

Department of Agriculture, Bombay

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**ECONOMIC VALUE OF FRUIT FARMING  
IN WESTERN INDIA**

BY

DR. G. S. CHEEMA, D.Sc.

*Horticulturist to the Government of Bombay, Poona*

AND

P. G. DANI, B.Ag., B.Sc.

*Superintendent, Modibag, Poona*



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### ECONOMIC VALUE OF FRUIT FARMING IN WESTERN INDIA

The advent of canals for irrigation inspired the cultivators of the Presidency with strong hopes of raising really paying crops. Some of these hopes have failed to materialise during recent years. For example, the most promising crop of sugarcane has already proved a disappointment though some crops are still paying well. But it seems that the cultivators are on the lookout for some others that might pay them more than what they are making at present.

We take this opportunity to suggest fruit farming. It might answer their present requirements. The Horticulturist to Government has been busy in investigating the economic value of fruit cultivation in Western India for the last five years. The main efforts were directed to calculate the normal cost of cultivation and the resultant income derived from different fruit crops. Reliable records that were used as the bases of the cost of cultivation and the subsequent yield of specified plots, in the Modibag, Agricultural College, Poona, were kept from the very outset. These suggestions will prove of special value to the cultivators as great care has been taken in calculating the figures and in choosing a great variety of crops. The plots chosen were small. But the crops selected include all kinds of paying fruits that can be grown in the Presidency. Hence even the holder of a very small area can derive full benefit from it.

In this article we propose to give facts and figures concerning figs, bananas, pomegranates and papayas. An appendix for each of these crops is added at the end. Even a casual survey of it can give a detailed idea of the quantity of labour required for each operation with its respective cost incurred during the last five years. There are also figures of yield and value. There is also table to show the annual dividend on the capital invested.

The following table will illustrate clearly how the figures are accompanied by a set of conditions under which those fruit crops have been successfully grown. It includes the nature of the soil and its depth, spacing, irrigation, marketing and the rate at which fruits were sold :—

No.	Crop	Nature of soil	Depth of soil	Spacing of plants	Irrigation	Market where fruits were sold	Rate at which fruits were sold
1	Fig	Light	9'	15'	Canal and well.	Poona	From 4 to annas per lb.
2	Pomegranate	Do.	9'	15'	Do.	Do.	From 1 to 2 annas per fruit.
3	Papaya	Medium black.	1½	8'	Canal	Do.	Two annas per fruit.
4	Banana	Do.	2'	10'	Do.	Do.	Three annas per dozen.

Obviously the general conditions under which these plantations have been raised are in no way extraordinary. In fact, every care has been taken to grow them under as normal conditions as an average fruit grower actually does. Any special treatment would only add to the figures of cost and thus reduce the ultimate net income.

*Cost of cultivation.*—To arrive at the total cost of cultivation daily labour sheets are taken as the bases for calculation. The total amount of labour and the material spent on a particular crop in a year are classified according to the kind of operation done, and the value is calculated at the following rates prevalent :—

*Cost of labour.*—Man charged at 10 annas per day. ✓

Woman charged at 5 annas per day. ✓

Bullock charged at 10 annas per day. ✓

*Cost of material.*—Farm yard manure at Rs. 2 per cart-load. ✓

Bonemeal at Rs. 85 per ton. ✓

Two cart-loads are equal to one ton (2,240 lbs.)

One iron basket of manure ordinarily weighs 20 lbs. ✓

In the case of bananas for instance, the figures from the second year onwards recur with negligible differences and the same operations have to be repeated annually. Under such circumstances, the figures for the second year are taken for the successive years.

*Figures of return.*—Individual tree performance records were maintained for each orchard and the total yield was taken from these records.

A word or two of explanation are quite essential here regarding the disposal of the produce. A great quantity of it was used for experimental, laboratory, teaching and exhibition purposes. The rest was always preferably disposed of at our own stalls. Sometimes if there was a surplus it was sent to the market and was sold at a wholesale price. Our retail prices are much below the average market rate and are always fixed. Disregarding the high retail rate of the market that prevails over a large part of the year, and sometimes the low prices, we have taken care to calculate the value of the produce at the mean average rate. We can therefore safely assert that there would not be much difference whether it was sold at retail price or at the wholesale price in the market. Care has been taken not to include unmarketable stuff in the total yield.

It may further be stated that an attempt has been made to include (1) supervision charges, (2) marketing charges, (3) assessment of land separately, and 9 per cent. interest has been charged on the total amount, including the cost of cultivation. To interest our readers, an annual dividend is shown on the initial capital, taking the value of the land at Rs. 1,800 per acre round about Poona.

