?

Khan Bahadur.—I have (shown). That is for the Fyzabad district, south of Oudh, where the method of cultivation is very poor and the method of manufacture is more suitable for gur.

President.—There are no factories in this area?

Khan Bahadur.—Not in Fyzabad.

President.—Cutting and stripping is negligible. Total cost of cultivation is Rs. 40-8. Cartage may be 3 pies to 6 pies per maund of cane. Yield 325 maunds per acre; cost of transport is 6 pies per maund for 325 maunds, that is Rs. 10-2; delivered at the factory it will be about Rs. 51. Will that be fair? It comes to As. 2-6 per maund. How many ratoons do they have?

Khan Bahadur.—Only one.

President.—And the cost would be Rs. 17 for 225 maunds. Taking the two together it is 550 maunds and the total expenditure adding Rs. 10 for transport comes to, say, Rs. 75 in round figures; dividing that by two it comes to Rs. 37-8 for the two crops together on an average yield of 275 maunds which comes to 2 annas and the price realised is As. 2-10 or say 3 annas which comes to Rs. 51-9 for an expenditure of Rs. 37-8. On an expenditure of Rs. 37-8 he gets about Rs. 14.

Khan Bahadur.—Yes. But the custom is this with the cultivator that one always helps the other and there are many items which go to the pockets of the cultivator himself.

Mr. Rahimtoola.—But he must get something to live?

Khan Bahadur.—He has his wages.

Mr. Rahimtoola.—What are the labour charges?

Khan Bahadur.—3 annas for the male and 2 annas 6 pies for the female. There is no cash outlay.

Mr. Rahimtoola.—He gives his own manure?

Khan Bahadur.—Yes. He has generally his own seed. 5 harrowings require 20 labourers. He has to pay rent. As regards carting there are two or three in the villages. They help one another. Nothing is paid in cash.

Mr. Rahimtoola.—You have not included interest on working capital, because there is not much cash outlay before the harvest.

Khan Bahadur.—No.

Mr. Rahimtoola.—When is the rent paid?

Khan Bahadur.—The custom is this. The agricultural year begins in July. He will be only ploughing the land. In August he will be sowing rabi. That will be cut in December. He will sow the cane in February or March. In these parts the crop sown in March will be ready for harvesting in January next and from January to March it will be finished. When the rains set in he will have no more operation to do. This is how he does. Most of the operations are done by family members. That is how they manage to sell their cane at 2 annas. The cultivator has no cash in his pocket in December. Out of what he has earned in kharif, that is the rainy season crop, the kharif rent has been paid. Rabi rent will be paid in March. Then the next season will begin in October or in February or March. He is living from hand to mouth. He has nothing to do from December to March. There are no operations.

Mr. Rahimtoola.—He will have to borrow money for his upkeep.

Khan Bahadur.—Unless he has that cane, he cannot get cash.

Mr. Rahimtoola.—He may get money on cane.

Khan Bahadur.—Or by selling gur. On cane he will get at once. On gur he will get when he can sell it. Last year and the year before last prices have gone down so low that he has not been able to sell half of his produce.

Mr. Rahimtoola.—He was getting 3 annas and it cost him 2 annas. Gur prices were not all right.

Khan Bahadur.—No.

Mr. Rahimtoola.—He might not be making money, but he was not making any loss.

Khan Bahadur.—He was.

Mr. Rahimtoola.—What is the cost price of one maund of gur?

Khan Bahadur.—Rs. 2-9-6.

Mr. Rahimtoola.—What was the selling price of gur?

Khan Bahadur.—23 seers per rupee. Rs. 1-14 per maund. Rab does pay because it sells.

Mr. Rahimtoola.—They sell rab to open pan factory.

Khan Bahadur.—Yes for making sugar. What happens about gur is this: gur begins to come into the market about the end of June. The price is as high as Rs. 3 or Rs. 3-4 or Rs. 3-10. Considerable quantity of gur is sold from January to March. The wholesale dealer purchases all the gur that he has got. He cannot sell his gur at the same price as he did in November. Wholesale dealers buy this gur, bring it to the city and have special arrangements for storing the gur. It is not an easy matter to store gur, because it will absorb moisture and becomes watery. To begin with, the house must be katcha and it must be two storeyed. The cultivator cannot afford to have a two storeyed house, and therefore he is compelled to sell his gur before March. At that time the wholesale dealers buy this

gur at the price prevailing in the market and usually during that period of 2½ to 3 months, the price of gur would be low.

Mr. Rahimtoola.—Is it not better for the cultivator to sell his sugarcane to the factory than turn it into gur?

Khan Bahadur.—Where are the factories to buy them? 75 per cent. of the area has been dealt with by vacuum pan factories and the prices of the indigenous sugar have gone down to Rs. 5. So they are not purchasing cane. Open pan factories purchasing cane have to set up mills and once they set up mills, they become liable to excise duty. That is the greatest disadvantage.

Mr. Rahimtoola.—They may employ 19 people.

Khan Bahadur.—With 20 people we can do nothing. You require men for crushers; you require men for weighing and you require men for centrifugal. Always the number exceeds 20. Therefore it is done in two separate premises. That is really fraud. I have come here to explain matter in the proper light. Sometimes sugar has been smuggled in order somehow to save the industry. If you look into the price of sugar, you would be surprised that we were selling the open pan sugar in 1933 at Rs. 9; it came down to Rs. 8-8; then to Rs. 7; then to Rs. 6-8 and suddenly it came down to Rs. 5. Last year's stock had to be sold at Rs. 5.

Mr. Rahimtoola.—You say it was sold at Rs. 5. What was the cost of manufacture?

Khan Bahadur.—The cost of manufacture would depend upon the efficiency of the boiler and of the centrifugal. There is no use when prices are so low trying to run a bel with a capacity to deal with 150 or 100 maunds of cane. There is a tremendous amount of inversion. Supposing you have to boil 100 maunds of cane a day you should use two bels which will work up the juice as quickly as possible so as to get a full recovery of 6 per cent. with the minimum loss of wastage.

Mr. Rahimtoola.—You have given us the total expenditure as Rs. 2,150.

Khan Bahadur.—Rs. 4-8-7 per maund.

Mr. Rahimtoola.—You were getting Rs. 5 to Rs. 5-2 per maund?

Khan Bahadur.—Yes.

Mr. Rahimtoola.—He gets a profit of 10 annas on a capital expenditure of Rs. 2,150.

Khan Bahadur.—Yes.

