

**REPORT**  
**ON**  
**Time-bound Programme**  
**for Achieving Self-Sufficiency**  
**in Foodgrains and Oilseeds**

**BY**  
**WORKING GROUP OF SECRETARIES IN AGRICULTURAL**  
**SECTOR UNDER THE CHAIRMANSHIP OF**  
**SHRI P. G. GAVAI**  
**CHIEF SECRETARY TO THE GOVERNMENT OF**  
**MAHARASHTRA**



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**REPORT**

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# REPORT OF COMMITTEE ON SELF-SUFFICIENCY IN FOODGRAINS AND OILSEEDS

## 1. GENERAL ASSESSMENT

1.1. Government has decided that Maharashtra should be self-sufficient in foodgrains and oilseeds at the earliest possible date. This report gives the blueprint for achieving self-sufficiency in foodgrains and oilseeds by the year 1984-85. It has been calculated that, in order to attain self-sufficiency, the production levels of cereals, pulses and oilseeds in 1984-85 should be as follows :—

						(Figures in lakh tonnes)
						Production targets for 1984-85
Cereals	..	..	..	..	..	120.71
Pulses	..	..	..	..	..	14.71
Total foodgrains	..	..	..	..	..	135.42
Oilseeds	..	..	..	..	..	20.62

1.2. In order that the above production targets are reached, there may have to be some shifts in the areas from one crop to another and such shifts should be brought about through various policy instruments spelt out in this report. There will also have to be an increase in the yields of various crops; the extent of such increases in yields and the manner of bringing about such increases are also indicated in this report.

1.3. Statement-II gives the area coverage which will have to be brought under various crops by 1984-85, the percentage of coverage under hybrid and high yielding varieties and the yields which will have to be achieved.

1.4. Statement-III gives, at a glance, the shifts to be brought about in the areas under different crops. It will be seen that, broadly, the area under pulses and oilseeds should increase and the area under cereals should decrease. Since in pulses and oilseeds no hybrid or high yielding varieties have so far been evolved (except sunflower hybrids), as in the case of cereals, it is obvious that any substantial production increase in these crops can be achieved only by an increase in the area. In the case of cereals, maximum advantage of the availability of hybrid and high yielding varieties should be taken so that even with the reduced area there should be an overall increase in production. Broadly, this would be the strategy to be followed.

1.5. Statement-IV gives the measures to be adopted for every crop in order to achieve the projected yields. These cropwise strategies are discussed in greater detail in item 3 below.

## 2. MAHARASHTRA'S PAST PERFORMANCE IN AGRICULTURE

2.1. Agriculture in Maharashtra has made considerable progress in the last two decades. Total foodgrains production rose from an average of 69.69 lakh tonnes in 1960-63 to an average of 102.80 lakh tonnes in 1977-80. The annual growth rate recorded was 2.64 per cent.

2.2. The agricultural growth of Maharashtra, particularly in the 70s, compares favourably with the growth rates achieved by other States, some of them with a higher percentage of irrigated area and climatically better endowed.

*Statewise growth rates of production and yield of total foodgrains in  
India from 1967-68 to 1978-79.*

Serial No.	State	Total Foodgrains	
		Production	Yield
1	Andhra Pradesh	3.02	2.78
2	Assam	1.12	1.11
3	Bihar	1.42	2.31
4	Gujarat	2.79	3.80
5	Haryana	3.69	2.41
6	Himachal Pradesh	1.38	0.83
7	Jammu and Kashmir	1.99	1.37
8	Karnataka	3.11	3.70
9	Kerala	0.11	0.64
10	Madhya Pradesh	1.20	0.63
11	Maharashtra	5.14	4.16
12	Orissa	0.70	0.94
13	Punjab	5.62	3.27
14	Rajasthan	3.23	1.40
15	Tamil Nadu	2.16	2.03
16	Uttar Pradesh	2.40	1.33
17	West Bengal	2.07	1.20
	All India	2.77	1.84

The above Table would show that as compared to what has been achieved in the recent past, the targets now proposed are not unrealistic. They are well within the capability of the State to reach.

2.3. Jowar is the most important cereal crop accounting for 59.8 per cent of total area under cereals and 58.6 per cent of total production of cereals in the State (in 1979-80). The average yield of kharif jowar which was 688 kg./ha. in early 1960s rose to 1,085 kg./ha. in 1977-80. This represents a 57.7 per cent increase brought about mainly by a substantial step up in Hy/HYV kharif jowar area, especially from 1974-75. This yield level is the second highest in the country, all India average being 800 kg./ha. But rabi jowar which is sown over a larger area than kharif jowar gives poor yields and these have been stagnant around 5 quintals/ha. The reason is that rabi jowar is grown mostly in the drought-prone areas of the State under conditions of receding moisture, and the uncertainties in rabi jowar production are greater. Because of higher uncertainties, farmers are reluctant to invest in cash inputs, particularly fertilisers.

2.4. Rice and wheat are the two foodgrains for which demand is likely to go up with increasing urbanisation. Production as well as productivity of both these crops have shown increase. The productivity of rice in the early 1960s was only 1,047 kg./ha. This rose to 1,422 kg./ha. between 1977-80. The total production of rice rose from 13.82 lakh tonnes in early 1960s to 21.24 lakh tonnes between 1977-80. In the case of wheat the productivity rose from 473 kg./ha. in early 1960s to 818 kg./ha. between 1977-80 and production rose from 4.25 lakh tonnes in early 1960s to 9.73 lakh tonnes between 1977-80.

2.5. Paras 2.3 and 2.4 above compare the cereal yields in Maharashtra in early 60s with those obtained in late 70s. The yields remained almost static during the 60s and there was in fact a negative growth rate in many foodgrain crops. The effects of hybridisation began to be felt only after Maharashtra emerged from the 3 years of drought from 1970 to 1973. The real growth, therefore, took place only from 1973-74 onwards and during the latter half of the 70s the cereal production recorded an annual compounded growth of 6.32 per cent.

2.6. In contrast with the above cereal crops, the total production of pulses and oilseeds in the State has remained more or less stagnant in the last two decades. This is mainly because the focus has been more on cereals, and also because Hy./HYV pulses and oilseeds were not available. In recent years, however, Government has viewed the shortage of pulses and oilseeds, with concern. Special programmes have been launched from 1981-82 to increase their production. Special mention needs to be made of the summer groundnut programme launched by the Government on an extensive scale in 1980-81. As against an area of 24,000 ha. in the preceding year, the campaign launched in 1980-81 ended with a summer groundnut coverage of 1.22 lakh ha. with estimated production of 1.7 lakh M.Ts.

### 3. CROPWISE STRATEGY AND TOOLS FOR INCREASING PRODUCTIVITY

3.1. For achieving the production targets mentioned in para 1.1 above by 1984-85 a definite strategy for increasing productivity of crops has to be followed. The cropwise strategy for increasing productivity is discussed below. Various tools to be used for this purpose and their aggregate effect in raising productivity are indicated in Statement-IV.

#### A. RICE

3.2. It is mainly a kharif rainfed crop, with protective irrigation, wherever possible. High rainfall zone and coastal zone are the main paddy growing areas contributing 36 per cent and 30 per cent respectively to the total area under paddy in the State. Paddy can be grown on shallow and well drained soils and hence areas on elevations, if properly bunded to maintain water depth requirement, would be suitable for paddy.

3.3. The yields of rice ranged from a minimum of 8 Q./Ha. in Dhule district to 20.6 Q./ha. in Kolhapur district in 1978-79, the average for the State being about 14.70 Q./ha. In the coastal area which provides 30 per cent coverage the average yield is 17.6 Q./ha. while in the high rainfall zone providing 36 per cent area coverage, the yield level is 12.4 Q./ha.

3.4. During last 5 years the areas and yield levels for the State have been as follows :—

Year	1975-76	1976-77	1977-78	1978-79	1979-80
Area .. .. .	1,416	1,483	1,499	1,498	1,485
Yield .. .. .	1,615	1,351	1,563	1,469	1,231

Area—'000\* ha. Yield—kg/ha.

3.5. It is seen that there has been a marginal increase in the area, but the yield level has come down from 1,615 kg./ha. in 1975-76 to 1,231 kg./ha. in 1979-80 due to seasonal factors. In 1979-80, the area and production of rice were 13.0 per cent and 19.6 per cent of the total area under and production of cereals. The HYV coverage during that year was 8.76 lakh ha. or 59 per cent of the total rice area. The productivity of rice in 1978-79 in Maharashtra was 1,469 kg./ha. as against the all-India figure of 1,339 kg./ha. The area contribution under rice in Maharashtra to total all India rice area was 3.75 per cent.

3.6. The local varieties, which are long duration ones (150 to 160 days) come to flowering stage in September-October as they are planted in July or so, after the rain is well set. A small water stress at this stage (i.e. September-October) reduces the yields drastically. Mostly, this is exactly what happens as the September-October rains are most unreliable. Even under irrigated conditions, the water supply from source reduces due to early use of water and insufficient water supply is made in September-October. If September-October rains fail, the production of paddy undergoes a marked reduction.

3.7. High yielding varieties have received the most popular acceptance for paddy amongst all the crops, due to their potential yield characteristics. During 1979-80, 59 per cent of the area under paddy was under high yielding varieties, while 9 per cent of the area was under improved local variety. In the coastal zone, the extent was 55 per cent and 28 per cent. In the high rainfall zone, high yielding varieties occupied 52 per cent area while local improved varieties

were not taken at all. One of the main reasons for such a rapid switchover is the early maturing characteristic of high yielding varieties which are relatively less affected by water stress in September-October. Another reason is that, due to early maturing and early harvesting, a second crop is possible.

3.8. For reaching the production target of 26.85 lakh tonnes by 1984-85, the average yield of rice will have to be increased from the base level of 1,231 kg/ha. to 1,730 kg/ha. Considering the fact that the yield level of 1,568 kg/ha has already been achieved in 1980-81, it is felt that the productivity target of 1,730 kg/ha. is not too high. It is within the capability of the farmers.

3.9. In order to attain the yield levels projected, certain improvements in the level of agricultural practices should be brought about. These have been spelt out in Statement-IV. They are:—

- (1) increased coverage under HYV;
- (2) higher percentage of consumption of certified seed;
- (3) maintenance of optimum plant population;
- (4) increased use of fertilizers;
- (5) increased use of plant protection;
- (6) increase in area under irrigated paddy.

Most of the above will have to be achieved through extension.

3.10. Three specific measures will have to be taken up for increasing the productivity of paddy:—

- (1) considerable extension of the scheme of community paddy nurseries.
- (2) raising of paddy bunds and repairs to bunds through EGS;
- (3) increased production of good quality paddy seeds including certified seeds.

The past performance of the scheme of community paddy nurseries is as follows:

Year	Area covered under community nurseries (Ha.)	Expenditure incurred on subsidy (lakh Rs.)
1979-80 Summer	158	1.63
1980-81 Kharif	902	9.02
1980-81 Summer	287	2.87
1981-82 Total	1,200	12.00
	Programme	Expected

The scheme has given an impetus to the coverage of HYV paddy specially amongst small farmers and backward farmers and hence it should be extended to 2,500 hectares by 1984-85.