These items (including the value of the land) vary from place to place and from year to year. For instance, marketing or carrying the produce to the market in the neighbourhood of Poona is easy and

costs less than carrying the same from Diya and Saswad where there are no railway facilities. Besides, there is likelihood of at least some produce being spoiled in transit. An instance of the variable value of the land may be cited. Round about Poona the value of the land is Rs. 1,800 per acre while at Saswad it is much lower. Figures for such items can be adjusted according to the local conditions and facilities.

The figures of cost of cultivation and income per acre in the neighbourhood of Poona are as follows :—

Years	Fig.		Pomegranate	
	Cost	Income	Cost	Income
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1st year	262 5 4	345 14 5	231 8 0	Nil
2nd year	197 6 4	410 12 0	221 0 8	52 13 0
3rd year	279 11 8	508 4 0	163 10 5	72 5 0
4th year	297 2 0	452 15 0	248 12 5	327 9 7
5th year	295 12 4	530 2 8	321 8 5	780 13 0

Years	Papaya		Banana	
	Cost	Income	Cost	Income
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1st year	272 11 9	512 11 0	468 2 0	Nil
2nd year	387 10 6	729 11 0	342 8 0	1,422 10 0
3rd year	326 15 10	1,913 2 0	341 4 0	953 6 0
4th year	.....	.....	341 4 0	965 4 0
5th year	.....	.....	341 4 0	1,252 0 0

Out of these, bananas and papayas seem to be more profitable while figs and pomegranates come second.

The difficulty in the extension of these crops lies in the fact that their initial expenditure is heavy. But this can be overcome by the judicious management through intercropping till the fruit crops come to normal bearing. These crops being perennial, their recurring expenses fall year by year and the income rises gradually. In conclusion, it may be confidently claimed that in the canal tract or wherever water is available the foregoing crops can be grown by cultivators with a good profit according to soil conditions.

The following data are used in the appended statements for each crop :—

1. *Cost of labour.*—Man charged at 10 annas per day, woman charged at 5 annas per day, boy charged at 5 annas per day, bullock charged at 10 annas per day.

2. *Cost of material.*—Farm yard manure at Rs. 2 per cart-load, ash at Rs. 2-8 per cart-load, bonemeal at Rs. 85 per cart-load.

Two cart-loads are equal to one ton (2,240 lbs.).

One iron basket of manure weighs 20 lbs.

3. *Supervision charges.*—Calculated at 1½ annas per rupee of the cost of cultivation.

4. *Marketing charges.*—Charged at one anna per 100 lbs. or 100 in number of the total yield.

5. *Assessment of the land.*—Average figure of Rs. 3-11-3 per acre calculated from the assessment figures of the surrounding survey numbers.

6. *Value of the land.*—The land is valued at Rs. 1,800 per acre round about Poona. (Figures were got from the land acquisition file of the Principal, College of Agriculture, Poona.)

7. *Interest.*—Interest is charged at .9 per cent. on the sum invested.

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APPENDIX No. 1 (*a*)

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## APPENDIX

Statement showing figures of cultivation for  
Area—30 gunthas.

No.	Operations, etc.	1921-22			1922-23		
		Labour		Cost	Labour		Cost
		Men	wo. bull.	Rs. a. p.	Men	wo. bull.	Rs. a. p.
1	Ploughing with C. T.	7	0 14	13 2 0	2½	0 6½	5 2 6
2	Harrowing and discing	6½	0 12	11 11 6	5½	0 11	10 5 0
3	Digging pits 3' x 3' x 3'	58½	0 0	25 5 0	.....	.....	.....
4	Cost of plants 12½	.....	.....	15 0 0	.....	.....	.....
5	Planting	20½	0 0	12 13 0	.....	.....	.....
6	Mauure (5 lb. bone + 60 FY.M.)	.....	.....	37 6 6	.....	.....	18 0 0
7	Manning	5½	2 6	7 13 0	8	4½ 0	6 6 6
8	Watering charges	17½	0 0	11 1 6	24½	0 0	15 7 6
9	Preparation of beds	13½	0 3	10 5 0	18½	3½ 1	13 4 6
10	Interculture	10½	7½ 0	8 12 0	16	45 0	24 1 0
11	Irrigation charges (canal)	.....	.....	15 12 0	.....	.....	15 12 0
12	Inter crop, Tomato planting	3½	2 0	2 13 0	7½	3 0	5 10 0
13	Main and sub-crop harvesting.	15½	12½ 0	13 9 6	8½	9½ 0	8 2 0
14	Watching of figs	0	4 0	1 4 0	0	28 0	8 12 0
15	San green manning	.....	.....	.....	8½	16 10	16 9 0
16	Uprooting tomato plants	.....	.....	.....	0	1½ 0	0 8 9
17	Miscellaneous	.....	.....	.....	.....	.....	.....
	Total	156½	28 35	196 12 0	99½	111½ 27½	148 0 9