Mr. Rahimtoola.—I want to know how many maunds of sugar are produced with an expenditure of Rs. 2,150.

Khan Bahadur.—We get 450 maunds of sugar from 4,000 maunds of juice. At Rs. 5-12-0 per maund for 450 maunds of sugar it comes to Rs. 2,537-8-0. 270 maunds of molasses at 7 annas a maund come to Rs. 118-2-0.

Mr. Rahimtoola.—With Rs. 5-2-0 he gets a return of 10 per cent. Your total expenditure is Rs. 2,150 for 450 maunds.

Khan Bahadur.—The income is Rs. 2,705.

Mr. Rahimtoola.—That is the total. It leaves a profit of Rs. 281.

Khan Bahadur.—Yes, including the price of molasses. From this you have to deduct working expenses which amount to Rs. 2,150, interest on working expenses at 4 per cent. for four months of Rs. 28-10-8, depreciation on initial outlay of Rs. 95 and interest on the initial outlay of Rs. 950 for 12 months which comes to Rs. 38. The total deduction is Rs. 2,311-10-8.

Mr. Rahimtoola.—The balance is about Rs. 394.

Khan Bahadur.—The percentage of profit on working expenses is 13.64. The price of sugar is Rs. 5-12-0. The price is rising.

Mr. Rahimtoola.—What would you take the price at?

Khan Bahadur.—Rs. 5-12-0 is the average price for the season.

Mr. Rahimtoola.—Then you make both ends meet with the excise duty.

Khan Bahadur.—Yes. This is an expert arrangement. The average man cannot work down to these costs.

Mr. Rahimtoola.—According to your calculations you are making 5 per cent. profit after paying the excise duty, if the price is Rs. 5-12-0.

Khan Bahadur.—The uncertain factor is the molasses. Sugar manufactured by this method yields a large quantity of molasses, very fine in colour, very clean quality, which is used for *sharbat*.

Mr. Rahimtoola.—How many maunds of molasses do you get?

Khan Bahadur.—It is 6.75 per cent.

President.—Molasses obtained by this method are better than factory molasses.

Khan Bahadur.—Yes, it contains much more sugar. I used to sell molasses at Rs. 1-8-0.

Mr. Rahimtoola.—How many years ago?

Khan Bahadur.—6 or 7 years ago before the grant of protection. Now it is sold at 10 to 11 annas. I have put down 7 annas which is the average.

Mr. Rahimtoola.—Who are your buyers of molasses?

Khan Bahadur.—In the first place it is consumed in *sharbats* and in ceremonies and then in the village in the preparation of village sweets. Tobacconists will not use factory molasses. They will necessarily have to fall back upon our molasses. When they cannot get open pan molasses then they go to factory molasses.

Mr. Rahimtoola.—Open pan molasses fetch a better price than vacuum pan factories' molasses.

Khan Bahadur.—Yes, being better,

President.—Can you tell us how many open pan factories have ceased working?

Khan Bahadur.—Every one of them.

President.—Those that have not to pay the duty are working.

Khan Bahadur.—Yes.

President.—Supposing Government decided to exempt open pans from the payment of excise duty, would it not be reasonable to expect that a better price should be fixed for cane to the grower?

Khan Bahadur.—So long as these prices of sugar continue, you should reckon that open pan sugar should sell at 12 annas per maund less than the vacuum pan sugar. Then at that rate 3 annas a maund will be a suitable price. Even working with crushers, we get only 61 or 62 per cent. of the juice from the cane whereas vacuum pan factories get 86 to 88 per cent. That is one disadvantage. In such circumstances how can you expect us to compete with vacuum pan factories? However good our sugar may be and however fine and white our sugar may be, it will always be inferior to the vacuum pan sugar in respect of crystals. The point in favour of this open pan sugar is this that the village people who do not like vacuum pan sugar eat this sugar with their bread and curd. Vacuum pan sugar is not so sweet. High class Brahmins and Jains do not believe that it is nice to eat.

President.—From a religious point of view?

Khan Bahadur.—They think that it is not pure in the true sense of the term.

Mr. Rahimtoola.—My difficulty is this. You tell us that the difference between the price of vacuum pan sugar and open pan sugar is about 12 annas, is that correct?

Khan Bahadur.—Yes.

Mr. Rahimtoola.—It follows, that if the excise duty is abolished for the open pan and kept on the vacuum pan sugar, then the difference will be about Rs. 2 per cwt. Therefore instead of developing the vacuum pan

sugar there may be a tendency to encourage the open pan system of manufacture.

Khan Bahadur.—It is used for eating purposes.

Mr. Rahimtoola.—You have not understood my point. My point is that the result of the abolition of the excise duty on the open pan sugar will lead to the expansion of the open pan factories at the expense of vacuum pan factories.

Khan Bahadur.—It will not lead to the expansion but will result in the continuance of the open pan factories.

Mr. Rahimtoola.—There is a wide difference between the two sugars. Your present difference is 12 annas. Under the arrangement you propose it will be Rs. 1-8 per maund, i.e., double.

Khan Bahadur.—There is a difference in our molasses.

Mr. Rahimtoola.—You have a better market for your molasses.

Khan Bahadur.—Yes, there is no doubt about that.

Mr. Rahimtoola.—The vacuum pan factories do not know what to do with their molasses.

Khan Bahadur.—They need not take that into account.

Mr. Rahimtoola.—They would like to take that into account.

President.—What is the position of the khandsari industry? Can it survive?

Khan Bahadur.—I don't think so.

President.—The khandsaris are continuing, at least some of them.

Khan Bahadur.—Yes.

President.—Can you give us an estimate as to what proportion of khandsaris are working now?

Khan Bahadur.—I cannot give it. The factories at Mohanganj and Akbarpur cannot continue so long as the excise duty is in force. The factory at Jalpa has closed. The factory at Fyzabad has closed down. There are two factories which are still continuing in existence. The factory has been leased by the co-operative department to a certain private individual, and a factory which does not cover even half the depreciation on machinery I look upon as a failure. There is a factory at Kanakpur. Khandsaris cannot work properly by Rohilkhand *bel* except in Rohilkhand, because you cannot get juice in sufficient quantities. You cannot use power crushers. In the first place they do not yield as much extraction as bullock mills; bullock mills extract 66 and power mills 60 per cent. only. Five roller power mills have given 64 to 65 per cent.

President.—How about the cost of bullock mill as against power mill?