## B. JOWAR (SORGHUM)

3.11. The crop is taken either in monsoon (kharif) or winter (rabi) season. The kharif jowar is restricted mainly to low rainfall (700 to 900 mm) areas. Rabi jowar is taken where the soils are water retentive making the residual soil moisture available.

3.12. In the State the total area under jowar (1978-79) is about 65.3 lakh hectares. It comprises approximately 30.3 lakh hectares of Kharif jowar and 35 lakh ha. of rabi jowar. Out of the total area of 65.3 lakh ha. under jowar cultivation scarcity zone alone contributes about 50 per cent kharif jowar, while assured rainfall zone contributes about 50 per cent of rabi jowar. The yield level for kharif jowar varies from a minimum of 4.7 Q./ha. in Akola district to 19.4 Q./ha. in Pune district. The average yield level of the State was 10.3 Q./ha. in the year

1978-79. For rabi jowar yield level varies from 3.3 Q/ha. in Ahmadnagar district to 8.3 Q/ha. in Jalgaon district, the average for the State being 5.02 Q/ha. (1978-79). During the last five years jowar has undergone changes in respect of its yields and area coverage as shown below:—

Year		1975-76	1976-77	1977-78	1978-79	1979-80
Kharif Sorghum	{ Area .. ..	2749	3094	3211	3019	3033
	{ Yield .. ..	817	956	1086	1035	1134
Rabi Sorghum	{ Area .. ..	3315	3346	3429	3507	3791
	{ Yield .. ..	365	524	473	502	534

Area—'000' ha. Yield—kg./ha.

It is seen that the area as well as the yield of jowar has shown increasing trend.

#### (a) Kharif Jowar

3.13. In 1979-80 the Hy./HYV coverage was 16.56 lakh ha. contributing 54.6 per cent to total kharif jowar area. The target of hybrid coverage by 1984-85 should be 26.02 lakh ha. and the productivity should be raised from 1134 kg./ha. in 1979-80 to 1564 kg./ha. This should be achieved by using the tools indicated in Statement IV. They are:—

- (1) increased coverage under Hy./HYV;
- (2) higher percentage of consumption of certified seed;
- (3) maintenance of optimum plant population;
- (4) increased use of fertilizers;
- (5) increase in area under irrigation.

3.14. The percentage of irrigated kharif jowar is very small as can be seen from Statement II. The main strategy in jowar would, therefore, have to be in the direction of increasing this percentage of kharif jowar under irrigation. It will be seen from Statement II that the assumption regarding increase in irrigated area by 1984-85 is very conservative i.e. from 37,000 hectares to 52,000 hectares. But considering the total irrigation potential and the fact that during kharif the seasonal crops which can be irrigated (barring the paddy growing areas) are mostly jowar and cotton, there is no reason why this area cannot be increased substantially. It is necessary to devise irrigation management policies suitably to motivate farmers to go in for at least protective irrigation if there is break in monsoon. Thus, the strategy for increasing the yield of jowar in areas coming under the irrigation commands should be two-fold viz. (1) encouraging farmers to go in for irrigated kharif jowar in which case the planting should start from June 1st and (2) encouraging those farmers who eventhough located in irrigation commands choose to grow a rainfed crop, to take protective irrigation during kharif season, if found necessary.

3.15. In the Staff Appraisal Report of the World Bank on Maharashtra Composite Irrigation Project II, it has been clearly brought out that carrying over water storage through the rabi and hot weather seasons in order to commence kharif season from June 1st would be agronomically desirable and would not result in any substantial wastage of water due to evaporation. Therefore, it is proposed that (1) kharif irrigation season should start from June 1st rather than from July 1st; (2) kharif irrigation (i.e. irrigation from June 1st) for foodcrops should be made free, to start with at least in those irrigation commands located in assured rainfall areas where normally farmers do not irrigate their kharif crops but prefer to wait for a good monsoon; (3) farmers in the command areas should, through proper extension be made to prepare their fields for irrigation during kharif. This would enable them to draw irrigation water, if there is a break in the rains during monsoon. For this purpose, the field channels should be got done and brought into proper shape well in advance of the kharif season. This should be the responsibility of the Soil Conservation Wing, the work being undertaken under EGS.



3.16. CSH-5 and CSH-9 varieties of hybrid jowar have been very well received by farmers for early sowing in kharif season. These varieties give higher yields both of grain and fodder with better quality as compared to CSH-1. Having a longer duration (110 to 115 days) than CSH-1, these varieties if sown in first week of June, escape the effect of absence of or break in September rains. For greater use of these promising varieties also, kharif irrigation should start from June 1st.

3.17. The importance of ensuring adequate and timely-availability of seeds in any agricultural development strategy which depends critically upon hybrid crops (where the farmer cannot use his own seeds, as in the case of wheat) cannot be overemphasized. In the State, even though the coverage under hybrid jowar is 16.56 lakh ha. in kharif, the consumption of certified seeds has not exceeded 60,000 qtls., thus bringing the seed rate to about 4 kg./ha., as against the recommendation of about 7 to 10 kg./ha. Thus, the possibility of achieving substantial increase in production by merely increasing the consumption of certified seeds is apparent. The new seed policy of the State Government which seeks to produce plenty of certified seeds even at the risk of incurring carry-over costs, would result in increasing the consumption of certified seeds. It is to be added here that not only should the overall availability of seeds be adequate, but it is the responsibility of the Government to have enough stocks of each variety of hybrid jowar seed

**(b) Rabi Jowar**

3.18. Rabi jowar area in Maharashtra contributes about 30 to 33 per cent to the total cereal area, while the contribution to production is hardly 20 to 21 per cent of the total cereal production. The reason is that the average rabi jowar yield is just 5.34 quintal per hectare or about half of the yield of kharif jowar. Area-wise, rabi jowar has the largest area (37.91 lakh hectares in 1979-80) under any single crop in Maharashtra. In recent years two new varieties have been evolved viz., Hybrid CSH-8 and SPV-86 which is a composite high yielding variety. Potential yields of these varieties are 30-32 Q./ha. and 25-30 Q./ha. respectively.

3.19. The strategy for increasing production of rabi jowar would lie in bringing about a substantial increase in the area under these two varieties. Specific target for use of different tools for reaching productivity target of 609 kg./ha. by 1984-85 are indicated in Statement-IV attached; they are the same as those for kharif jowar.

3.20. Seed planning is very important in the case of rabi jowar. Since, the risk factors are more, unirrigated farmers will be reluctant to invest in certified seeds of CSH-8 or SPV-86. But, there are years when the season turns out to be very favourable for rabi jowar, as in 1979, or in 1981, because of good rains in September and October. When such favourable circumstances happen, the administration should try through the T. and V. extension network to make the farmers use certified seeds. Farmer response will be better if the risk factor is less. This would imply that every year the administration should be ready with adequate stocks of certified seeds; in some years farmers will buy them and in other years they may not. This certainly carries the risk of Government incurring carry-over losses. But in order to smoothen the farmers' risk such losses should be considered as a part of developmental expenditure.

3.21. Another area of administrative action in relation to rabi jowar is regarding fertilisers. Even the application of one kg. of nitrogen per ha. will increase the production by 10.9 kg./ha. But farmers generally do not take the trouble of travelling long distances just to purchase a small quantity of fertilisers. It is, therefore, necessary to organise mobile fertiliser vending centres. A small beginning was made in rabi 1981-82. This requires to be intensified.

**(c) Bajra (Pearl Millet)**

3.22. It is extensively grown as a kharif rainfed crop. Shallow soils with good drainage properties are also favourable for growth of this crop and as such, low rainfall tracts with relatively high locations prove to be bajra growing area. In 1978-79 bajra occupied about 15.8

lakh hectares area in the State. As compared to kharif jowar which can be grown under similar conditions, but on better soils, the yield of bajra is low. The yield level varies from 1.8 Q./ha. in Kolhapur district to 6 Q./ha. in Jalgaon district. The area and yield levels of bajra during last five years have been as shown below:

Year		1975-76	1976-77	1977-78	1978-79	1979-80
Bajra	Area ..	1,808	1,768	1,759	1,575	1,428
	Yield ..	310	385	369	342	425

Area in '000' ha. Yield in kg./ha.

It is seen that the area under bajra has come down since 1975-76.

3.23. Hybrid varieties in bajra were introduced in 1965. They gained rapid acceptance, However, due to equally rapid spread of downy mildew and ergot, the hybrid varieties lost popularity and areas under bajra also showed a declining tendency. In 1979-80, some promising, early maturing (90-95 days) and disease tolerant varieties as indicated below were introduced:

Variety	Potential Yield
BJ 104 .. ..	20-22 Q./ha.
BK 560 .. ..	22-24 Q./ha.

These hybrid varieties of bajra have proved to be a success. The area under hybrid varieties increased from 2.80 lakh ha. in 1978-79 to 4.11 lakh ha. in 1979-80. Productivity also increased from 3.42 Q. per ha. to 4.25 Q. per ha.

3.24. In order to achieve the production target, the productivity will have to be increased from 4.25 Q./ha. in 1979-80 to 7.11 Q./ha. by 1984-85. This increase should be achieved through the use of tools as indicated in Statement-IV attached. They are the same as in the case of kharif jowar. It will be seen from Statement-II that area under bajra is assumed to increase from 14.28 lakh ha. in 1979-80 to 16.00 lakh ha. in 1984-85. Such an increase would imply that lands with shallow soil cover where farmers at present grow ordinary jowar (because the soils are not good enough for hybrid jowar) should be brought under hybrid bajra. Such a change will have to be brought about through extension. There will have to be a blockwise survey of such areas which can more profitably be shifted from ordinary jowar to hybrid bajra. This will be the task of the extension organization.

#### (d) Wheat

3.25. Unlike in northern India, the climatic conditions in Maharashtra are not very much favourable for the growth of wheat due to mild and short winters. Wheat is an important irrigated crop and is taken on deep water retentive soils where irrigation is limited. About 50 per cent area under wheat is unirrigated but then the yields are poor.

3.26. In Maharashtra, the total area under wheat during 1978-79 was about 11.9 lakh hectares. Assured rainfall zone contributes maximum area (4.40 lakh ha.). Scarcity area also grows wheat to the extent of 2.6 lakh ha. The yield variation is from 4.2 Q./ha. in Bhandara district to 10.6 Q./ha. in Pune district. The average yield obtained in the State is 8.6 Q./ha. During the last five years, the area and yield levels of wheat were as shown below:

		1975-76	1976-77	1977-78	1978-79	1979-80
Wheat area ..	..	1,169	1,188	1,215	1,187	1,164
Yield ..	..	1,026	789	792	802	864

Area—in '000' ha. Yield—kg./ha.