Year	Total cost for the plot	Cost calculated per acre
	Rs. a. p.	Rs. a. p.
1921-22	196 12 0	262 5 4
1922-23	148 0 9	197 6 4
1923-24	209 12 9	279 11 8
1924-25	222 13 6	297 2 0
1925-26	221 13 3	295 12 4



No. 1 (a)

fig crop, for five years from 1921 to 1926

Spacing—15' either way

1923-24		1924-25		1925-26	
Labour	Cost	Labour	Cost	Labour	Cost
Men wo. bull.	Rs. a. p.	Men wo. bull.	Rs. a. p.	Men wo. bull.	Rs. a. p.
5 0 9	8 13 0	2 0 4	3 12 0	2½ 0 5	4 11 0
6½ 0 12	11 9 0	6 0 10	10 0 0	3½ 0 6½	6 6 6
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	18 0 0	.....	18 0 0	.....	18 0 0
11½ 10½ 0	10 6 3	9 4½ 0	7 0 6	4½ 0 3	7 15 6
34 4½ 45½	51 2 9	39½ 6 73	72 3 0	41 4 89	62 8 0
38½ 3½ 2	20 5 0	33½ 1 0	21 4 0	7½ 0 0	4 13 6
27½ 89½ 0	45 0 0	21½ 7 0	15 7 6	48½ 17½ 0	35 11 3
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
12½ 1½ 0	8 5 9	9 2 0	6 4 0	6 2½ 0	4 8 6
1½ 118 0	36 4 0	31½ 12½ 0	58 4 6	54½ ½ 0	34 8 6
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	14½ 5½ 0	10 10 0	36½ 0 0	32 15 6
126½ 223½ 68½	209 12 9	165½ 150 87	222 13 6	210½ 24½ 109½	221 13 3

Note.—There is a sudden rise in expenditure from the year 1923-24.

The obvious reason being that the plot was brought under lift-irrigation, it being under canal irrigation for the first two years. It will be seen that the expenditure for the last three years is more or less steady.

## Statement showing figures of return for

No.	Name of the crop	1931-1932			1922-23		
		Quantity in	Rate per	Value	Quantity in	Rate per	Value
		lb. oz.	lb.	Rs. a. p.	lb. oz.	lb.	Rs. a. p.
1	Yield of the main crop, fig ...	65 12½	5 as.	17 8 0	656 11½	5 as.	305 5 0
2	Sub-crop, Tomato ...	7,742 0	½ a.	241 15 0	1,644 0	1 a.	102 12 0
	Total ...			259 7 0			308 1 0

## Calculations per acre

Years	Yield of the main crop Fig	Yield of the sub-crop, Tomato	Value per acre
	lb.	lb.	Rs. a. p.
1921-22 ...	74½	10,322½	345 14 5
1922-23 ...	876½	2,192	410 12 0
1923-24 ...	1,637½	.....	508 4 0
1924-25 ...	1,449½	.....	452 15 0
1925-26 ...	2,120½	.....	530 2 8

## No. 1 (b)

fig crop, for five years from 1921 to 1926

1923-24			1924-25			1925-26		
Quantity in	Rate per	Value	Quantity in	Rate per	Value	Quantity in	Rate per	Value
lb.	lb.	Rs. a. p.	lb. oz.	lb.	Rs. a. p.	lb. oz.	lb.	Rs. a. p.
1,220	5 as.	381 4 0	1,087 1	5 as.	339 11 3	1,590 8½	4 as.	397 10 0
		381 4 0			399 11 3			397 10 0

N.B.—1. There is a steady rise in the income till the end of the third year. The fall for the year 1924-25 is due to the abnormal season, *i.e.*, excessive cold and actual occurrence of frost in January, at the time of the development of fruits.

2. The value of the yield for the first year mainly consists of the sub-crop of tomato. During the second year the proportion of value of main crop to the sub-crop is 2:1. From the third year onwards raising of the sub-crop was discontinued.