Khan Bahadur.—We save a good deal by using power crusher because you can deal with a greater amount of cane. Bullock is calculated at 12 annas per day. If you use power crusher you at once become liable to pay the excise duty because your centrifugals must work with the same power. This arrangement that I have mentioned, and that is already before Government, will require two three-roller bullock mills. From these 50 maunds of juice is not very difficult to get from a village crushing cane on the co-operative system. You can set up one mill, two mills or five mills but must not exceed 50 maunds otherwise you may not get the *rab* in that percentage. If you keep the juice boiling for long hours then your inversion will increase very much. Having done this you have to centrifuge the *rab*; for that you have to use power centrifugals because hand centrifugals never run so fast. They must be small. We have several types of centrifugals, 36" diameter, 48" diameter and so on. A 9" diameter centrifugal is the best machine for the village.

Mr. Rahimtoola.—Your point is this, that you are recommending the use of bullock power in preference to machine power to avoid the duty.

Khan Bahadur.—But the centrifugals will be run by power; the cost of production is less and the yield is much better. The purchaser in these days want very fine open pan sugar. Once we introduce power centrifugals we are liable to duty. It is nonsense to say that 20 men will be sufficient to produce sugar even by the smallest plant, and if you divide the work you have to maintain two establishments. Then again these things are liable to pilfering at every stage and the man has to be very careful. Therefore useless the excise duty is removed and power centrifugals of small size are introduced and unless you are able to boil the juice in a better manner, whether you obtain it by bullock power or mechanical power, there is no future for the industry. Exempt from duty you may be able to sell it at Rs. 5 and who knows sugar prices may drop even below Rs. 5 owing to cut-throat competition amongst the factories themselves.

President.—The price has been raised.

Khan Bahadur.—I am keenly interested in the industry. I undertook to save the industry which I did last year but there was the sudden drop in the price of sugar and the duty increased and my whole life's work went to nothing.

President.—To what extent is rab eaten?

Khan Bahadur.—None. It is all used for the manufacture of sugar. The only way they eat it is with *kakri*; it is not eaten in any other way. There is a demand for rab, and the purchaser cheats the cultivator and becomes the instrument for causing loss to him. He goes and says "I am the only purchaser; you make rab". The man makes rab. He is not allowed to boil it sufficiently thick because the purchaser wants bigger crystals and that can be obtained only when the rab is boiled thin. The purchaser says "I will buy thin rab and buy it at Rs. 2 a maund or Rs. 2-4-0" and the cultivator is obliged to make that.

President.—How many maunds of sugarcane go to a maund of rab?

Khan Bahadur.—13 maunds of rab is obtained from 100 maunds of cane assuming the extraction to be 64 per cent.

President.—What is the extraction of gur?

Khan Bahadur.—100 maunds of cane equal to 62 maunds of juice which is equivalent to 11 maunds of gur. That is the best outturn. But the cultivator sometimes gets 60 or even 59 per cent.

Mr. Rahimtoola.—You said just now that the purchaser goes to the cultivator and buys thin rab. Does he buy according to the crystals?

Khan Bahadur.—Yes. He buys the rab according to the amount of crystals and the quality of the crystals. I can sell my rab at Rs. 3 a maund because mine is rich in sugar but the crystals are smaller. In the other case the crystals are bigger but the yield is low.

President.—In your process you take your cane from the beginning and turn it into sugar, whereas the khandsari only buys the rab.

Khan Bahadur.—Yes; he does not buy the cane. But that rab is of a very different quality. In the open pan system you convert your cane into sugar while the khandsari only buys rab?

Khan Bahadur.—He buys juice too. But some of the khandsaris in Rohilkhand have set up their own mills and crush cane. They are closing down because of the excise duty.

President.—One suggestion has been made that instead of taking the number of persons working in a factory you should take the polarisation of sugar and exempt those who have a polarisation below 96.

Khan Bahadur.—Polarisation is a matter which neither the consumer nor the manufacturer understands. He is merely guided by the colour of sugar. You take sugar with 80° polarisation and sugar with 96° polarisation to the market you will find that the white sugar will command the higher price. Nobody understands it except an expert chemist.

Mr. Rahimtoola.—What is the polarisation of open pan sugar?

Khan Bahadur.—97 to 98.5.

Mr. Rahimtoola.—Can you make it below 96 without additional cost?

Khan Bahadur.—Certainly.

Mr. Rahimtoola.—Will that sugar be marketable?

Khan Bahadur.—96° is a little low; 97° would be white. Below 96° won't sell in the open market. I have made sugar of 95° polarisation. It is not good.

Mr. Rahimtoola.—Suppose the cultivator is asked to produce thick rab; what price will he get?

Khan Bahadur.—He won't be able to sell it.

Mr. Rahimtoola.—Suppose I am a buyer for thick rab?

Khan Bahadur.—Neither thick rab nor thin rab will produce white sugar. It would be brown.

Mr. Rahimtoola.—You are missing my point. My point is in connection with your statement that the cultivator usually makes rab for the manufacturer.

Khan Bahadur.—A very low grade of sugar.

Mr. Rahimtoola.—It doesn't matter how low it is. You say the cultivator is at a disadvantage in making thick rab.

Khan Bahadur.—They take out the crystals from the rab and convert it into a crushed sugar. The thick rab is sold to people who use centrifugals and make white sugar, but the thick rab or the thin rab whatever it may be when made by the cultivator by the indigenous method will not yield white sugar. Therefore no one who is working on the open pan system will purchase it. Plenty of rab is available in the bazars, but they don't purchase it. Rab has to be manufactured especially in order to yield white sugar and a good quality as well as high yield.

Mr. Rahimtoola.—The only marketable rab is thin juice.

Khan Bahadur.—With big crystals.

President.—What happens to the other rab?

Khan Bahadur.—The whole of the rab doesn't sell.

Mr. Rahimtoola.—What do they do with it?

Khan Bahadur.—They eat it. That is why rab making is not profitable. Boiling is very slow. Slow boiling goes on for hours and hours.

Mr. Rahimtoola.—You have described here as wet bagasse and dry bagasse. What exactly is the difference between the two?

Khan Bahadur.—As soon as it comes from the mill the bagasse is moist. There is a certain amount of moisture in it which is of course juice. That is obtained by the weight of cane minus the weight of juice. Wet bagasse loses moisture when it is spread in the sun to be dried in order to be used as fuel.

Mr. Rahimtoola.—All the dry bagasse is used as fuel.