In 1975-76, due to intensive extension in the pilot projects and good season, the area under wheat increased. Unfortunately, however, in the next year while the area increased further, the yield decreased. The yield level again picked up from 1977-78 but area came down. The yield level of 1975-76 was not reached again, because of adverse seasonal conditions though the area is coming up to the 1975-76 level. High Yielding Varieties of wheat have gained widespread acceptance. In the year 1979-80 out of the total area of 11.64 lakh ha. the high yielding varieties were grown on 9.73 lakh ha. i.e. 83.6 per cent. Maximum (91 per cent) adoption of high yielding varieties has mostly been in the moderate rainfall zone.

3.27. It is seen from appended Statement-IV that for reaching the production target the average yield of wheat will have to be increased from 864 kg./ha. in 1979-80 to 1,000 kg./ha. by 1984-85. This is not a difficult task considering the fact that the pilot projects for wheat launched in 1975 gave an average yield of 31.6 quintals per ha. But then this was an achievement under ideal conditions when all inputs at optimum level were made available with supervised credit. Still the above mentioned increase in yield should be possible through the use of tools indicated in Statement-IV. These are:

- (1) higher percentage of consumption of certified seed and increased seed replacement rate.
- (2) increased coverage under HYV.
- (3) maintenance of optimum plant population.
- (4) increased use of fertilizers.
- (5) increase in area under irrigated wheat.

(e) Pulses

3.28. Pulses grown in the State are mainly tur and gram. They are generally grown as rainfed crops. They occupy an area of about 28 lakh hectares. Kharif pulses like Tur are taken as inter-crops in jowar and bajra. The average yield of tur and gram has been 5.9 Q./ha. and 3.4 Q./ha. The yields are less as compared to any cereals. During last five years the area and yields have been as shown below:

		1975-76	1976-77	1977-78	1978-79	1979-80
Pulses	{ Area ..	2,913	2,805	2,842	2,803	2,666
	{ Yield ..	401	348	356	569	389

Area—'000' ha. Yield—kg./ha.

As compared to 1975-76 the area as well as yield level has declined.

(a) Kharif Pulses

3.29. These are mainly tur, mug and udid. The area and productivity statistics are as follows:—

Year	Tur		Mug		Udid	
	Area	Yield	Area	Yield	Area	Yield
1975-76 ..	676	604	519	322	480	356
1976-77 ..	648	459	585	327	487	353
1977-78 ..	660	521	540	303	484	349
1978-79 ..	676	591	534	282	490	320
1979-80 ..	663	620	516	271	452	325

Area—'000' ha. Yield—kg./ha.

For reaching the production targets, a larger area should be brought under these crops, through extension, as indicated in Statement III and yields also should be raised to the levels indicated in Statement IV by using the tools specified therein. These are—

- (i) maintenance of optimum plant population;
- (ii) increased use of plant protection;
- (iii) use of Rhyzobium Culture;
- (iv) increase in area under irrigation;
- (v) additional area from kharif fallows.

3.30. In particular, inter-cropping will have to be promoted through extension. Earlier, free irrigation for kharif jowar has been suggested starting from June 1st. By and large, tur is taken as an inter-crop with jowar and so it will get the advantage of early kharif irrigation. In addition, free irrigation should be made available from June 1st to sole tur crop also.

#### (b) Rabi Pulses

3.31. The most important rabi pulse crop is gram. Its area and yield in recent years have been as follows:—

		1975-76	1976-77	1977-78	1978-79	1979-80
Rabi Gram	Area	446	428	471	460	453
	Yield	404	315	312	342	383
		Area—'000' ha.	Yield—kg/ha.			

For reaching the production target the productivity will have to be raised to 490 kg/ha. by 1984-85. For this purpose, various tools as indicated in Statement IV should be used. These are the same as for kharif pulses.

3.32. Mainly, gram is taken on residual moisture. In the event of inadequate precipitation in September/October, however, irrigation for gram crop at the flowering stage is badly needed. Therefore, even though there are no previous applications from farmers received by Irrigation Department, it should immediately respond to the requests for irrigation water to save the crop. Cultivators in command areas, on their part, should prepare their fields for receiving the irrigation water. Responsibility for digging field channels or getting them into proper shape well in advance of rabi season would lie with Soil Conservation Wing. The work should be undertaken under EGS.

#### (f) Oilseeds

3.33. In 1978-79, the area and production of total oilseeds in the State as compared to All India, was 10.8 and 7.9 per cent respectively and the productivity of total oilseeds in Maharashtra was 415 kg/ha. as against 572 kg/ha. at all India level. Area and yields statistics in recent years has been as follows:—

Year	Kharif groundnut		Summer groundnut		Safflower		Sunflower		
	Area	Yield	Area	Yield	Area	Yield	Area	Yield	
1975-76	854	810	.....	.....	473	388	.....	.....	
1976-77	925	654	.....	.....	510	355	.....	.....	
1977-78	848	682	Negligible	.....	515	276	Negligible	.....	
1978-79	795	602	Negligible	.....	514	329	Negligible	.....	
1979-80	723	744	24	1250	534	364	30	400	
		Area—'000' ha.		Yield—kg/Ha					

For achieving the production target, it will be necessary to ensure through extension larger areas being brought under oilseed crops as shown in Statement III. Substantial step up should be in crops like summer groundnut, safflower and sunflower. Already, efforts made in this

direction have evoked good response and so the targets of coverage are capable of being achieved. Simultaneously, steps should be taken to increase productivity by adopting various tools mentioned in Statement IV in respect of different oilseeds crops.

3.34. In the case of groundnut, in particular, there is need for sufficient credit being made available to the farmers. Considering the high cost of seed, subsidy should be given at source only to such extent as to keep the selling price a little above the market price

3.35. The major constraint in kharif groundnut production is the frequently occurring phenomenon of moisture stress at the time of pegging and pod formation occasioned by absence of rain at that critical time. For sustaining the cultivators' interest in kharif groundnut production and for raising yield to the target level, irrigation department should release irrigation water for kharif groundnut immediately on getting demand from the farmers. Appropriate steps should be taken also by Soil Conservation Wing and cultivators themselves to keep their fields ready to receive irrigation.

3.36. In the case of summer groundnut irrigation charges should not be levied for two seasons. Only the summer rate should be charged and if additional water is given either before or after the summer season the charges should be on the basis of number of irrigations availed of

#### 4. RAISING POTATO PRODUCTION

4.1. In the opinion of the Working Group it will be in the fitness of things if higher production of cereals is further supplemented by raising the production of potatoes also. Potatoes form a part of staple diet of a large number of families both in the rural and urban sectors. The area under potato cultivation as also the productivity need therefore to be raised substantially. Evidently, this will imply production of seed potatoes on an adequate scale and arrangements for proper storage and distribution. Detailed proposals in this regard are being worked out separately.

#### 5. AGRICULTURAL EXTENSION

5.1. Adoption of recommended modern cultural practices help substantially in bringing about desired shifts in cropping patterns, increased yields and therefore, higher production. This is amply brought out in a recent paper AGR Technical Note No. 5 on Agricultural Extension in India—brought out by South Asia Projects Department of the World Bank, excerpts from which are reproduced below:—

“Since its inception in July 1977, training and visit extension in Orissa has been a chief vehicle for promoting oilseed and pulse development, reflecting the priority given by the Central and State Governments to these crops. In the four years since 1976-77, the area under oilseeds has increased from 505,000 to 725,500 ha., Kharif pulses from 187,800 to 210,800 ha. and rabi pulses from 779,600 to 1,381,000 ha.”

5.2. Another example of the achievements of training and visit extension comes from Assam where, the extension service decided to put emphasis on HYV rice during the 1980 kharif season (which followed a drought in the previous season). The decision was made at a meeting of field extension staff who indicated that earlier extension efforts had generated considerable demand for HYV, particularly among small and medium scale farmers. Also, a number of trials on farmers' fields had indicated that even under rainfed conditions, short duration HYVs have almost double the yield of traditional varieties. Farmers reacted favourably to the decision; four times the amount of HYV seed were taken up compared to the previous year and the Department of Agriculture projected an increase in the area under HYV and improved varieties from 4,00,000 to 5,75,000 ha. Actual consumption of NPK also increased by 144 per cent to 6,600 tonnes from the previous kharif season.

5.3. Training and visit extension has had a significant impact on Rajasthan since its introduction there. During the first three years under the system (to 1978-79), yields of wheat in the project area increased from 11.1 to 14.6 qtl./ha. Yields of groundnut and cotton also increased (from 5.9 to 9.4, and from 1.9 to 2.4 qtl./ha. respectively). Under the guidance of the extension service, in many areas millet has been replaced by soyabean and linseed by mustard. Elsewhere—in Bharatpur district—the area planted under hybrid millet increased by

more than three-fold. Seed treatment and basal applications of fertilisers were recommended by VEWs, and are now adopted by 40 to 50 percent of farmers in the project area. Promotion of summer cultivation supported by well irrigation has also been promoted and the current 200,00 ha. under this practice are expected to increase to 600,000 ha. this year."

5.4. Though not any glamour attached to it, Agricultural Extension is, therefore, a basic requirement in any plan for increasing agricultural production. It is a very important tool and should be fully used to get the output maximised to the level of production targets. Success stories of extension should be widely published for information of and emulation by farmers for their own benefit.

5.5. Presently, the Training and Visit extension covers nine districts of Raigad, Jalgaon, Buldhana, Akola, Nagpur, Aurangabad, Jalna, Solapur and Satara. The programme has been phased over two years to cover the entire State and is being closely monitored. Besides Training and Visits, full use should be made of all the information or communication media as for instance, the Shetkari magazine, radio, television, advertisements, issue of season-wise and crop-wise pamphlets/bulletins, etc. etc. to widely publicise the success stories of extension and properly advise farmers all over to adopt modern cultural practices for better yields and production. This should be backed up by adequate provision of funds, may be a bit more liberally.

5.6. For evaluation of the Training and Visits programme a base line survey (a) to ascertain present status of cultivation and (b) to assess crop yields should be undertaken early.

## 6. ASSUMPTIONS TO BE FULFILLED

6.1. While the crop-wise strategy should be as discussed earlier, it has to be noted that the production targets are based on certain assumptions which will have to be fulfilled. These are discussed in the following paras.

6.2. *Irrigation*.—Facilities for raising irrigated foodgrain and oilseed crops should be available to the following extent:—

	Lakh ha.					
(a) Flow irrigation	..	..	..	..	..	11.13*
(b) Tanks	..	..	..	..	..	2.76
(c) Wells	..	..	..	..	..	7.18**
					Total	21.07

\*This is out of total utilisation of 12.72 lakh ha. by June, 1984 indicated by Irrigation Department in Statement V attached.

\*\*This is out of 15.70 lakh ha. of well irrigated area assumed by 1984-85 as below:—

Base level (1979-80)	14.33	lakh ha.
Additional due to new wells and energisation	1.37	lakh Q.***
	Total	15.70 lakh ha

\*\*\*This again is based on assumption that 60 per cent of the additional potential created by wells will be available for food and oilseed crops. Out of the programme of 40,000 wells per annum *vide* attached statement X, till the end of 6th Plan, successful wells dug upto 1982-83, estimated at 1,10,000, would contribute at the rate of 1.25 ha./ well, about 82,000 ha. of additional irrigated area under food and oilseed crops. In regard to energisation of pump sets, 69,174 pump sets were energised during 1980-81. During 1981-82 the number of pump sets likely to be energised is 49,500 only chiefly, because of the constraints in provision of funds. The target of energisation of 2,50,000 pumps sets by the end of 6th plan would, however, be achieved. These would irrigate about one lakh ha. at the rate of 0.4 ha. per pump set. Of this 55 per cent i.e. about 55,000 ha. would be available for food and oilseed crops.