APPENDIX No. 1 (c)  
Statement showing annual dividend on the capital  
invested for fig crop 1921-1926

No.	Items per acre	1921-22	1922-23	1923-24	1924-25	1925-26
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1	Cost of cultivation	262 5 4	197 6 4	279 11 8	297 2 0	295 12 4
2	Supervision charges	24 9 6	19 8 0	26 4 0	27 13 6	27 12 0
3	Marketing charges	6 8 0	1 14 8	1 0 0	0 14 3	1 5 4
4	Assessment of land	3 11 3	3 11 3	3 11 3	3 11 3	3 11 3
		297 2 1	221 8 3	310 10 11	329 9 0	328 8 11
5	Interest at 9 per cent. on the sum invested.	28 12 0	19 15 0	27 15 3	29 10 6	29 9 0
		323 14 1	241 7 3	338 10 2	359 3 6	358 1 11
6	Value of the yield	345 14 5	410 12 0	508 4 0	452 15 0	530 2 8
7	Gain	22 0 0	169 4 9	169 9 10	93 11 6	172 0 9
8	Taking the value of land at Rs. 1,800 per acre at Poona the dividend per 100 comes to.	1 3 6	9 7 0	9 8 0	5 2 4	9 8 10

Years	Dividend per cent.
	Rs. a. p.
1921-22	1 3 6
1922-23	9 7 0
1923-24	9 8 0
1924-25	5 3 4
1925-26	9 8 10

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APPENDIX No. 2 (a)

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APPENDIX  
Statement showing figures of cultivation for  
Area—25 gunthas.

No.	Operations, etc.	1921-22		1922-23					
		Labour		Cost					
		Men	Wo. Bull	Rs.	a. p.	Men	Wo. Bull	Rs.	a. p.
1	Ploughing	4	0 8	7	8 0	3	0 6	5	10 6
2	Harrowing and levelling	5½	0 11	10	5 0	9½	0 19	17	13 0
3	Digging pits	54	2½ 0	34	8 6	.....	.....	.....	.....
4	Cost of plants (150)	.....	.....	18	0 0	.....	.....	.....	.....
5	Planting	10	5½ 0	17	15 6	.....	.....	.....	.....
6	Manure and manuring	4½	4 5	*22	15 0	0	2 0	20	14 0
7	Preparation of beds	6	0 0	3	12 0	26½	1 2	18	2 3
8	Irrigation and watering	7½	0 0	4	13 6	34	2½ 24	37	0 6
9	Interculture	6½	2½ 0	4	13 6	11	38 0	18	12 0
10	Inter crop	.....	.....	.....	.....	11½	20½ 10	19	14 9
11	Harvesting and watching	.....	.....	.....	.....	.....	.....	.....	.....
12	Miscellaneous (includes preparation of bags, spraying, tying of bags, etc.)	.....	.....	.....	.....	.....	.....	.....	.....
	Total	98	11½ 24	144	11 0	95½	63 61	138	2 3

Years	Cost for the plot	Cost calculated
		per acre
	Rs. a. p.	Rs. a. p.
1921-22	144 11 0	231 8 6
1922-23	138 2 3	221 6 8
1923-24	102 4 6	163 10 5
1924-25	155 7 9	248 12 5
1925-26	300 15 3	321 8 5

No. 2 (a)

## Pomegranate Crop for five years from 1921-1926

Spacing—15' either way

1923-24				1924-25				1925-26			
Labour		Cost		Labour		Cost		Labour		Cost	
Men	Wo.	Bull	Rs. a. p.	Men	Wo.	Bull	Rs. a. p.	Men	Wo.	Bull	Rs. a. p.
6½	0	13	12 8 0	11	0	1	1 4 0	9	0	18	16 14 0
3½	0	7	6 9 0	2½	0	5½	5 2 6	1½	0	3	2 19 0
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2½	0	0	21 13 0	10	0	4	29 0 0	11	0	5	30 14 0
13	0	1	8 13 0	20½	0	0	12 15 6	13½	0	0	8 9 6
5½	1	1½	119 11 0	23½	1	55	53 3 3	22½	0	40½	39 3 6
9½	67½	0	27 1 9	9	29½	0	14 13 6	19	47½	0	26 10 3
1	17½	0	6 2 9	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	4½	64½	0	22 13 0	4½	126½	0	42 3 0
.....	.....	.....	.....	26	0	0	16 4 0	54	0	0	33 12 0
44½	86½	22½	102 4 6	103½	95	65½	155 7 9	134½	173½	67½	200 15 3

This amount includes the value of manure of Rs. 45-12-0. For the successive years an amount of Rs. 20-4-0 is added as the value of manure.