Khan Bahadur.—100 maunds of cane to 65 maunds of juice; 35 maunds of wet bagasse. When dry this will be 18.3.

Mr. Rahimtoola.—It is very nearly half.

Khan Bahadur.—Yes.

Mr. Rahimtoola.—Actual weight of the bagasse when it is used as fuel would be 18.3.

Khan Bahadur.—Yes. It may be 19 in special cases. It has been 19 in some cases.

Mr. Rahimtoola.—When the juice is 65 per cent?

Khan Bahadur.—Yes. Juice doesn't affect much.

Mr. Rahimtoola.—In vacuum pan factories the juice is much higher.

Khan Bahadur.—That is their main advantage. That is why the vacuum pan system pays. Given equal extraction the recovery of sugar from the open pan will not be very much less.

Mr. Rahimtoola.—What does 'diluted molasses' mean?

Khan Bahadur.—Certain amount of water is used in washing the centrifugals. That goes into the molasses.

Mr. Rahimtoola.—They are again dried up.

Khan Bahadur.—Diluted molasses are always sold.

Mr. Rahimtoola.—You have another kind of molasses.

Khan Bahadur.—That is finer molasses, and they are obtained thus: when the first molasses have been boiled into rab and cooled for a number of days. When mature they are centrifuged, that is, again passed through the centrifugals. You get a second crop of sugar and what is left is molasses.

Mr. Rahimtoola.—6-60 is the finer molasses. What about the diluted molasses?

Khan Bahadur.—Diluted molasses we don't weigh.

Mr. Rahimtoola.—Do you sell them outright?

Khan Bahadur.—That contains the washings.

Mr. Rahimtoola.—Do the diluted molasses fetch the same price as the finer molasses?

Khan Bahadur.—We have no molasses other than diluted.

Mr. Rahimtoola.—It means one and the same.

Khan Bahadur.—Finer molasses are also diluted molasses, because it contains also washings.

Dr. Jain.—I wonder if you could give us any idea of the amount of capital involved in the case of open pan factories which have closed down. You might give it now or later on?

Khan Bahadur.—I shall send you a statement later on.

Dr. Jain.—The second point was the condition of labour in these open pan factories.

Khan Bahadur.—I want to be perfectly frank. I want to tell you every thing. These people who have sunk their money are landlords. They have a very large number of labourers under their thumb. They do not pay more than 2 annas a day.

Dr. Jain.—Does that apply to men, women and children or is it to men only?

Khan Bahadur.—Men only. The woman gets 0-1-6 a day and children are not employed.

Dr. Jain.—I mean boys.

Khan Bahadur.—Ordinarily 2½ annas is the wages for the best man; in some places 3 annas. A skilled labour is paid according to the rates I have already given you. You will see that I have allowed Rs. 15 for the owner of the factory.

President.—Are not the conditions under which sugar is manufactured very insanitary?

Khan Bahadur.—Yes, it is very insanitary. For example in the manufacture of gur in the south of Oudh where I am strongly urging a radical change in the method of manufacture they mix ashes from the furnace with gur. The objects are (1) to increase the weight and (2) to sweeten the gur. There is a certain amount of acidity which they do not know how to neutralise and so they use ash. They do not know the use of lime and lime if it is used darkens the colour. That is why the weight increases.

Mr. Rahimtoola.—It is unhealthy to eat gur of this province.

Khan Bahadur.—It is unhealthy to eat gur of this province.

Mr. Rahimtoola.—You mean United Provinces gur.

President.—Punjab gur is more healthy.

Khan Bahadur.—But it is not so sweet.

Mr. Rahimtoola.—In the Punjab the United Provinces gur is considered as fit for animals.

Khan Bahadur.—We have got the same form of gur.

Dr. Jain.—Is khandsari sugar also unhealthy?

Khan Bahadur.—No, it is very clean.

Dr. Jain.—In spite of the number of flies killed in the process.

Khan Bahadur.—Flies are not killed.

President.—In the khandsari factories we visited, there were masses of flies.

Dr. Jain.—They rub the sugar by their feet.

Khan Bahadur.—That is done.

Dr. Jain.—Is not that insanitary?

Khan Bahadur.—The men who do it are professional men. They wash their feet every day before entering the business premises. They walk on wooden shoes when they go out. It means practically the same thing as rubbing by the hand. Under existing conditions one of the means of saving the industry is to introduce the manufacture of muscavado sugar. I have made a list. The recovery is about 26 and that sugar is fit for making basan sugar, absolutely yellow. There is consumption for it in the villages.

President.—What is the percentage?

Khan Bahadur.—Everybody would eat.

President.—The percentage made must be very very small.

Khan Bahadur.—It is not made at all, because you want centrifugal to separate the crystals from the molasses.

President.—Is it much cheaper to make?

Khan Bahadur.—Almost as cheap as sugar.

Mr. Rahimtoola.—Is it entirely made out of molasses?

Khan Bahadur.—It is made out of rab. You know the process. The rab is put in and the machine is spun. Don't wash it. If the rab is good, you will get 56 or 57 per cent. When our local halwai converts that into basan sugar, it has got a sale. It is very much appreciated. It is not manufactured.

Mr. Rahimtoola.—What is the chief ingredient which makes it popular?

Khan Bahadur.—Its flavour.

President.—It is like brown sugar in England.

Khan Bahadur.—Yes, Bashni sugar; Damarara sugar. That was a thing that was recommended in 1921. I am the only man who has made it. We have been so discouraged by this excise duty and other difficulties. There is always an Inspector giving us all sorts of trouble.

President.—What would be the cost of manufacture of Bashni sugar?

Khan Bahadur.—The cost of production of rab is Rs. 2-4-0 and the cost of centrifuging will be Rs. 1-14-0 (10 labourers per day at 3 annas). We will be able to deal with 12 maunds of rab and we can get 57 per cent. of 12 maunds of sugar or 6·8 maunds of sugar. We reboil the molasses and get a crop of second sugar 7·3 per cent. Then we get 28 maunds of molasses. At 6 annas a maund it comes to Rs. 10-8-0. On the whole it will be seen that it will be profitable to undertake this manufacture.

Mr. Rahimtoola.—From the figures given by you we come to two conclusions. The cost is not very great and it leaves a margin of profit to the man who produces this kind of sugar.

Khan Bahadur.—It is much better to make this sugar instead of gur.

President.—This brown sugar is practically superior gur.

Khan Bahadur.—Very much superior. You can keep it for a long time unlike gur.

President.—Is there any pamphlet published on that?