6.3. During 1980-81 the Land Development Bank financed a well construction programme of 34,534 wells for which long term loans to the extent of Rs. 18.66 crores were advanced. During the current year the Bank has programmed for a well construction programme of 11,300

wells for which it is estimated that long term loans to the extent of Rs. 19.35 crores may have to be advanced. This is in addition to the crash programme for wells for small holders. It would thus appear that the Bank may be able to step up the pace of loan advances for wells to the extent of 40,000 wells per annum during the remaining years of the Sixth Five Year Plan provided, however, the managerial efficiency of the bank and the recovery performance are improved. Up to the end of January 1982 the Bank could only recover to the extent of about 18 per cent of its demand amounting to about Rs. 90 crores. According to the guidelines laid down by the RBI, sub branches whose overdues to demand are more than 40 per cent, are not eligible for fresh finance. The total number of such sub branches in the State is at present 133. In particular, the following steps are recommended:—

(i) Management of the State Co-operative Land Development Bank should be suitably strengthened to effectively deal with managerial functions;

(ii) Vigorous programme of recoveries even from influential defaulters should be launched; if necessary, coercive measures should be adopted. This alone would enable Land Development Bank to avail of IDA Credit through Agricultural Refinance and Development Corporation which, otherwise, would remain unutilised;

(iii) Adequate funds should be provided on account of subsidy for failed wells;

(iv) Special quota of cement should be released every quarter exclusively for wells/pump sets programme on an adequate scale;

(v) Maharashtra State Electricity Board should promptly energise all successful wells by advance planning of sufficient stock of equipment needed. Sufficient funds should also be provided to Maharashtra State Electricity Board to enable it to take up energisation programme of the size indicated above.

6.4. *Seeds.*—As a result of new seed policy evolved on the basis of recommendations of the Committee appointed under the Chairmanship of Minister (Agriculture) steps are already taken for production of breeder, foundation and certified seed with a provision for buffer stock. For matching the production targets, the assumption is that seed production programme over the Sixth Plan shall be undertaken to match the proposed level of use by 1984-85 as indicated in Statements VI, VII and VIII

Uptil now, not much attention had been given to the production of seeds of pulses and oilseeds. Further, there is the handicap that there are no Hy/HY. varieties for these crops. It is, however, imperative that despite these constraints, sufficient quantity of seed particularly of promising varieties as for instance, Phule Pragati variety of groundnut should be made available to farmers and hence the need to implement the proposed seed production programme under close supervision with continuous monitoring at the highest level.

6.5. *Fertilisers.*—This is a key input for raising foodgrains and oilseeds production and the assumption is that the State's consumption would be raised from the level of 4.21 lakh tonnes of NPK in 1979-80 to 9.78 lakh tonnes by 1984-85. Between 1975-76 and 1979-80, fertiliser consumption in the State registered a growth rate of 15.85 per cent. Because of steep rise in prices announced by Government of India in Kharif, 1980, the growth in fertiliser consumption came to a grinding halt despite subsidies announced by State Government. Happily, however, consumption during 1981-82 is showing a very favourable trend. Already, during Kharif, 1981 season consumption of fertilisers has reached an all time high of 3.02 lakh tonnes as compared to 2.25 lakh tonnes of the preceding kharif season. This tempo should be kept up. Fertilisers should be made available in each block within easy reach of farmers, through adequate extension of retail outlets and cultivators should be enabled to lift them in advance of the season. For reaching the consumption levels indicated in Statement IV, following steps should be taken:—

(i) Retail outlets should be opened in remote and inaccessible areas located 8 km. or more away from taluka and block headquarters by granting managerial subsidy to cooperatives to make it a viable proposition.

(ii) Interest should be charged on credit utilised for lifting fertilizers in advance of the season only from 1st July in Kharif and 1st October in Rabi season. Government should provide subsidy to lending institutions to compensate for loss of interest on this account.

6.6. *Pesticides*.—The assumption is that cultivators themselves would take adequate measures to protect their crops. However, to prevent crop losses due to severe attacks of pests and diseases, in endemic areas community plant protection measures should be taken through institutional agencies like Maharashtra Agro-Industries Development Corporation. Cost on this account should be recovered in case of good crop; otherwise, the expenditure should be borne by Government. Use of plant protection equipment by farmers should be encouraged, supplying it at 50 per cent subsidy at source. This scheme should be operated through institutional agencies like Maharashtra Agro-Industries Development Corporation.

## 7. CROP FINANCE

7.1. On the basis of the standard scales of finance recommended by the Technical Committees of D. C. C. Banks for various crops and on the assumption that the actual requirements of credit of the participating farmers would be to the extent of 50 per cent of the national requirements, it is estimated that the level of credit support which the co-operative credit structure in the State may have to give for raising out put of various crops as mentioned in Statement No. II would be to the extent of about Rs. 781 crores. The reason why it is assumed that the actual credit requirements would be only to the extent of 50 per cent of the sanctioned scales of finance is that not all beneficiary farmers would borrow from the co-operatives and that even those who borrow may not draw fully to the extent of their entitlement on account of various factors like fertiliser prices, climatic conditions, inter crop price disparities etc. Against the estimated requirements of Rs. 781 crores, however, the present level of outstandings of short term credit (position as on 30 June 1980) is Rs. 300 crores only. This would mean that the co-operative credit structure in the State would have to increase its credit support by more than twice its present level, during the course of next five years. This would require that urgent steps are taken to remove various operational deficiencies of the structure such as high level of overdues (45 per cent), the managerial inefficiency at the primary level, inability of some of the DCC Banks to raise adequate resources by way of deposits and credit limits from R.B.I. etc. While it may not be possible at this stage to make an exact estimate of the level which the co-operative credit structure would be able to reach by 1984-85, it is obvious that steps will have to be taken to supplement the resources of the co-operatives in the State by resources from the Nationalised Banks. At the same time various remedial measures as indicated below would have to be taken to remove the defects in the functioning of the co-operatives and to increase their ability to lend adequately to the borrowers.

7.2. The following remedial measures are suggested :—

(i) Reorganisation of societies on the basis of economic viability norms should be effected immediately. (The programme of reorganisation of credit societies was drawn in the year 1977 but meanwhile, it was stayed).

(ii) Recovery measures should be enforced very strictly.

(iii) Recovery be linked with marketing and processing.

(iv) Additional Government share capital of Rs. 10 crores should be given to about 5,000 primary agricultural credit societies at the rate of Rs. 20,000 each so that they can be revitalized. Such revitalisation will restore the borrowing capacity of the societies and enable them to undertake loaning programme commensurate with the production targets.

(v) Cash component should be related to the kind component so that cultivators adopting scientific practices and using more inputs automatically get increased cash component.

(vi) Procedural reforms in the system of crop finance should be introduced urgently so as to reduce delay in the disbursement of credit to the agriculturists. In particular, District Central Co-operative Banks should be permitted to disburse some percentage of credit to the borrowers on the basis of the previous year's normal credit statements, pending preparation, scrutiny and sanction of fresh normal credit statements, every year. Similarly, a greater



incentive should be provided to the borrowers repaying their loans through linking. This incentive could be in the shape of a slightly higher cash component and a reduced rate of interest on the amount repaid by way of linking.

(vii) The existing scheme of caderisation of Group Secretaries of Primary Credit Societies should be overhauled. Steps should be taken to improve the managerial skills of the Group Secretaries. The primary Credit Societies should be given a greater share in the control and supervision of the Group Secretaries.

(viii) The Study Group on overdues appointed by the RBI has made a number of recommendations for improving the performance of recoveries. State Government should taken action on these recommendations. In particular, various legal and administrative measures as recommended by the Study Group should be taken for improving linked recoveries. Steps to amend the APMC Act should also be taken without further loss of time.

7.3. Regional Rural Bank and Nationalised Banks should be allotted specific areas in which the cooperative credit structure is weak so that they could advance short term production credit to the cultivators in these areas either directly or through multipurpose societies in such areas. The State Government should extend to the Nationalised Banks same concessions and facilities which are available to the cooperative banks so far as short term credit for agriculture is concerned. For this purpose, a dialogue should be held with the State Level Bankers Committee which may be recognised as co-ordinating agency for fixation of targets for nationalised banks operating in the State and periodically monitoring the progress of achievement of the targets set down for the Nationalised Banks. This may ensure that the programmes of self sufficiency in agricultural production do not suffer for want of the required credit support.

## 8. PRICE SUPPORT AND MARKETING

8.1. Price is the single factor which could bring about the desired change in any production programme. The classical example of not a distant past is that of sugarcane price. With the steep decline in cane price, the area under sugarcane registered a sharp fall from 3 lakhs hectares in 1977-78 to 2.74 lakh hectares in 1979-80. With the change in sugar policy, better prices were realised by cane growers and as a result, area under cane in Maharashtra increased to 3.00 lakh hectares, during 1980-81.

8.2. The State Government has been firmly of the view that cultivators should get remunerative prices for their produce. Support prices are determined by Government of India. The experience is that the support prices fixed on All India basis are much lower than those recommended by the State Government (*vide* Statement IX attached). Be that as it may, the working group would favour fixing incentive prices, much above the support price level at least for oilseed crops where the State has to go a long way in attaining self sufficiency. The principal oilseed crops for Maharashtra are groundnut and safflower. Last year Government of India fixed a price of Rs. 206 per quintal only for groundnut crop, as against our recommendation of Rs. 343.11 per quintal. For the current year, our recommendation is Rs. 493 per quintal and Government of India have still to announce the support price. Considering the prevalent price range of groundnut of Rs. 400 to Rs. 500 per quintal, the State Government would do well to fix, with concurrence of the Government of India an incentive price of Rs. 400 per quintal. If this is done, quite a large number of cultivators can be expected to revert to groundnut; if they are already raising this crop, they can have a larger area under it.

8.3. There is no price support for safflower announced by Government of India. A year ago, they had suggested that Government itself may arrange for procurement of safflower through the Marketing Federation. It would be helpful if the State Government could fix an incentive price for safflower too along with groundnut.

8.4. Marketing facilities also play a big role in boosting production. At present the farmer stands to get a smaller share than he deserves of the final price paid by the consumer because of the distribution system in which he is the victim of intermediate agencies. This situation

can be remedied only if the farmers can establish effectively their own marketing co-operatives instead of selling their produce in the open markets. Although the regulated markets exist, the cultivator by and large does not get a fair share in the final price paid by the consumer. Nevertheless Government cannot go in for procurement of all commodities produced by all farmers. There is, however, need that in the case of the principal oilseed crops, namely, groundnut, safflower and sunflower, Government should lend support to the production efforts by according marketing facilities through procurement at incentive prices which are remunerative to the growers. Procurement should however, be accompanied by steps to have the idle processing capacity in the co-operative sector fully utilised.