\* The plot was under canal irrigation for the year and hence the amount includes Rs. 13-3-0 as irrigation charges.

† Figures for ploughing are taken in the next year as the operation was done after the financial year.

## APPENDIX

*Statement showing figures of Return for Pomegranate*

No.	Name of the crop	1921-1922			1922-23			
		Quantity in	Rate per	Value	Quantity in	Rate per	Value	
			Rs. a. p.			Rs. a. p.		
1	Yield of the main crop	.....	.....	.....	.....	.....	.....	.....
2	Yield of the sub-crop	.....	.....	.....	1,055 lb. (knol-khol).	6 pies per lb.	32 15 6	.....
Total		.....	.....	.....	.....	.....	32 15 6	.....

\*Inter or sub-crop could be taken. But in the particular example it could not be taken as construction work was going on in the plots.

*Calculations per acre*

Years		Yield of the main crop	Yield of the sub-crop	Value per acre
				Rs. a. p.
1921-22	.....	Nil	Nil	.....
1922-23	.....	Nil	1,688 lb. Knolkhol.	52 13 0
1923-24	.....	Nil	1,157 lb. Bhendi, gowar.	72 5 0
1924-25	.....	3,173	Nil	397 9 7
1925-26	.....	12,157	1,349 lb. Bhendi, gowar.	780 13 0



No. 2 (b)

Crop for five years from 1921 to 1926

1923-24			1924-25			1925-26		
Quantity in	Rate per	Value	Quantity in	Rate per	Value	Quantity in	Rate per	Value
		Rs. a. p.	numbers	fruit	Rs. a. p.	numbers	fruit	Rs. a. p.
		.....	692 (Alandi)	1 anna.	43 6 0	7,598 (both varieties)	1 anna.	474 14 0
			1,291 (Dholka)	2 annas	161 6 0			
723 lb. Bhendi and gowar.	1 anna per lb.	45 3 0	...	...		843 Bhendi and gowar.	3 pies per lb.	13 2 9
...	...	45 3 0	...	...	204 12 0	...	...	489 0 9

\*The main crop was lost by the anar caterpillar pest as the effective method of controlling by paper bagging was not known at that time.

## APPENDIX No. 2 (c)

*Statement showing Annual Dividend on the capital invested  
for Pomegranate Crop 1921-1926*

No.	Items per acre	1921-1922	1922-1923	1923-1924	1924-1925	1925-1926
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1	Cost of cultivation	231 8 0	221 0 8	163 10 5	248 12 5	321 8 0
2	Supervision charges	21 11 6	20 11 6	15 5 3	23 5 0	30 2 3
3	Marketing charges	.....	0 10 6	9 7 3	1 4 0	5 4 0
4	Assessment of land	3 11 3	3 11 3	3 11 3	3 11 3	3 11 3
		256 14 9	245 11 3	191 2 2	277 0 8	333 16 7
5	Interest at 9 per cent. on the sum invested.	23 2 0	22 2 6	16 8 0	24 15 0	32 6 3
		280 0 9	268 4 5	199 10 2	301 15 8	333 0 13
6	Value of the yield	.....	52 13 0	72 5 0	327 9 7	780 13 0
7	Gain	250 0 9	215 7 5	127 5 2	25 9 11	387 12 0
8	Taking the value of the land at Rs. 1,800 per acre at 100 per cent. the dividend per cent. comes to	15 8 0	11 15 1	7 1 3	1 6 3	21 8 0
		(Loss per cent.)	(Loss per cent.)	(Loss per cent.)		

Years	Dividend per cent.
	Rs. a. p.
1921-23	15 8 0
1923-23	11 15 1
1923-24	7 1 3
1924-25	1 6 3
1925-26	21 8 0

## APPENDIX No. 3 (a)

Statement showing figures of cultivation for Papaya crop for three years from 1921 to 1924

Area, 16 gunthas. Spacing, 8 feet either way. Life of the plantation, 2 years and 4 months.)