Khan Bahadur.—Not yet.

Mr. Rahimtoola.—You have certainly experimented and produced this sugar and sold it.

Khan Bahadur.—Yes. It all depends upon the method of boiling. You may produce rab which will bring 33 per cent. of sugar. At the same time with better methods of boiling you may produce a rab which will yield 43 per cent. After years and years of patient study we have come to this conclusion that more than 50 maunds should not be attempted.

Mr. Rahimtoola.—Per factory?

Khan Bahadur.—Yes. Here are some of Mr. Sethi's remarks. He is a man who knows a great deal about the open pan system. He has seen my machine. He has seen Mr. Srivastava's book. I had been with him for three or four months. That is the conclusion we actually came to. There must be a radical change in the method of manufacture; otherwise the industry will not survive.

Mr. SHIBBAN LAL SAXENA, LUCKNOW.

Evidence of Mr. SHIBBAN LAL SAXENA recorded at Cawnpore on Tuesday, the 7th September, 1937.

President.—Mr. Saxena, I understand you are acquainted with the conditions in Gorakhpur and Basti districts in particular?

Mr. Saxena.—Yes.

President.—You have begun in your note by talking about unorganised labour employed in factories. Is there no Trade Union?

Mr. Saxena.—It has been recently started in Gorakhpur.

President.—In how many factories?

Mr. Saxena.—In Gorakhpur there are 23 factories and workers from almost all of them have joined the Union.

President.—Speaking generally, what is the main complaint?

Mr. Saxena.—Some men, whom the millowners trust, are employed as jobbers. They take something and get their own men employed. This is not a very serious complaint, but it does exist to a certain extent. About fines and dismissals it sometimes leads to great hardship as fines are sometimes imposed to the extent of 25 per cent. of a man's salary, and when a poor labourer is fined Rs. 2 or Rs. 1-8-0 it becomes very serious. About dismissals, the whole thing is very arbitrary. A labourer is dismissed on the most frivolous pretext, and he is not given an opportunity to explain his conduct even if he has been serving the company for a number of years.

President.—Have you got anything to say about the retrenchment of labour during the silent season?

Mr. Saxena.—There is a very great complaint about the silent season. In every factory during the silent season all except some 200 or 300 men are thrown out of employment. Of course, this being the agricultural season some of the men get employed in the fields for agricultural operations, but most of them do not get any employment. They are put to very great hardship. There are one or two factories who do give something to their labour even in the silent season, and I wish that the other mills too were asked to pay their labour during the silent season as well.

Mr. Rahimtoola.—You are talking about the non-technical staff?

Mr. Saxena.—Yes. I was told by one factory that if they paid even one-half their wages to labour during the silent season those men come back to the factory during the busy season. Altogether New recruitment means poor percentage of sugar extraction, and there is loss to the factory. For new labour takes time to get acquainted with the factory, and for about a month in the beginning work does not run as smoothly as when old labour returns to its work. In fact the factory which pays its labour during the silent season is never a loser. If therefore during the silent season factories pay their labour even half their usual wages, it will be better both for the factory and its men.

President.—What about the hours of work?

Mr. Saxena.—This is a serious complaint, and it is of two kinds. One is about the ordinary labourers who do an ordinary shift of eight hours: they have to do *begar* work in addition. I know of a number of factories where the labourers have to remove *begasse* and sometimes put cane in the carriers after their 8 hours work and this is never recorded in any way. This is quite illegal.

Mr. Rahimtoola.—Are they not paid extra for that?

Mr. Saxena.—No.

Mr. Rahimtoola.—What percentage of labour would be employed in this way?

Mr. Saxena.—In factories where such an abuse exists, sometimes 30 per cent. to 40 per cent. of the labour is asked to do this kind of work, after they have completed their normal shift, without any extra remuneration.

Mr. Rahimtoola.—What do you think of the wages of unskilled labour?

Mr. Saxena.—That is very low. I will give you a list of wages of skilled and unskilled labour (statement handed in). Some of the mills refused to give me information on this point, while others gave round figures. Rs. 10 for unskilled labour was given as the round figure which I believe is wrong. My investigation in the factories of Gorakhpur gives about Rs. 6 as the average monthly wage for unskilled labour, though I have found some labourers getting as low as Rs. 4 per month.

Mr. Rahimtoola.—What do you think should be the average wage.

Mr. Saxena.—Rs. 10 per month should be the absolute minimum wage for unskilled labour.

Mr. Rahimtoola.—Have you any information with regard to skilled labour?

Mr. Saxena.—I have. About hours of work, first of all, the universal complaint is that some skilled labourers have to work for about 12 hours, specially chemists, pan men and some other classes of people. Though the factories are supposed to work three shifts, actually there are only two shifts of twelve hours each for these people. If they don't submit to this kind of treatment they will be turned out.

Mr. Rahimtoola.—What about their salary?

Mr. Saxena.—Their salary is very low. This is shown in the statement of wages, I have given.

President.—What is this point you have made about payments in kind?

Mr. Saxena.—A few factories give fuel, about 4 seers, to each resident labourer free. Similarly they give some kerosine oil to their skilled staff; they give electric light, but only to a small number of the superior employees who live in the factory quarters.

President.—What percentage of labour is housed at present?

Mr. Saxena.—I think 75 per cent. of the superior staff is housed. But the condition of the lower staff, both skilled and unskilled, is hopelessly unsatisfactory. I have given the figures of the number of houses in each factory. For example one factory has got 61 double rooms and 54 single room tenements, and the number of labourers, employed there is a thousand. Surely this accommodation is altogether insufficient. In most factories in the working season where there should be two men ordinarily, in one tenement, you will find 10 or 12 men huddled up together. Some of the labourers go to live in their villages, but they go only because they cannot find accommodation. They would all like to stay in the factory if proper housing is provided. The houses are not properly ventilated; some of them are so bad that they are not fit for human habitation in fact.

President.—What about welfare activities? Some factories do something in that direction.

Mr. Saxena.—Yes, but their achievement is very little. Some of them have schools attached to them, but they are also subscribed to by the public round about the mill. Most of the factories have some sort of dispensaries; one or two have got certain clubs but they exist more in name only. One has got a library attached to it, but that is also nominal. They are not generally alive to their responsibilities in this respect.

President.—Let us pass on next to the plight of the cane growers.