## 9. MONITORING AND DEMARCATION OF RESPONSIBILITIES

9.1. Government is keen that the State becomes self-sufficient in foodgrains and oilseeds at the earliest possible date. The efforts taken in formulating the crop strategy and plan will be worthwhile only if the plan could be implemented with singular determination. As the programmes get under way, it is not unlikely, taking a realistic view, that with the changing economic situation, some bottlenecks or deficiencies might have to be faced. It will therefore, be in the fitness of things if the responsibilities for executing the plan could be properly fixed on departments and officials at different levels and the programme is closely monitored.

9.2. Item-wise assignment of responsibilities on the officers/agencies should be as indicated below:

Item	Officer responsible
<b>A. Cash Inputs—</b>	
(i) Seeds	<p>(a) Agricultural Development Officer shall generate demand for HY/HYV seeds to reach the target levels of coverage and communicate the demand in time to Maharashtra State Seeds Corporation.</p> <p>(b) Maharashtra State Seeds Corporation shall arrange for timely and adequate supply of HY/HYV seed.</p>
(ii) Fertilizers and Rhyzobium culture.	<p>(a) Agricultural Development Officer shall generate demand to reach the target levels of consumption and also to promote adequate number of retail outlets/mobile outlets to make fertilizers available within easy reach of farmers.</p> <p>(b) District Deputy Registrar of Co-operative Societies shall ensure efficient distribution of fertilisers within the district through the Maharashtra State Co-operative Marketing Federation and Co-operative network which should be suitably geared up.</p> <p>(c) Other institutional agencies viz., Maharashtra Agro-Industries Development Corporation and Vidarbha Co-operative Marketing Society (in Vidarbha region) shall also ensure efficient distribution of fertilizers through their retail network.</p> <p>(b) In regard to rhyzobium culture responsibility for prompt and adequate supply shall rest on Maharashtra Agro-Industries Development Corporation.</p>
(iii) Pesticides	<p>(a) Maharashtra Agro-Industries Development Corporation shall be responsible for ensuring adequate supply of pesticides for pest control campaigns launched by Agricultural Development Officer.</p> <p>(b) Agricultural Development Officer shall monitor the supply of pesticides through Maharashtra Agro-Industries Development Corporation/Co-operatives/Private dealers for proper control of pests and diseases keeping in view the targets given in Statement IV.</p>

Item	Officer responsible
(iv) Credit	.. District Deputy Registrar of Co-operative Societies shall be responsible for ensuring that adequate credit limits are sanctioned to Co-operatives dealing with agricultural inputs and crop finance is made available by District Central Co-operative Banks/Nationalised Banks to cultivators on an adequate scale and in good time before the sowing season. District Deputy Registrar of Co-operative Societies shall also endeavour to remove the gap between the sanctions and disbursement of crop finance to cultivators.
(v) Irrigation—	
(i) CADA Projects ..	(a) Six weeks in advance of the season, the Administrator, CADA shall hold meeting with the concerned Superintending Agricultural Officer/Agricultural Development Officer and Chairman, Agricultural Committee of Zilla Parishads to discuss the demand including the demand for protective irrigation and depending on the water availability/canal capacity distributorywise, cropwise areas to be irrigated and also the irrigation rotation shall be determined.  It will also be the responsibility of the Administrator, CADA to ensure that utilisation of potential created by the end of June every year is maximised.  (b) For this purpose Soil Conservation Wing of Agriculture Department shall be responsible for getting the field channels constructed or brought into proper shape well in advance of sowing season.
(ii) Non-CADA Projects.	The responsibilities cast on Administrators in CADA projects shall be cast on Superintending Engineers in-charge, Irrigation management in Non-CADA projects. Field Channels shall be the responsibility of Soil Conservation Wing of Agriculture Department.
(vi) Wells and pump sets programme.	The District level Committee under the Collector, <i>vide</i> para. 9.3 shall be responsible for execution of this programme as per targets indicated in Chapter 5 of this Report.
B. Adoption of the crop-wise tools of the Plan.	The responsibility for change in cropping pattern <i>vide</i> Statement III and for adoption of crop-wise tools such as timely sowing, spacing, maintenance, depth of sowing, selection of varieties, adequate plant population, appropriate cultural practices including adoption of dry-farming technique, inter-cropping, pollination in the case of sunflower, etc. to reach the targets indicated in Statement IV shall lie squarely on the Principal Agricultural Officer (T & V).  By his very nature of duties, the Principal Agricultural Officer (T & V) shall also be responsible for dissemination of agricultural information including, of course, fortnightly messages to all farmers in the district. He will also have to ensure that the problems encountered from time to time are posed quickly to the Subject Matter Specialist/Agricultural Universities in the Monthly Workshops and a proper solution made known to the farmers for adoption.

9.3. The overall responsibility at various levels should be fixed as indicated below:—

(a) Director of Agriculture shall be responsible for splitting up the State Level Programmes, district by district, indicating the area and production targets for different crops, as also their seasonwise phasing every year. He shall also be responsible for overall performance and realisation of the ultimate objective viz., targetted production for achieving self-sufficiency.

(b) At the Regional level, the responsibility for achieving the area and production targets shall devolve on the respective Divisional Commissioners.

(c) At the district level, the Collector and Chief Executive Officer of Zilla Parishad shall be jointly held responsible for achieving the area and production targets for each season.

(d) Committees shall be formed to oversee the progress and take appropriate and timely remedial measures at the respective levels, viz., at district, divisional and State levels. Broadly, the composition of the Committees could be as follows:—

**(i) District Level:**

Collector,	Chairman.
Chief Executive Officer of Zilla Parishad,	
Executive Engineer, Irrigation management CADA,	
Groundwater Survey & Development Agency representative,	
District Central Co-operative Bank representative,	
Concerned Commercial Bank representative,	
Maharashtra State Seeds Corporation representative,	
Maharashtra Agro-Industries Development Corporation representative,	
Maharashtra State Electricity Board representative,	
District Marketing Officer of Marketing Federation,	
District Deputy Registrar of Co-operative Societies,	
Principal Agricultural Officer,	
Agricultural Development Officer,	.. Member-Secretary.

**(ii) Divisional Level:**

Divisional Commissioner,	.. Chairman.
Chief Engineer/Superintending Engineer, Irrigation management CADA,	
Divisional Joint Registrar of Co-operative Societies,	
Maharashtra State Seeds Corporation representative,	
Maharashtra Agro-Industries Development Corporation representative,	
Marketing Federation representative,	
Groundwater Survey & Development Agency representative,	
Maharashtra State Electricity Board representative,	
Joint Director of Agriculture (T. & V.),	
Superintending Agricultural Officer,	.. Member-Secretary.

**(iii) State Level:**

Chief Secretary	.. Chairman.
Secretary (Agriculture),	
Secretary (Co-operation),	
Secretary (ADF),	
Secretary, Rural Development Department	
Secretary, Irrigation,	
CADA Commissioner and Secretary, Irrigation,	
Secretary (Energy), Industries, Energy and Labour Department,	
Director of Agriculture	Member-Secretary.

9.4. Wherever decision cannot be taken at district or divisional level within the powers already delegated for discharging the responsibilities fixed as above, the matter shall be referred by the Collector/Divisional Commissioner to the Committee at higher level.

9.5. In order to enable Director of Agriculture to discharge his responsibility additional post of Additional Director of Agriculture with supporting staff should be created immediately in the Directorate of Agriculture.

## SUMMARY AND RECOMMENDATIONS

### A. Summary

1. In order to attain self-sufficiency, the production levels of cereals, pulses and oilseeds in 1984-85 should be as follows:—

		(Figures in lakh tonnes) Production targets for 1984-85
Cereals	..	120.71
Pulses	..	14.71
Total foodgrain	..	135.42
Oilseeds	..	20.62

2. For attaining the target production, changes in cropping pattern will have to be brought about. The area under pulses and oilseeds should increase and the area under cereals should decrease. Since in pulses and oilseeds no hybrid or high yielding varieties have so far been evolved (except sunflower hybrids), as in the case of cereals, it is obvious that any substantial production increase in these crops can be achieved only by an increase in the area. In the case of cereals, maximum advantage of the availability of hybrid and high yielding varieties should be taken so that even with the reduced area there should be an overall increase in production. Broadly, this would be the strategy to be followed.

### B. Recommendations

1. Kharif irrigation season should start from June 1st rather than from July 1st. (3.15)
2. Kharif irrigation (i.e. irrigation from June 1st) for foodcrops should be made free, to start with at least in those irrigation commands located in assured rainfall areas where normally farmers do not irrigate their kharif crops but prefer to wait for a good monsoon. (3.15).
3. Farmers in the command areas should, through proper extension be made to prepare their fields for irrigation during kharif. (3.15).
4. Field channels should be got done and brought into proper shape well in advance of the kharif season. This should be the responsibility of the Soil Conservation Wing, the work being undertaken under EGS. (3.15).
5. Not only should the overall availability of seeds be adequate, but it is the responsibility of the Government to have enough stocks of each variety of hybrid jowar seed. (3.17).
6. The administration should try through the T. and V. extension network to make the farmers use certified seeds. Farmer response will be better if the risk factor is less. This would imply that every year the administration should be ready with adequate stocks of certified seeds; in some years farmers will buy them and in other years they may not. This certainly carries the risk of Government incurring carry-over losses. But in order to smoothen the farmers' risk such losses should be considered as a part of developmental expenditure. (3.20).
7. It is necessary to organise mobile fertiliser vending centres. A small beginning was made in rabi 1981-82. This requires to be intensified. (3.21).
8. Inter-cropping will have to be promoted through extension. Earlier, free irrigation for kharif jowar has been suggested starting from June 1st. By and large, tur is taken as an inter-crop with jowar and so it will get the advantage of early kharif irrigation. In addition, free irrigation should be made available from June 1st to sole tur crop also. (3.30).
9. Eventhough there are no previous applications from farmers received by Irrigation Department, it should immediately respond to the requests for irrigation water to save the crop. (9.32).
10. In the case of groundnut in particular there is need for sufficient credit being made available to farmers. Considering the high cost of seed, subsidy should be given at source only to such extent as to keep selling price a little above the market price. (3.34).

11. For sustaining the cultivators' interest in kharif groundnut production and for raising yield to the target level, irrigation department should release irrigation water for kharif groundnut immediately on getting demand from the farmers. Appropriate steps should be taken also by Soil Conservation Wing and cultivators themselves to keep their fields ready to receive irrigation. (3.35).

12. The area under potato cultivation as also the productivity need to be raised substantially. Evidently, this will imply production of seed potatoes on an adequate scale and arrangements for proper storage and distribution. (4.1).

13. Besides Training and Visits, full use should be made of all the information or communication media as for instance, the Shetkari magazine, radio, television, advertisements, issue of season-wise and crop-wise pamphlets, bulletins, etc. to widely publicise the success stories of extension and properly advise farmers all over to adopt modern cultural practices for better yields and production. This should be backed up by adequate provision of funds, may be a bit more liberally. (5.5).