No.	Operations, etc.	1921-22				1922-23				1923-24									
		Labour		Cost		Labour		Cost		Labour		Cost							
		M.	Wo.	Bull.	Rs.	a.	p.	M.	Wo.	Bull.	Rs.	a.	p.	M.	Wo.	Bull.	Rs.	a.	p.
1	Ploughing ...	4	0	8	7	8	0	3½	0	7	6	9	0	.....	.....	.....	.....	.....	.....
2	Harrowing and levelling.	7	3	11	12	3	0	3½	0	6½	6	1	6	2½	0	5	4	11	0
3	Cost of plants (500 seedlings).	.....	.....	.....	5	0	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4	Planting ...	6	0	0	3	12	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5	Manure and manuring.*	.....	.....	.....	5	0	0	13	8½	0	41	11	3	8	0	0	36	0	0
6	Preparation of beds.	9	0	5	8	12	0	58½	5	9½	39	13	6	31	5	1	21	9	0
7	Irrigation and watering.†	19½	0	0	23	7	6	21½	½	4	31	7	8	21½	3½	0	29	14	0
8	Interculture ...	0	12½	0	3	14	6	7	72	0	26	14	0	11	86½	0	33	15	9
9	Intercrop ...	36½	16	19	39	8	6	½	3	0	1	4	0	.....	.....	.....	.....	.....	.....
10	Harvesting ...	.....	.....	.....	.....	.....	.....	1½	½	0	1	4	0	6½	2	0	4	11	0
	Total ...	75½	31½	43	109	1	6	109½	89½	20	155	0	11	80½	97½	6	130	12	9

\* In the second and third year the amount contains the value of manure Rs. 31 only.

† Throughout the irrigation charges are Rs. 15-3-0.

Years	Total cost	Cost calculated per acre	
		Rs.	a. p.
1921-22	109 1 6	272	11 9
1922-23	155 0 11	387	10 6
1923-24	130 12 9	326	15 10

APPENDIX  
Statement showing figures of return for

No.	Name of the crop	1921-22		
		Quantity	Rate	Value
1	Yield of the main crop, Papaya	.....	.....	Rs. a. p. .....
2	Yield of the sub-crop	4,375 lb. (brinjals).	9 pies per lb.	905 1 3
	Total	.....	.....	905 1 3

*Calculations per acre*

Years	Yield of the main crop in numbers	Yield of the sub-crop	Value per acre
1921-22	.....	10,937 $\frac{1}{2}$ lb. (brinjals)	Rs. a. p. 512 11 0
1922-23	5,837 number of fruits.	.....	729 11 0
1923-24	9,705 number of fruits.	.....	1,213 2 0

No. 3 (b)

*Papaya crop for three years from 1921 to 1924*

1922-23			1923-24		
Quantity	Rate	Value	Quantity	Rate	Value
		Rs. a. p.			Rs. a. p.
2,335 number of fruits.	At 2 annas per fruit.	291 14 0	3,682 number of fruits.	At 2 annas per fruit.	485 4 0
.....	.....	.....	.....	.....	.....
.....	.....	291 14 0	.....	.....	485 4 0

## APPENDIX No. 3 (c)

*Statement showing annual dividend on the capital invested  
for Papaya crop 1921-1924*

No.	Items per acre	1921-23	1922-23	1923-24
		Rs. a. p.	Rs. a. p.	Rs. a. p.
1	Cost of cultivation	272 11 9	387 10 6	326 15 10
2	Supervision charges	25 9 0	36 5 6	30 10 6
3	Marketing charges	2 11 9	1 7 3	2 6 9
4	Assessment of land	3 11 3	3 11 3	3 11 3
		304 11 9	429 2 6	363 12 4
5	Interest at 9 per cent. on the sum invested.	27 7 0	35 10 0	32 12 0
		332 2 9	467 12 6	396 8 4
6	Value of the yield	512 11 0	729 11 0	1,213 2 0
7	Gain	180 8 3	261 14 6	816 9 8
8	Taking the value of the land at Rs. 1,500 per acre at Poona the dividend in Rupees per cent. was.	10 0 0	14 9 0	45 5 3

Year	Dividend per cent. on money invested in land
	Rs. a. p.
1921-22	10 0 0
1922-23	14 9 0
1923-24	45 5 3

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APPENDIX, No. 4 (a)

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## APPENDIX

Statement showing figures of cultivation for Banana crop,  
(Area, 10 gunthas.