Mr. Saxena.—The cane-growers' life is most miserable. That is because the cane rules as they are at present are most defective. This allows of so many swindlings upon the cane-grower. I had a talk with the cane inspector, and he said that this year about 1.50 crores worth of cane must

have been purchased by the factories of which a crore only must have reached the pockets of the grower while 50 lacs must have gone to the swindlers.

President.—On page 19 of your note you talk of swindling by the zamindars, sale of passes to growers, short weighments, malpractices, collections for charities, etc.

Mr. Saxena.—There is organised swindling by zamindars through sale of passes to growers, etc. Suppose one factory owner is a big landlord in one tahsil; he purchases the cane and credits the amount due to the cultivator to his own account; he takes receipts from them, for they dare not refuse and after that he does not pay the amount to him but deduct it towards the rent and so many other cesses realised from him as his tenant; only a very meagre amount is generally paid back to him, and the complaint up to a recent date was that they used to get nothing back. Similarly there are other millowners who do a very strange thing. Uptill now during the crushing season, there has been a great rush at the factory gates, and carts have to wait ordinarily for about 6 to 7 days; so if anybody is afforded the facility of having his cart emptied in a day the man would naturally be prepared to take even less for his cane. I will cite a case that was caught by the Cane Inspector last year. Every factory has usually more than one gate. This factory had some farm cane of its own and the carts bringing it, came from a different gate reserved for the factory farm cane. Nobody therefore watched that gate. But the factory owner permitted carts of those people who accepted three annas a maund for their cane to be weighed through this same gate along with their own cane immediately on arrival. In order to avoid a long wait many poor cultivators accepted what they received. The inspectors estimate was that in this way the factory must have earned at least Rs. 40,000 before being discovered. Still the factory owner could not be run down as the cane rules are so defective, and it is so difficult to prove a case fully in the manner required. This kind of thing was carried on for about two months.

President.—We have heard their evidence about these malpractices: actually we have heard of some 20 different ways in which this is done!

Mr. Saxena.—I have given them in a condensed form.

President.—About the excessive crop, what is your estimate of the amount of cane that remained uncut at the end of the season.

Mr. Saxena.—About a crore of maunds in the Gorakhpur District alone.

President.—What is your estimate based on?

Mr. Saxena.—This year 270,000 acres were under cane in Gorakhpur; last year it was 213,000 acres, so there was an increase of some 57,000 acres. Taking the average yield per acres as 350 maunds.

President.—That is not the official estimate.

Mr. Saxena.—What is the official estimate?

President.—300 maunds.

Mr. Saxena.—Taking 300 maunds that will come to 171,000 maunds. This year the factories have crushed 57,900,000 maunds of cane and last year they crushed 51,900,000 maunds; so this year they crushed 6,000,000 maunds less. This year the amount of gur manufactured was less than last year.

President.—Can you prove that statement?

Mr. Saxena.—Why I say that, is, that the price of gur was very low, and secondly, from my tours in the districts I found myself that the growers were anxious to sell their cane to the factories. They did not know in the beginning that there was glut in cane: They thought the factories would take all their cane; the factories did propaganda and said "do not crush your cane to make gur; you sell to the factory". So up to the end of February they did not crush: only when they found they could not sell

their cane to the factories even at reduced price, they started making gur, in March, and of course that is not a good season for crushing cane into gur, and therefore my estimate is that the amount of cane crushed into gur was much less than last year. I think this 11,100,000 maunds of cane remained uncrushed and this was verified during my tours. I issued a statement to the cane growers, and got them to fill up the form showing how much of their produce had to be destroyed and how much was still standing, and I sent these up to the Government to grant these poor people some remission. My tours have convinced me that a very large amount of sugarcane is still standing.

Mr. Rahimtoola.—Did you tour the whole of United Provinces?

Mr. Saxena.—No; only the Gorakhpur and Basti districts.

Mr. Rahimtoola.—We have been told that the official estimate made by the tahsildars on the basis of the estimates of patwaris for the same area about which you are speaking was about 5,000 acres.

Mr. Saxena.—I have made enquiries also. The patwaris stated that they had done it for the standing crop and not for what had been destroyed. These estimates were made in the month of May when a large amount of the crop had been already destroyed, because they were preparing the fields for other crops. I will tell you one thing more about Government's own statements. They issued statements from time to time about the sugarcane situation in Gorakhpur District. On the 26th May they had issued their last statement in which they stated that the crop standing was about 20,000 acres. I haven't got figures before me, but I think that was the correct number. Only one mill, viz., Ramkola mills, was working after that. I can safely say that very little cane was crushed by the mills after that date. Gur was not made in that season, and if it was made it was in a very small amount. What has happened to the crop standing on these 20,000 acres? The Government cannot give me any explanation as to what has happened to that. On the 28th of June in that Conference held at Naini Tal Sir Jwala Prasad made a statement that only 5,000 acres of cane had been left uncut.

President.—This 20,000 which you say was an official estimate.

Mr. Saxena.—Yes. The first estimate was that about 25 per cent. of the total amount of cane in the Tehsils of Maharaganj and Padrauna was left uncut. Maharaganj and Padrauna produce about three-fourths of the total production of cane in the Gorakhpur District. If 25 per cent. were left standing in the month of April, it is surely very difficult to explain how this amount was crushed. The total amount of cane produced was about 10 crores, and these two tahsils produced about 750 lakhs, and 25 per cent. of this would mean 2 crores. I do not know how they can explain that all this amount was crushed in less than a month. If the official statements are carefully seen, and if you take note of all the facts that I have mentioned, you must come to the same conclusion to which I have come.

President.—Can you speak about the organisation of cane growers? What is your opinion of the Cane Development Societies?

Mr. Saxena.—I have not a very good opinion about them. I think they are not at present discharging much really useful function. They were meant to develop cane and that work I think they have done. Cane has been developed, and now what is required is improvements which they are not able to effect.

President.—You mean which varieties to grow?

Mr. Saxena.—They know the varieties. There is no further need of teaching that. What is needed is that they should tell them how much to sow and how to fight the disease that often overtakes their plant and how to improve their method of agriculture. The present Cane Development Societies are not fully equipped for these purposes. My own view about the organisation of cane growers is that it is a very difficult problem, and

will take some time before it becomes really effective. The congress too has started its *Ikh Sangha*. But, as I have said, it will take time to become really effective. Still, the gravity of the problems affecting the growers is so great that unless the Government comes to their help by forming a cane marketing Association with compulsory membership for each grower of cane who wants to sell to a factory, and prohibits any factory to purchase cane except through such an association, their condition will not improve. This Association will be something like the National Farmer's Union of Beet-growers in England which enters into a contract with the Beet Sugar Manufacturer's Association of England for the total amount of Beet required by them during the ensuing year, and settles all turns and conditions of the sale. The present Co-operative Societies cannot perform this function.