14. Land Development Bank may be able to step up the pace of loan advances for wells to the extent of 40,000 wells per annum during the remaining years of the Sixth Five Year Plan provided, however, the managerial efficiency of the bank and the recovery performance are improved. (6.3).

15. Retail outlets should be opened in remote and inaccessible areas located 8 km. or more away from taluka and block headquarters by granting managerial subsidy to cooperatives to make it a viable proposition [6.5].

16. Interest should be charged on credit utilised for lifting fertilizers in advance of the season only from 1st July in Kharif and 1st October in Rabi season. Government should provide subsidy to lending institutions to compensate for loss of interest on this account. [6.5].

17. To prevent crop losses due to severe attacks of pests and diseases, in endemic areas, community plant protection measures should be taken through institutional agencies like Maharashtra Agro-Industries Development Corporation. Cost on this account should be recovered in case of good crop; otherwise, the expenditure should be borne by Government. Use of Plant Protection equipment by farmers should be encouraged, supplying it at 50 per cent subsidy at source. (6.6).

18. Against the estimated short term credit requirements of Rs. 781 crores the present level of outstandings of short term credit (position as on 30th June 1980) is Rs. 300 crores only. This would mean that the cooperative credit structure in the State would have to increase its credit support by more than two times of its present level, during the course of next five years. This would require that urgent steps are taken to remove various operational deficiencies of the cooperative credit structure. (7.1).

19. Steps will have to be taken to supplement the resources of the cooperatives in the State by resources from the Nationalised Banks. At the same time various remedial measures as indicated in para. 7.2 would have to be taken to remove the defects in the functioning of the cooperatives and to increase their ability to lend adequately to the borrowers. (7.1).

20. The State Government should extend to the Nationalised Banks some concessions and facilities which are available to the cooperative banks so far as short term credit for agriculture is concerned. For this purpose, a dialogue should be held with the State Level Bankers' Committee which may be recognized as coordinating agency for fixation of targets for Nationalised Banks operating in the State and periodically monitoring the progress of achievement of the targets set down for the Nationalised Banks. (7.3).

21. The State Government would do well to fix up for groundnut an incentive price of Rs. 400 per quintal. If this is done, quite a large number of cultivators can be expected to revert to groundnut; if they are already raising this crop, they can have a larger area under it. (8.2).

22. It would be helpful if the State Government could fix up an incentive price for safflower too along with groundnut. (8.3).

## STATEMENT I

Statement indicating estimated requirement of foodgrains and oilseeds.

Serial No.	Commodity	Per annum per capita weighted average consumption in Kg. (as per N.S.S.)	Net requirement as per N.S.S. adopted by C.S.D. (lakh tonnes)	Gross requirement with reference to Col. 4 (lakh tonnes)
1	2	3	4	5
<i>1980-81 Population 627.15 lakhs</i>				
1	Rice	34.68	21.75	24.85
2	Wheat	30.00	18.82	21.50
3	Jowar	70.80	44.40	50.74
4	Bajra	11.64	7.30	8.34
5	Other cereals	6.48	4.06	4.64
6	Total cereals	53.60	96.33	110.09
7	Total pulses	18.00	11.29	12.90
8	Total foodgrains	71.60	107.62	122.99
9	Oilseeds	5.10(Oil)	.....	17.98
<i>1981-82 Population 641.00 lakhs</i>				
1	Rice	34.68	22.23	25.40
2	Wheat	30.00	19.23	21.98
3	Jowar	70.80	45.38	51.86
4	Bajra	11.64	7.46	8.53
5	Other cereals	6.48	4.15	4.74
6	Total cereals	153.60	98.45	112.51
7	Total pulses	18.00	11.54	13.19
8	Total foodgrains	171.60	109.99	125.70
9	Oilseeds	5.16(Oil)	.....	18.59
<i>1982-83 Population 655.15 lakhs</i>				
1	Rice	34.68	22.72	25.96
2	Wheat	30.00	19.65	22.46
3	Jowar	70.80	46.38	53.01
4	Bajra	11.64	7.63	8.72
5	Other cereals	6.48	4.25	4.86
6	Total cereals	153.60	100.63	115.01
7	Total pulses	18.00	11.79	13.47
8	Total foodgrains	171.60	112.42	128.48
9	Oilseeds	5.22(Oil)	.....	19.20
<i>1983-84 Population 669.62 lakhs</i>				
1	Rice	34.68	23.22	26.54
2	Wheat	30.00	20.09	22.96
3	Jowar	70.80	47.41	54.48
4	Bajra	11.64	7.79	8.90
5	Other cereals	6.48	4.34	4.96
6	Total cereals	153.60	102.85	117.54
7	Total pulses	18.00	12.05	13.77
8	Total foodgrains	171.60	114.90	131.31
9	Oilseeds	5.28(Oil)	.....	19.87
<i>1984-85 Population 684.41 lakhs</i>				
1	Rice	34.68	23.74	27.13
2	Wheat	30.00	20.53	23.46
3	Jowar	70.80	48.45	55.37
4	Bajra	11.64	7.97	9.11
5	Other cereals	6.48	4.43	5.06
6	Total cereals	153.60	105.12	120.13
7	Total pulses	18.00	12.32	14.08
8	Total foodgrains	171.60	117.44	134.21
9	Oilseeds	5.34(Oil)	.....	20.48



STATEMENT II

Statement indicating area, production, etc., of Cereals/Pulses and Oilseeds during 1979-80 and projections for attaining self-sufficiency by 1984-85

Crop	Year	Total area	Area covered			Per centage of column 6 to 3	Yield (kg/ha.)			Total production (Lakh M.T.)	Irrigated area (Lakh ha.)	Percentage of column 12 to 3.
			Hybrid	H. Y. V.	Total (lakh ha.)		Dry	Irrigated	Composite			
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Rice	1979-80	14.85	.....	8.76	8.76	59.0	1,190	1,350	1,231	18.29	3.91	26.3
	1984-85	15.50	.....	12.75	12.75	82.2	1,720	1,750	1,730	26.85	4.56	29.4
2. Kharif Jowar	1979-80	30.34	14.54	2.02	16.56	54.6	1,120	1,550	1,134	34.40	0.37	1.2
	1984-85	28.00	20.50	5.52	26.02	92.9	1,550	2,000	1,564	43.79	0.52	1.8
3. Bajri	1979-80	14.28	4.11	.....	4.11	28.8	420	480	4.25	6.07	0.48	3.4
	1984-85	16.00	10.00	.....	10.00	62.5	700	850	711	11.37	0.63	3.9
4. Rabi jowar	1979-80	37.91	0.80	.....	0.80	2.1	490	970	534	20.24	3.40	9.0
	1984-85	34.40	2.00	6.00	8.00	23.2	550	1,070	609	20.94	3.71	10.8
5. Wheat	1979-80	11.64	.....	9.73	9.73	83.0	620	1,110	8.64	10.06	5.83	50.1
	1984-85	13.00	.....	13.00	13.00	100.00	720	1,300	1,000	13.00	6.30	50.1
6. Other cereals	1979-80	5.08	0.43	.....	0.43	8.4	790	1,750	823	4.18	0.15	3.0
	1984-85	5.00	0.87	.....	0.87	17.4	900	2,000	952	4.76	0.22	4.4
Total cereals	1979-80	114.10	19.82	20.50	40.39	35.	770	1,140	817	93.24	14.14	12.4
	1984-85	111.90	33.37	37.27	70.64	63.1	1,030	1,390	1,078	120.71	16.94	14.2
7. Tur	1979-80	6.63	.....	.....	.....	.....	620	800	620	4.11	0.06	0.09
	1984-85	7.04	.....	.....	.....	.....	791	1,000	791	5.57	0.08	.....
8. Mug	1979-80	5.16	.....	.....	.....	.....	270	500	271	1.40	0.08	0.06
	1984-85	6.40	.....	.....	.....	.....	420	900	422	2.70	0.04	0.08
9. Udid	1979-80	4.52	.....	.....	.....	.....	325	.....	325	1.47	.....	.....
	1984-85	4.65	.....	.....	.....	.....	387	.....	387	1.80	.....	.....
10. Gram	1979-80	4.53	.....	.....	.....	.....	350	560	380	1.74	0.79	17.4
	1984-85	5.20	.....	.....	.....	.....	400	900	490	2.55	0.97	18.7
11. Other pulses	1979-80	5.82	.....	.....	.....	.....	280	500	286	1.66	0.04	0.7
	1984-85	6.85	.....	.....	.....	.....	300	500	305	2.09	0.04	0.6
Total Pulses	1979-80	26.66	.....	.....	.....	.....	380	560	389	10.38	0.93	3.5
	1984-85	30.14	.....	.....	.....	.....	470	890	488	14.71	1.13	3.7

12. Kharif Groundnut	1979-80	7.23	....	....	....	730	1,000	1,444	5.39	0.23	3.3
	1984-85	7.40	....	....	....	970	1,100	1,005	7.44	2.00	27.0
13. Summer Groundnut	1979-80	0.24	....	....	....	....	1,250	1,250	0.30	0.24	100.0
	1984-85	2.50	....	....	....	....	1,350	1,350	3.37	2.50	100.0
14. Safflower	1979-80	5.34	....	....	....	364	....	364	1.94	....	....
	1984-85	6.34	....	....	....	458	....	458	2.90	....	....
15. Sunflower	1979-80	0.30	....	....	....	400	....	400	0.12	....	....
	1984-85	2.75	....	....	....	600	....	600	1.65	....	....
16. Other Oilseeds	1979-80	5.79	....	....	....	219	....	219	1.26	....	....
	1984-85	5.40	....	....	....	219	....	219	1.18	....	....
Total Oilseeds	1979-80	18.90	....	....	....	460	1,130	477	9.01	0.47	2.5
	1984-85	24.39	....	....	....	550	1,240	678	16.54	4.50	18.5
17. Cotton seed	1979-80	25.88	....	....	....	200	500	223	Cotton seed. *(5.76) (not considered)	1.55	6.0
	1984-85	25.40	....	....	....	240	600	268	*(6.80) 4.08 Available 60%	1.71	6.7
Total—Oilseeds and Cotton Seed.	1979-80	..	..	..	..	..	..	..	9.01	..	..
	1984-85	..	..	..	..	..	..	..	20.62	..	..

\*How quantity of Cotton seed is worked out:—

Item	Unit	1979-80	1984-85
(1) Production	Lakh Bales of 170 kg. each.	16.95	20.00
(2) Lint from above (1/3 Lint)	Lakh tonnes	2.88	3.40
(3) Seed from above (2/3 seed)	Do.	5.76 (not considered)	6.80
(4) 60 per cent seed for oil extraction	Do.	3.46 (not considered)	4.08

(Cotton seed contains 18% edible oil)

## STATEMENT III

*Change in crop pattern for attaining self-sufficiency*

Area : Lakh hectares.

Percent : To gross cropped area.