No.	Operations, etc.	1921-22		1922-23
		Labour		Cost
		M.	Wo. Bull.	Labour
1	Ploughing crosswise ...	4	0 8	7 8 0
2	Harrowing ...	$\frac{1}{2}$	0 1	0 15 0
3	Digging pits $2\frac{1}{2}' \times 2\frac{1}{2}' \times 2\frac{1}{2}'$ (114) ...	38 $\frac{1}{2}$	0 0	17 13 0
4	Cost of suckers ...	.....	.....	12 8 0
5	Planting ...	8	0 0	5 0 0
6	Manure and manuring ...	14 $\frac{1}{2}$	0 0	31 6 6
7	Preparation of beds (twice) ...	11 $\frac{1}{2}$	0 0	7 3 0
8	Irrigation and watering ...	8	0 0	10 0 0
9	Interculture ...	0	19 0	5 15 0
10	Intercrop ...	.....	.....	.....
11	Harvesting ...	.....	.....	.....
12	Manuring second time ...	0	4 0	23 12 0
13	Miscellaneous ...	.....	.....	.....
	Total ...	74 $\frac{1}{2}$	23 9	122 0 6
				38 $\frac{1}{2}$ 19 9

Years	Total cost for the plot	Cost calculated per acre
	Rs. a. p.	Rs. a. p.
1921-22 ...	122 0 6	488 2 0
1922-23 ...	85 10 0	342 8 0
1923-24 ...	85 5 0	341 4 0
1924-25 ...	85 5 0	341 4 0
1925-26 ...	85 5 0	341 4 0



No. 4 (a)

*Rajapuri variety, for five years 1921-1926*

Spacing, 10 feet either way)

		1923-24		1924-25	1925-26
Cost		Labour		Cost	
Rs. s. p.	M. Wo. Bull.			Rs. s. p.	
7 8 0	4 0 8			7 8 0	
0 15 0	1 0 1			0 15 0	
.....	.....			.....	
.....	.....			.....	
.....	.....			.....	
51 14 0	8 4 0			51 4 0	Further annual expenses are almost constant.
6 14 0	19 0 0			11 14 0	
10 0 0	8 0 0			10 0 0	
8 7 0	0 12 0			3 12 0	
.....	.....			.....	
.....	.....			.....	
.....	.....			.....	
.....	.....			.....	
85 10 0	39 16 9			85 5 0	

## APPENDIX

Statement showing figures of return for

No.	Name of the crop	1931-23			1932-23		
		Quantity	Rate	Value	Quantity in number of fruits	Rate	Value
				Rs. a. p.			Rs. a. p.
1	Yield of the main crop, Banana.	...	...	.....	22,762	3 as. per doz.	355 10 6
2	Yield of the sub-crop	...	...	.....	...	...	.....
	Total	...	...	.....	...	...	355 10 6

## Calculated per acre

Years	Yield of the main crop, Bananas, in number of fruits	Yield of the sub-crop	Value per acre
			Rs. a. p.
1921-22	Nil.	Nil.	.....
1922-23	91,049	Nil.	1,422 10 0
1923-24	61,016	Nil.	963 6 0
1924-25	61,776	Nil.	965 4 0
1925-26	80,128	Nil.	1,252 0 0

No. 4 (b)

*Banana Crop for five years from 1921 to 1926*

1923-24			1924-25			1925-26		
Quantity in number of fruits	Rate	Value	Quantity in number of fruits	Rate	Value	Quantity in number of fruits	Rate	Value
		Rs. a. p.			Rs. a. p.			Rs. a. p.
15,254	3 as. per doz.	238 5 6	15,441	3 as. per doz.	241 5 0	20,032	3 as. per doz.	313 0 0
...	...	.....	...	...	.....	...	...	.....
...	...	238 5 6	...	...	241 5 0	...	...	313 0 0

## APPENDIX No. 4 (c)

Statement showing annual dividend on the capital invested  
for Banana Crop 1921-1926

No.	Items per acre	1921-22	1922-23	1923-24	1924-25	1925-26
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1	Cost of cultivation	488 2 0	342 8 0	341 4 0	341 4 0	341 4 0
2	Supervision charges	45 12 0	32 1 9	31 15 0	31 15 0	31 15 0
3	Marketing charges	14 3 6	9 8 0	9 8 0	9 10 0	12 8 0
4	Assessment of land	3 11 3	3 11 3	3 11 3	3 11 3	3 11 3
		531 12 9	387 13 0	386 6 3	386 8 3	389 6 3
5	Interest at 9 per cent. on the sum invested.	49 10 0	35 0 0	34 14 0	34 14 0	35 2 0
		601 6 9	422 13 0	421 4 3	421 6 3	424 8 3
6	Value of the yield	Nil	1,422 10 0	963 6 0	965 4 0	1,252 0 0
	Gain	601 6 9	999 13 0	532 1 9	543 13 9	827 7 9
8	Taking the value of the land at Rs. 1,800 per acre at Poona the dividend in Rupees per cent. was.	(Loss) <sup>1</sup> 33 5 4	55 9 0	29 8 0	30 0 0	46 0 0