Mr. Rahimtoola.—Their whole object is to deliver the cane to the factory.

Mr. Saxena.—That too they are not able to do on a very large scale.

Mr. Rahimtoola.—We were told that as much as 50 lakhs of maunds of cane were sold through Co-operative Societies in the whole province.

Mr. Saxena.—That is not much.

President.—The Societies are just being organised.

Mr. Saxena.—I think they are about 4 or 5 years old.

President.—This is the third year of their working.

Mr. Saxena.—I have not made any special study of these Co-operative Societies, but I do not feel that the cane growers have got much confidence in them so far.

President.—I would like to ask one or two questions about the average cost of cultivation. You have given the yield as 400 maunds on an average. That is rather a high estimate.

Mr. Saxena.—Yes.

President.—As you know speaking generally the more money you put into the cost of cultivation, the bigger the yield and 400 maunds would hardly be an estimate for an ordinary cultivator.

Mr. Saxena.—That is true.

President.—Some of the items seem to me rather high. We have taken a good deal of evidence on this question. For example in Gorakhpur area there is not very much irrigation.

Mr. Saxena.—That is not true. A very large area is irrigated.

President.—You have put down Rs. 20 for irrigation per acre.

Mr. Saxena.—There are two kinds of land Bangar and Bhat. In the former there is a lot of irrigation, and in the latter there is practically none.

President.—How did you arrive at that figure? The canal rate is Rs. 10.

Mr. Saxena.—These are from different agriculturists sowing about a bigha or so, i.e., three-fifth of an acre. There is an ordinary kutchra well dug on an expenditure of Rs. 4 or Rs. 5. Five times they have to give water in Bangar lands. Four days are taken for one watering an acre if six men work at it. 24 men at the rate of three annas come to Rs. 4-8-0. Five times they have to water and that would cost Rs. 22-8-0. I have put down Rs. 20 for irrigation. Here is an estimate from a man who actually sowed his fields and kept his accounts. These are his figures for one bigha—

5 waterings—7 men for one watering which takes two days at 3 annas come to Rs. 2-10-0 per watering Rs. 13-2-0. Per acre it will be about Rs. 20.

President.—It would be better if you give us the exact cost of cultivation.

Mr. Saxena.—All these are factory areas. The first estimate referred to a field supplying the Pharendra factory. The second estimate is of a

cultivator selling to the Campierganj factory. This man was a factory intelligent man and he kept accounts. I think it is a very reliable estimate. Rs. 13-2-0 is the cost of irrigation. He got a well dug for Rs. 2-8-0. He sowed 20 maunds of seed in the month of January. He purchased it at 5 annas and it cost him Rs. 6-4-0.

President.—A good deal less than the other estimate.

Mr. Saxena.—A very reliable estimate. The third item is hoeing which costs Rs. 1-8-0.

President.—Your figure is Rs. 31-8-0.

Mr. Saxena.—That is another estimate.

President.—That is rather high.

Mr. Saxena.—That was a land where irrigation and hoeing is very difficult. The following are the full details of this cultivator's cost of production:—

	Rs. A. P.
Well	2 8 0
20 maunds of seed at 5 annas	6 4 0
First hoeing	1 8 0
Trenching 15 men at 3 annas a day	2 13 0
8 men hoeing before sowing at 3 annas a day	1 8 0
12 men sowing at 3 annas	2 4 0
Preparation of land	10 0 0
20 cart loads of manure	10 0 0
5 waterings	13 2 0
6 men in 2 days. When there is watering there is also hoeing	11 4 0
8 men for fencing	1 0 0
Rent	5 8 0
	67 11 0
	per
	bigha or Rs. 112-8-0 per acre.

President.—What is the yield you have given?

Mr. Saxena.—300 maunds per acre.

President.—You have given a figure of Rs. 31-8-0 as interest in the first estimate.

Mr. Saxena.—25 per cent. is the rate charged in the rural area. The capital outlay is Rs. 112. At the rate of 25 per cent. it comes to Rs. 28.

President.—He would not have to pay for the whole year.

Mr. Saxena.—The amount of money he invested was taken about the beginning of the season.

President.—The usual practice in this matter is to take half the total outlay, because he does not want all the money in the beginning of the season. He only wants money as he goes along.

Mr. Saxena.—The amount is repaid after a year.

President.—He would not have to borrow all the money in the beginning of the season. It would be roughly half.

Mr. Saxena.—It may be three-fourths, but the interest he has to pay generally amounts to a full year's interest.

Mr. Rahimtoola.—This estimate which you have given works out to Rs. 112-8-0 an acre and 300 maunds yield. That comes to 6 annas a maund.

Mr. Saxena.—Yes.

Mr. Rahimtoola.—That doesn't allow for interest.

Mr. Saxena.—If the usual method is adopted, it would be about Rs. 14 an acre.

President.—That man must be working at a loss.

Mr. Saxena.—There is no doubt that he has been working at a loss. If still he continues at it it is because he has no alternative. The other crops are no better. The advantage of this crop is that it gives him money in a lump sum after a year, and at the time he needs it most for rent etc. Besides the cultivation of cane draws from him more intense labour. Cane cultivation is for him a sort of insurance policy for which he pays heavy premiums in the form of hard labour all the year round. The only advantage to him is that he gets the money in a lump sum and at the time when he needs it most. At present he has not been getting anything like a fair return for his labour. The result of cultivating cane during the last five years has been that most of the lands have gone barren. He has not been able to put into the land the money he ought to in the form of manure, etc. The yield is therefore very small.

President.—The more money you put in, the more yield you will get. Have you got any other estimates?

Mr. Saxena.—I have got one or two more.

President.—Would you send us copies of the estimates?

Mr. Saxena.—Yes.

Mr. Rahimtoola.—The Government have given an yield of 400 maunds per acre for irrigated land and 300 maunds for the unirrigated land.

Mr. Saxena.—I think that would be rather high. The amount I have given you for irrigated land is 250 maunds per bigha. I think the price for the last five years ranged between 5 annas and 6 annas. That is the minimum price. Actually they have to pay more for their cane when there is shortage in supply and consequently competition between factories to purchase cane.

Mr. Rahimtoola.—We have got average prices actually paid. Speaking generally it is below 6 annas for the province.