Serial No.	Crop	Base Level 1979-80		Required to be attained 1984-85	
		Area	Percent	Area	Percent
1	Rice	14.85	7.5	15.50	7.6
2	Kharif Jowar	30.34	15.4	28.00	13.7
3	Bajra	14.28	7.2	16.00	7.9
4	Rabi Jowar	37.91	19.3	34.40	16.9
5	Wheat	11.64	5.9	13.00	6.4
6	Other cereals	5.08	2.6	5.00	2.4
Total cereals		114.10	57.9	111.90	54.9
7	Tur	6.63	3.4	7.04	4.5
8	Mug	5.16	2.6	6.40	3.1
9	Udid	4.52	2.3	4.65	2.3
10	Gram	4.53	2.3	5.20	2.6
11	Other Pulses	5.82	2.9	6.85	3.4
Total Pulses		26.66	13.5	30.14	14.9
12	Kharif Groundnut	7.23	3.7	7.40	3.6
13	Summer Groundnut	0.24	0.1	2.50	1.2
14	Safflower	5.34	2.7	6.34	3.1
15	Sunflower	0.30	0.1	2.74	1.4
16	Other oilseeds	5.79	3.0	5.40	2.6
Total Oilseeds		18.90	9.6	24.39	11.9
(A) Net cropped area		181.54	74.4	182.15	89.4
(B) Gross cropped area		197.02	100.0	203.78	100.00
(C) Gross Irrigated Area		24.95	12.7	30.20	14.8

STATEMENT IV

cropwise tools proposed for raising productivity/production for attaining self-sufficiency by 1984-85

Crop	Item	Present stage	Proposed stage	Of what	Level of productivity (kg./hectare) and production		Highest level of productivity (kg./hectare) so far achieved
		1979-80 per cent	1984-85 per cent		1979-80	1984-85	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Kharif Jowar	(1) Use of certified Hy. seed for HYV area ..	70	80	of Hy. area	1134	1564	1134 (1979-80)
	(2) Hy. and HYV area ..	54	93	of total area	(Production 34.40 lakh tonnes)	(Production 43.79 lakh tonnes)	
	(3) Plant population ..	75	90	recommended			
	(4) Fertiliser use ..	34	45	recommended			
	(5) Irrigation ..	1.2	1.8	of total area of the crop.			
2. Bajra	(1) Use of Hy. seed ..	80	100	of Hy. area	425	711	445 (1980-81)
	(2) Hy. area ..	28.8	82.5	of total area	(Production 6.87 lakh tonnes)	(Production 11.37 lakh tonnes)	
	(3) Plant population ..	80	100	of recommended			
	(4) Fertiliser use ..	35	50	of recommended Hy. for area.			
	(5) Irrigation ..	3.4	3.9	of total area of the crop.			
3. Rabi Jowar (HYV/Hybrid)	(1) Use of certified Hy/HYV seed ..	80	90	of Hy./HYV area	534	609	534 (1978-81)
	(2) Hy. and HYV area ..	2.1	23.2	of total area	(Production 20.24 lakh tonnes)	(Production 20.94 lakh tonnes)	
	(3) Plant population ..	70	90	of recommended			
	(4) Fertiliser use ..	24	50	of recommended (only in hybrid area and irrigated area.)			
	(5) Irrigation ..	9.6	10.8	of total area of the crop.			
4. Wheat (HYV)	(1) Use of truthfully labelled or certified seed	2	8	of HYV area	864	1000	1028 (1975-76)
	(2) HYV area ..	83.6	100	of total area	(Production 10.6 lakh tonnes)	(Production 13.00 lakh tonnes)	
	(3) Plant population ..	80	100	of recommended			
	(4) Fertiliser use ..	25	50	of recommended dose			
	(5) Irrigation ..	50.1	50.1	of total area of the crop			

STATEMENT IV—contd.

Crop	Item	Present stage 1979-80 per cent	Proposed stage 1984-85 per cent	Of what	Level of productivity (kg./Hectare) and production		Highest level of productivity (kg./Hectare) so far achieved
					1979-80	1984-85	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
5. Rice	(1) Use of HYV truthful or certified seed	2	6	of HYV area	1231	1730	1568
	(2) Plant population	70	95	of recommended dose	(Production 18.25 lakh tonnes)	(Production 26.85 lakh tonnes)	(1980-81)
	(3) Fertilizer use	28	50	.....			
	(4) Plant protection	10	50	.....			
	(5) HYV area	59	82	of total area			
	(6) Irrigation	26.3	29.4	of total area of the crop.			
6. Kharif Groundnut	(1) Use of Phule Pragati	..	70	of the total area under bunch type.	744	1005	811
	(2) Plant population	60	80	of recommended	(Production 5.39 lakh tonnes)	(Production 7.44 lakh tonnes)	(1975-76)
	(3) Kh. protective Irrigation	1	12	of total area			
	(4) Plant protection	2	20	of total area			
	(5) Fertilizer use	10	40	of recommended dose			
	(6) Inter cropping	..	5	of total area			
	(7) Irrigation	3.3	27	of total area of the crop			
7. Summer Groundnut	(1) Plant population	60	80	of recommended	1250	1350	1350
	(2) Timely irrigation	10	80	of total area	(Production 0.30 lakh tonnes)	(Production 3.37 lakh tonnes)	(1980-81)
	(3) Fertilizer use	25	60	of recommended dose			
	(4) Plant protection	5	50	of recommended dose			
	(5) Irrigation	100	100	of total area of the crop			
8. Safflower	(1) Replacement dry Rabi jowar area	Nil	0.5	Additional area lakh ha.	364	458	472
	(2) Timely sowing	30	75	of total area	(Production 1.94 lakh tonnes)	(Production 2.90 lakh tonnes)	(1980-81)
	(3) Plant population	40	60	of recommended			
	(4) Fertilizer use	2	20	of recommended dose			
	(5) Plant protection	2	20	of the total area			

9. Sunflower	..	(1) Quality seed	..	..	60	100	Quantity for total area	400	600	
		(2) Plant population	..	..	50	80	of recommended	(Production 0.12	(Production 1.65	
		(3) Fertilizer use	..	..	25	50	of recommended dose	lakh tonnes)	lakh tonnes)	
		(4) Hand Pollination	..	..	1	50	of total area			
		(5) Plant protection	..	..	5	20	of total area			
		(6) Replacement of	..	..	Nil	1.5	Additional area			
<i>Pulses</i>										
1. Tur	..	(1) Plant population	..	..	80	90	of recommended	620	791	684
		(2) Rhizobium culture	..	..	5	15	of total area	(Production 4.11	(Production 5.57	(1975-76)
		(3) Plant production	..	..	2	10	of total area	lakh tonnes)	lakh tonnes)	
		(4) Irrigation	..	..	0.9	1.1	of total area of the crops			
2. Moog Udid	..	(1) Additional area (Kharif fallow)	..	..	1	5	of total area	Moog/Udid	Moog/Udid	327 Moog
		(2) Inter cropping	..	..	....	10	of total area	271/325	422/387	(1976-77)/
		(3) Plant protection	..	..	....	20	of total area	(Production 1.40/	(Production 2.70/	357 Udid
		(4) Rhizobium	..	..	2	20	of total area	1.47 lakhs tonnes)	1.80 lakhs tonnes)	(1978-79)
		(5) Irrigation	..	..	0.6	0.6	of total area of the crops			
3. Gram	..	(1) Protective Irrigation	..	..	....	10	of total area	383	490	404
		(2) Rhizobium culture	..	..	5	20	of total area	(Production 1.74	(Production 2.55	(1975-76)
		(3) Plant population	..	..	60	80	of recommended	lakh tonnes)	lakh tonnes)	
		(4) Plant protection	..	..	2	20	of total area			
		(5) Irrigation	..	..	17.5	18.7	of total area of the crop			

## STATEMENT V

*Statement showing yearwise creation of Irrigation Potential and Utilisation by Major, Medium and State Sector Minor Irrigation projects in Maharashtra State*

Unit : Lakh Hectares

Irrigation potential created/targetted				Utilisation during				Remarks
Year	Major-Medium	State	Total	Year	Major-Medium	State	Total	
1	2	3	4	5	6	7	8	
June 1976 ..	9.43	2.83	12.26	1976-77 ..	5.99	1.14	7.13	
June 1977 ..	10.58	3.15	13.73	1977-78 ..	5.77	1.05	6.82	
June 1978 ..	11.25	3.38	14.63	1978-79 ..	5.73	1.13	6.86	
June 1979 ..	11.39	3.63	15.52	1979-80 ..	5.48	1.12	6.60	
June 1980 ..	12.31	3.82	16.13	1980-81 ..	6.50	1.25	7.75	
June 1981 ..	13.21	3.87	17.18	1981-82 ..	7.43	1.40	8.83	
June 1982 ..	14.21	4.12	18.33	1982-83 ..	8.50	1.60	10.10	
June 1983 ..	15.41	4.27	19.68	1983-84 ..	9.50	1.80	11.30	
June 1984 ..	16.43	4.42	20.85	1984-85 ..	10.72	2.00	12.72	
June 1985 ..	17.56	4.57	22.13	1985-86 ..	11.80	2.20	14.00	
	132.28	38.16	170.44		77.42	14.69	92.11	

STATEMENT VI

Statement showing the hybrid and high yielding varieties programme upto 1984-85 and the programme for certified seed use

Serial No.	Crop	Total area in lakh (ha.)		Year	Coverage under hybrid and HYV crops in lakh (ha.)		Programme for certified seed use			Remarks		
		1979-80	1984-85		Hybrid	HYV	Seed reqd. as per target (Quintals)	Present level of use (Quintals)	Proposed level of use (Quintals)			
1	2	3	4	5	6	7	8	9	10	11		
1	Paddy	14.85	15.50	1979-80	....	8.76	2,19,000	9,000	truthful certified Nil.	....	There are about 15 to 20 prevailing varieties of paddy in different regions. The detailed variety-wise planning of production for major varieties is being done, a year in advance. Seed planning for BJ-104 and BK-560, the two prevalent varieties, is done 2 years in advance; sufficient seed will be made available.	
				1984-85	....	12.75	3,18,750	....	19,125	Certified for 6% coverage.		
2	Bajra	14.28	16.00	1979-80	4.11	....	10,275	10,000	Certified.	....	There are 4 varieties i.e. CSH-1, CSH-5, CSH-6 and CSH-9 of hybrid Jowar. Variety-wise planning for seed production is already being done 2 years in advance for HYV varieties. Cultivators use their own seed for 3 to 4 years and as such, only about 10 per cent of the requirement is being pushed into the market every year.	
				1984-85	10.00	....	25,000	....	25,000	Certified.		
3	Kh. Jowar.	30.34	28.00	Hybrid	1979-80	14.54	....	1,12,500	45,000	i.e. 40% of requirement.	....	There is only one variety of CSH-8 for rabi hybrid. Its seed production is being done with full planning. As for High Yielding Varieties SPV-86 is the rabi variety of which seed production for 10% area coverage by replacement has been planned.
					1984-85	20.50	....	1,53,750	....	92,250	i.e. 60% of requirement.	
				HYV	1979-80	....	2.02	15,150	1,500	i.e. 10% of requirement.	....	
					1984-85	....	5.52	41,400	....	4,140	i.e. 10% of requirement.	
4	Rabi Jowar	37.91	34.40	Hybrid	1979-80	0.80	....	6,000	1,500	i.e. 25% of requirement.	....	There are 10 to 12 wheat varieties of which systematic seed production is being taken through Maharashtra State Seeds Corporation. Variety-wise planning is being done 2 years in advance.
					1984-85	2.00	....	15,000	....	10,000	i.e. 66.6% of requirement.	
				HYV	1979-80	....	....	....	....	....	....	
					1984-85	....	6.00	45,000	....	4,500	i.e. 10% of requirement.	
5	Wheat	11.64	13.00	1979-80	....	9.73	9,73,000	5,000	i.e. 3.6% of requirement.	....	There are 10 to 12 wheat varieties of which systematic seed production is being taken through Maharashtra State Seeds Corporation. Variety-wise planning is being done 2 years in advance.	
				1984-85	....	13.00	13,00,000	....	78,000	i.e. 6% of requirement.		