Year	Dividend per cent. on money invested in land
	Rs. a. p.
1921-22	33 5 4 (Loss)
1922-23	55 9 0
1923-24	29 8 0
1924-25	0 0 0
1925-26	46 0 0

# I N D E X

(The figures refer to pages)

	PAGES		PAGES
Annual dividend on the capital invested for—		Fig—	
Fig crop ...	10	Cost calculated per acre for ...	6
Pomegranate ...	13	Total cost for the plot ...	6
Papaya ...	20	Figures of cultivation for ...	6-7
Banana ...	26	Yield of the main crop of ...	8-9
Appendix No. 1 (a) ...	6-7	Yield of the sub-crop of ...	8-9
(b) ...	8-9	Calculated yield per acre of ...	8
(c) ...	10	Annual dividend per cent. of ...	10
Appendix No. 2 (a) ...	12-13	Figures of cultivation for—	
(b) ...	14-15	Fig crop ...	6-7
(c) ...	16	Pomegranate crop ...	12-13
Appendix No. 3 (a) ...	17	Papaya crop ...	17
(b) ...	18-19	Banana crop ...	24-25
(c) ...	20	Fruit farming ...	1
Appendix No. 4 (a) ...	22-23	General conditions ...	2
(b) ...	24-25	Good profit ...	3
(c) ...	26	Income rises gradually ...	3
Area—		Individual tree performance records ...	2
Fig ...	6	Initial expenditure is heavy ...	3
Pomegranate ...	12	Interest ...	4
Papaya ...	17	Judicious management through inter-cropping ...	3
Banana ...	22	Low prices ...	2
Assessment of land ...	2, 4	Marketing charges ...	2, 4
Banana—		Mean average rate ...	2
Cost calculated per acre for ...	22	Normal conditions ...	2
Total cost for the plot ...	22	Operations, etc., for—	
Figures of cultivation for ...	22-23	Fig crop ...	6
Yield of the main crop of ...	24-25	Pomegranate crop ...	12
Yield of the sub-crop of ...	24-25	Papaya crop ...	17
Calculated yield per acre of ...	24	Banana crop ...	22
Annual dividend per cent. of ...	26	1. Ploughing.	
Bases for calculation ...	2	2. Harrowing and discing.	
Canal tract or wherever water is available ...	3	3. Digging pits.	
Cost of cultivation ...	2	4. Cost of plants.	
Cost of labour ...	2, 4	5. Planting.	
Cost of material ...	2, 4	6. Manure.	
Cost of cultivation and income ...	3	7. Manuring.	
Daily labour sheets ...	2	8. Watering charges.	
Difficulty in extension of these crops ...	3	9. Preparation of beds.	
Disposal of the produce ...	2	10. Interculture.	
Economic value of fruit cultivation ...	1	11. Irrigation charges.	
		12. Inter-crop.	
		13. Main and sub-crop harvesting.	
		14. Watering.	
		15. Green manuring.	
		16. Uprooting.	
		17. Miscellaneous.	

	PAGES		PAGES
Papaya—		Pomegranate— <i>contd.</i>	
Cost calculated per acre		Yield of the sub-crop	
for ...	17	of ...	14-15
Total cost for the plot		Calculated yield per	
for ...	17	acre of ...	14
Figures of cultivation		Annual dividend per	
for ...	17	cent. of ...	16
Yield of the main crop		Profitable—Bananas and Papa-	
of ...	18-19	yas seem to be more ...	3
Yield of the sub-crop of	18-19	Recurring expenses ...	3
Calculated yield per		Retail prices ...	2
acre of ...	18	Set of conditions—	1
Annual dividend per		Nature of soil.	
cent. of ...	20	Depth of soil.	
Paying fruits ...	1	Spacing of plants.	
Pomegranate—		Irrigation.	
Cost calculated per		Market where fruits were sold.	
acre for ...	12	Rates at which fruits were sold.	
Total cost for the plot		Supervision charges ...	2, 4
for ...	12	Unmarketable stuff ...	2
Figures of cultivation		Value of land ...	2, 4
for ...	12-13	Wholesale price ..	2
Yield of the main crop			
for ...	14-15		