Mr. Saxena.—My own impression is, as I have said above, that this cane cultivation is a sort of insurance. They put in their labour, and do more intensive cultivation. This cane cultivation brings out from them labour which they would not otherwise do. They get a lump-sum in cash. They almost invest as much as they can get, but they do not get back the money they invest in full. One bad result of all this has been that the land is impoverished. Although it is said that the yield of any crop after sugarcane is better, the experience of Gorakhpur people is that the yield of any crop after the plant cane crop is very much less because there is no more substance left in the soil.

Mr. Rahimtoola.—Your Government have fixed the minimum price.

Mr. Saxena.—Yes.

Mr. Rahimtoola.—Have you got anything to say on that?

Mr. Saxena.—I have much to say.

President.—We have got a good deal of evidence that as a result of the sugarcane crop, the next crop sown gives a considerably higher yield. That is the evidence we have. For instance, in some parts of India, if cotton is grown after sugarcane crop, the yield is almost double without any extra expenditure.

Mr. Saxena.—In Gorakhpur you will find that that is not the case. With me there is a M. L. A., Mr. Ramadhari Pandey of Padrauna, himself a farmer. He told me that his uncle was not allowing him to use the best fields for cane because he wanted those fields to be kept for grain and other things for the family. If cane is sown, then it will not be possible to get the average yield from the same fields. In one year he said his field was sown with sugarcane but next year he got 3 maunds of wheat where he used to get 7 or 8 maunds.

President.—All these costs you have given are for the plant crop.

Mr. Saxena.—Yes.

President.—The cost of cultivation for a ratoon crop is less.

Mr. Saxena.—Yes.

Mr. Rahimtoola.—Do the cultivators do much ratooning?

Mr. Saxena.—There was a large amount of cane left standing this year, and so they have done much ratooning. As regards the minimum price, 5 annas was fixed on the basis of Rs. 8-8-0 sugar price. For every reduction of 8 annas in the price of sugar, they reduced one pice in the price of sugar cane. I think that it is not fair. It means that in every rise in price of sugar by 8 annas the cultivator gets eleven pice and the factory owner five annas and a quarter. This is most unjust. I think the price of sugarcane must in no case be less than six annas which at the present yield per acre should be the absolute minimum irrespective of the price of sugar.

Mr. Rahimtoola.—What should be the price which would leave some profit to the cultivator?

Mr. Saxena.—If he can get a minimum price of 6 annas, he will just get a fair return for his labour, but no profit.

President.—That is for cane delivered at the factory?

Mr. Saxena.—Yes.

Mr. Rahimtoola.—If he gets an yield of 400 maunds instead of 300 maunds, the price becomes 5-1 annas. 80 per cent. of your area is irrigated and the yield of the irrigated area is 400 maunds.

Mr. Saxena.—I have put down the yield as 250 maunds per bigha.

Mr. Rahimtoola.—Then the cost will be more.

Mr. Saxena.—It comes to about 5 annas 1 pie per maund.

Mr. Rahimtoola.—Do you think that if the price is fixed at 6 annas it will give them a fair margin?

Mr. Saxena.—Yes, they will get just what they spend. They will spend one anna on carting and so he will only get a fair return for his labour in cultivation. If he can get a fair return for his labour, he will be quite contented under the present circumstances. I realise the industry in these provinces needs cheap cane, but that is possible only by increasing the yield per acre, and not by paying the cultivator less than the actual cost of cultivation. All efforts of the Government must therefore be concentrated on this problem if the industry is to be saved from passing into states and other provinces. As regards zoning, it has been said in some quarters that if every factory had got zones it would be better. My own view is that if there is zoning, cane growers will be entirely at the mercy of factories. Zoning, therefore, must be done after providing elaborate safeguards for the growers.

Mr. Rahimtoola.—When a minimum price is fixed under the zoning system, how can the cultivators be at the mercy of factories?

Mr. Saxena.—If the minimum price is fixed at 6 annas, when there is competition, they may get even 8 annas for their cane. If there is a system of zoning with a minimum price of 6 annas, they will only get 6 annas. They should get the benefit of competition.

Mr. Rahimtoola.—Your point is that you do not think that zoning would be in the interests of the cultivator.

Mr. Saxena.—Yes, that is the point, unless very elaborate safeguards are provided.

Mr. Rahimtoola.—Are there any other points which you would like to raise before us?

Mr. Saxena.—There is one another point I want to mention to the Board about the condition of the cartmen who bring cane to the factories. The roads are so bad that they must be thoroughly improved. The system of

calling carts to the factory gates is very bad. I have seen carts which have been delayed for ten days. That is something very objectionable. Some bullocks have in fact died. Some have got their legs broken and horns broken. There is no arrangement for drinking water for these bullocks near factories. Parking arrangements for carts are practically non-existent. The sight of these men and bullocks drenched in January rain, and keeping all night in the open is shocking. There is no arrangement for food or fodder either of which often runs short.

Mr. Rahimtoola.—As regards the contribution to charity, do the cultivators willingly pay it?

Mr. Saxena.—They do not give it willingly first of all and it is realised in fact as part of the ordinary routine. The money so collected is spent on things which the cultivator does not know.

Mr. Rahimtoola.—Is it actually spent on charity.

Mr. Saxena.—My own experience is that it is not all spent on charity. Some factories may do it but most of them do not.

Mr. Rahimtoola.—They say that they take it for charitable purposes.

Mr. Saxena.—Yes.

Mr. Rahimtoola.—What is the amount that they spend?

Mr. Saxena.—In some cases it might be very great. In this season there have been factories which have purchased cane from certain people on the condition that they must pay something to charity. The money so deposited has been spent on things which have no connection with charity.

Mr. Rahimtoola.—Do they not publish balance sheets in which this is shown?

Mr. Saxena.—This amount is not shown in any document published officially. There is one further point which I want to mention about sanitation. It is most objectionable, that the sewage water of mills should be dropped into village rivers. There is one beautiful river Khekra in Gorakhpur district from which cattle and men drink. The Siswa factory drops its sewage into it. The result is that there is such foul smell for miles round it that the villagers are really in a very bad condition. There is malaria and disease now where there was none before. This must be strictly forbidden. Similarly there is one more rivulet near the Padrauna Factory. I am very emphatic in my opinion that Factories must be required to submit to such laws regarding sanitation that those existence may not become a nuisance to their neighbourhood. At present the conditions are deplorable, and must be strongly tackled.