STATEMENT VII

Statement showing the seed requirement and proposed seed use for Pulse Crops

Serial No.	Crop	Total area in lakh hectares		Coverage under certified/truthful seed in ha.		Programme for certified/truthful seed use in quintals.			Remarks
		1979-80	1984-85	1979-80	1984-85	Seed requirement for entire area	Present level of use 1979-80	Proposed level of use 1984-85	
1	2	3	4	5	6	7	8	9	10
1	Tur	6.63	7.04	0.01	0.35	(1979-80) 1,32,600 (1984-85) 1,40,800	225 ....	.... 7,000	Improved varieties of tur includes N-94, N-148, BDN-162 (Multiplication on TSFs and through Maharashtra State Seeds Corporation).
2	Mung	5.16	6.40	0.01	0.32	(1979-80) 64,500 (1984-85) 80,000	115 ....	.... 4,000	Improved varieties are Pusa Vaishakhi S-8, T-1, T-44 and Kopergaon (Multiplication on TSFs and through Maharashtra State Seeds Corporation).
3	Udid	4.52	4.65	0.01	0.23	(1979-80) 56,500 (1984-85) 58,000	50 ....	.... 2,900	Improved varieties are T-9, D-67, No. 55 and Sindakheda 1-1 (Multiplication on TSFs and through Maharashtra State Seeds Corporation).
4	Gram	4.53	5.20	0.03	0.26	(1979-80) 2,26,500 (1984-85) 2,60,000	1,405 ....	.... 13,000	Improved varieties are N-59, Chafa, N-31, BDN-9-3. (Multiplication on TSFs and through Maharashtra State Seeds Corporation).

Note.—5 per cent of the total area will be covered under certified/truthful seed which will be produced on Taluka Seed Farms and through Maharashtra State Seeds Corporation.

STATEMENT VIII

Statement showing the seed requirement and proposed seed use for Oilseed Crops

Serial No.	Crop	Total area in lakh hectares		Coverage under certified/truthful seed in lakh ha.		Programme for certified / truthful seed use in Quintals			Remark	
		1979-80	1984-85	1979-80	1984-85	Seed requirement for entire area	Present level of use 1979-80	Proposed level of use 1984-85		
1	2	3	4	5	6	7	8	9	10	
1	Groundnut—									
	(a) Kharif	7.23	7.40	Phule Pragati	....	3.70	(1979-80) 7,23,000	....	3,70,000	Out of the total groundnut area 70 per cent is under bunch varieties. It is proposed to cover 70 per cent of this bunch type area under Phule Pragati* Other improved varieties include TMV-10 and M-13.
				Other varieties TMV-10, M-13	....	0.30	(1984-85) 7,40,000	....	30,000	
									1,00,000	
	(b) Summer	0.24	2.50	SB-XI	0.24	0.50	(1979-80) 24,000	5,000	....	Out of 50,000, 48,000 will be of SB-XI and 2,000 of M-13 obtained by multiplication through Maharashtra State Seeds Corporation and private seed growers.
				M-13	....		(1984-85) 2,50,000	....	50,000	
2	Safflower	5.34	6.34		0.08	2.00	(1979-80) 65,700 (1984-85) 79,250	1,000 ....	.... 4,000	The seed of improved varieties of safflower e.g. Tara, N-62-8 and N-7 will be multiplied and distributed through Maharashtra State Seeds Corporation
3	Sunflower	0.30	2.75		0.10	2.75	(1979-80) 3,000 (1984-85) 27,500	1,000 ....	.... 27,500	100 per cent of the total seed requirement will be multiplied and met by Maharashtra State Seeds Corporation, Akola and through Co-operatives.

\*The phasing of multiplication of Phule Pragati will be as under. This will be done through Maharashtra State Seeds Corporation and private seed growers.

1981-82	10,000 qtls.
1982-83	50,000 qtls.
1983-84	2,00,000 qtls.
1984-85	3,70,000 qtls.

## STATEMENT

*Prices recommended by State Government*

Crop	Years					
	1976-77		1977-78		1978-79	
	Support Prices		Support Prices		Support prices	
	Recom- mended by State Government	Fixed by Government of India	Recom- mended by State Government	Fixed by Government of India	Recom- mended by State Government	Fixed by Government of India
1	2	3	4	5	6	7
Wheat .. ..	125.00	105.00	142.46	110.00	140.67	112.50
Paddy .. ..	81.38	*	134.36	*	137.50	*
Jowar .. ..	126.55	**	117.39	**	121.59	**
Bajri .. ..	140.68	74.00	155.86	74.00	162.39	85.00
Tur .. ..	....	....	....	....	159.59	155.00
Mung .. ..	....	....	....	....	209.21	165.00
Sugarcane ..	10.84	8.50	16.86	8.50	14.21	10.00
Cotton L-147 ..	352.45	240.00	363.00	300.00	406.29	300.00
Groundnut ..	....	140.00	....	160.00	262.00	175.00
Gram .. ..	....	....	....	95.00	....	125.00
Safflower ..	....	....	....	....	....	....

**\*Paddy (1976-77)**

Superfine	89
Fine	84
Medium	79
Coarse	74

**\*Paddy (1977-78)**

Superfine	92
Fine	87
Medium	82
Coarse	77

**\*Paddy (1978-79)**

Superfine	100
Fine	95
Medium	90
Coarse	85

**\*\*Jowar (1976-77)**

Superior	74
Medium	72
Common	66

**\*\*Jowar (1977-78)**

Superior	74
Medium	72
Common	66

**\*\*Jowar (1978-79)**

Superior	85
Medium	83
Common	77

†Related to 8.5 per cent recovery.

## IX

and fixed by Government of India

(Rs. per quintal)						
1979-80		1980-81		1981-82		1982-83
Support prices		Support prices		Support prices		Support prices
Recom- mended by State Government	Fixed by Government of India	Recom- mended by State Government	Fixed by Government of India	Recom- mended by State Government	Fixed by Government of India	Recom- mended by State Government
8	9	10	11	12	13	14
138.03	115.00	141.22	117.00	179.29	130.00	207.52
142.46	*	166.23	*	174.96	*	....
132.91	**	150.77		169.05	**	....
173.19	95.00	176.12	105.00	212.86	116.00	....
	165.00	226.79	190.00	305.02	....	....
229.16	175.00	357.09	200.00	444.65	....	....
14.17	12.50	17.00	13.00	22.55†	13.00	31.10
438.01	325.00	521.21	359.00	638.46	....	....
304.09	190.00	343.11	206.00	493.96	....	....
	140.00	223.27	145.00	262.16	....	385.52
	....	251.71	.....	....	....	....

\*Paddy (1979-80)  
Superfine 103  
Fine 99  
Common 95

\*Paddy (1980-81)  
Superfine 113  
Fine 109  
Common 105

\*Paddy (1981-82)  
Superfine 123.00  
Fine 119.00  
Coarse 115.00

\*Jowar (1979-80)  
Superior 95  
Medium 93  
Common 87

\*Jowar (1980-81)  
Superior 105  
Medium 103  
Common 101

\*Jowar (1981-82)  
Superior 116.00  
Medium 114.00  
Coarse 112.00

In addition to the above basic procurement prices additional amount was paid to cultivators by State Government as follows :—

(Rs. per quintal)			
Year	Paddy	Jowar	Bajra
1980-81	17	17	17
1981-82	7	6	6

STATEMENT X

Yearwise Programme of financing new wells by the Land Development Bank

Serial No.	District	1980-81		1981-82		1982-83		1983-84		1984-85	
		New Well & Pump Set		New Well & Pump Set		New Well & Pump Set		New Well & Pump Set		New Well & Pump Set	
		Crash programme	Normal programme	Crash programme	Normal programme	Crash programme	Normal programme	Crash programme	Normal programme	Crash programme	Normal programme
1	2	3	4	5	6	7	8	9	10	11	12
1	Thane	240	210	250	100	275	110	280	120	280	140
2	Raigad	25	135	50	80	60	95	70	100	70	110
3	Ratnagiri (N)	10	110	10	25	15	30	20	35	15	40
4	Ratnagiri (S)	..	..	15	25	20	30	25	35	20	40
5	Dhule	140	390	425	900	475	950	480	1,020	490	1,070
6	Nashik	76	600	425	1,000	480	1,060	470	1,040	470	1,070
7	Jalgaon	421	745	425	1,400	480	1,460	460	1,440	450	1,420
8	Pune	108	545	600	900	570	870	570	870	580	870
9	Ahmadnagar	932	625	600	1,450	610	1,460	600	1,440	600	1,420
10	Satara	210	400	425	1,000	480	1,060	470	1,040	470	1,020
11	Sangli	429	305	400	520	430	550	410	570	400	580
12	Solapur	658	405	500	800	550	850	540	840	550	830
13	Kolhapur	204	510	425	750	425	750	440	770	430	780
14	Aurangabad	254	650	275	950	280	955	290	970	300	970
15	Jalna	..	..	775	900	250	870	250	870	250	870
16	Parbhani	928	850	525	900	500	870	500	870	500	870
17	Nanded	431	600	525	950	540	960	540	970	540	970
18	Beed	498	610	525	1,000	530	1,010	540	1,020	540	990
19	Usmanabad	798	715	650	1,350	600	1,285	580	1,260	590	1,270
20	Nagpur	2,709	1,150	1,500	1,150	1,430	1,080	1,420	1,070	1,410	1,070
21	Chandrapur	469	1,170	600	1,300	580	1,285	570	1,260	570	1,230
22	Bhandara	570	600	625	1,100	600	1,080	590	1,070	600	1,070
23	Akola	1,428	910	700	1,750	660	1,710	670	1,720	660	1,720
24	Amravati	744	1,100	525	900	500	865	500	870	500	880
25	Buldana	574	720	525	1,100	500	1,060	590	1,040	590	1,020
26	Wardha	379	1,060	2,000	1,100	1,900	1,080	1,860	1,070	1,870	1,070
27	Yavatmal	628	600	1,200	600	1,260	1,615	1,265	1,620	1,255	1,610
Total		13,863	15,715	15,000	25,000	15,000	25,000	15,000	25,000	15,000	25,000

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