Evaluation Study No. 4

STATE SEED FARMS

An
Evaluation Report

ISSUED BY
BUREAU OF STATISTICS & EVALUATION
GOVERNMENT OF PONDICHERRY
1969

INTRODUCTION

The "Report on the State Seed Farms, Pondicherry State" is the fourth issue in the Evaluation series of the Bureau of Statistics and Evaluation, Pondicherry. The report attempts to focus the attention on the working of the farms in all aspects.

The willing co-operation extended by the Agriculture Department in providing all facilities for this study is gratefully acknowledged. The comments of the Director of Agriculture, Pondicherry, are also given at the end of this report.

It is hoped that the present report will be useful for all those who are concerned in the evaluation of Plan Schemes.

Pondicherry, S. MUTHUBASAVAN,
22nd August, 1969. *Director.*

EVALUATION OF STATE SEED FARMS

Background of study :

In pursuance of the suggestion of the Planning Commission that an Evaluation machinery be set up in all the States, an Evaluation Cell has been constituted in the Bureau of Statistics with a view to evaluating certain important developmental programmes undertaken in the State. The Evaluation Cell, located in the Bureau of Statistics, is to function under the supervision and guidance of the Director of Statistics. It had to undertake studies on important schemes selected by the Government for evaluation, for making a critical assessment of the achievements with reference to the physical and financial targets prescribed. Eight schemes have been selected by the Government for evaluation in the first instance, of which "State Seed Farms" is one.

Collection of data :

As there are only two State Seed Farms in this Territory, one at Madagadipet in Pondicherry Region and the other at Madur in Karaikal Region both the farms were taken up for study. The study has been designed to cover broadly three points :—

(i) to find out the extent to which the programme has fulfilled the original objectives ;

(ii) to draw inferences regarding the strength and weaknesses of the programme ; and

(iii) to give broad suggestions for improvements and to enable the department administering the programme to undertake corrective action where necessary.

Each State Seed Farm is under the direct administration of a Farm Manager. Detailed schedules and questionnaire were designed and sent to the Farm Managers in order to elicit information in respect of the Seed Farms. A separate schedule has also been designed and sent to the Agriculture Department in order to obtain particulars of both the Seed Farms in a consolidated form for the State as a whole. The schedules and questionnaire referred to above are given in appendix I.

The study was commenced on the 20th May 1968. The field work of collection of data and inspections was completed on 30th October 1968. The scrutiny and analysis of data and the drafting of the report was completed on 15th November 1968.

Seed Programme :

One of the main objectives of the Five Year Plans is to step up the food production and make the country self-sufficient in its requirements of foodgrains. Among the various improved agricultural practices, the use of improved seeds is well known. Pure seed of improved variety is an important factor which contributes to additional output. Certain experiments were conducted and norms have been evolved for the application of improved seeds. One tonne of improved paddy seeds should cover 45 acres and contribute to an additional production of 5.5 tonnes of rice or 1/8 tonne of rice per acre. Similarly the application of one tonne of improved seeds of millets should cover 150 acres and contribute to additional production of 4.5 tonnes of millets or 30 kg. per acre. The use of improved seed is easy and less costly than other improved methods of agriculture. Hence the programme of seed multiplication and distribution has been recognised as an important programme in the development of agriculture. This programme envisages the evolving of nucleus and breeder's stock seed in the Agriculutral Research Station run by Government, its multiplication into foundation seed in State Seed Farms set up by the Government and its further multiplication into improved seed by the registered growers at the village level.

Genesis of the State Seed Farms :

Towards the end of the Second Five Year Plan provision was made for the establishment of two Seed Farms in the State. The first Farm was established at Madur in Karaikal region in 1960 and the second one at Madagadipet in Pondicherry region in

1961. The main object of the scheme is to multiply the foundation seeds of paddy, millets, oil seeds, sugarcane and vegetables for distribution to ryots for further multiplication. The Madur Seed Farm would be devoted for the multiplication of paddy seeds only, whereas the Madagadipet Farm would take up the multiplication of ragi, groundnut, sugarcane and vegetables in addition to paddy. The objective of this programme is to cover the major portion of the cultivable lands in Pondicherry and Karaikal regions with seeds of good quality.

The targets set for the production and release of primary seeds by these Seed Farms are as under :

Sl. No.	Particulars	Quantity of Primary Seeds	
		Tons	Metric Tonnes
1	2	3	4
1.	Paddy	60.00	61.20
2.	Ragi	1.00	1.02
3.	Groundnut	2.00	2.04
4.	Sugarcane	10.00	10.20
5.	Vegetables	1.00	1.02

Source : Third Five-Year Plan (Pondicherry State) Final proposals.

Plan Provision and Expenditure :

The following table shows the Second and Third Plan provision and the actual expenditure incurred in implementing the scheme.

Sl. No.	Particulars	Madur (Karaikal)	Madagadipet (Pondicherry)
1	2	3	4
		(Rs. in lakhs)	
1.	Second Plan Provision (for two years)—(Reallocated). ...	1.00	2.22
	(i) Actuals for 1959-60 ...	0.35	—
	(ii) Actuals for 1960-61 ...	0.52	0.56
	Total (i) and (ii) ...	0.87	0.56

1	2	3	4
2.	Third Plan Provision (for five years)—(Madur and Madagadipet Farms).	(Rs. in lakhs) (3.49)	
	(i) Actuals for 1961-62 ...	0.45	0.46
	(ii) " " 1962-63 ...	0.29	0.51
	(iii) " " 1963-64 ...	0.24	0.42
	(iv) " " 1964-65 ...	0.59	0.53
	(v) " " 1965-66 ...	0.17	0.53
	Total (i) to (v) ...	1.74	2.45

General particulars of the State Seed Farm, Madur (Karaikal region) :

The State Seed Farm, Madur was established in February, 1960 at Madur (Karaikal region) in an area of 19.97 acres which is a Government acquired land. It is situated about ten miles away from Karaikal town and about one and a half miles from the highway. The texture of the soil, topography, drainage and water supply in the farm were reported to be quite suited for paddy cultivation. It was also reported that the general soil analysis of the farm indicated that, a major portion of the soil is stiff clay typical to that of the surrounding area.

The farm is entirely for wet land cultivation except an area of one acre which is utilised for the location of the farm office building, seed store and implements shed. The area of the farm was increased to 25.97 acres by the addition of 6 more acres acquired during April 1965.

The farm consists of two main blocks lying on either side of the Madur Road. It is divided into 6 blocks which are further divided into 55 small rectangular shapped plots in order to carry out the farm work economically and conveniently. The area and particulars of each block are given in the following table :

S. No.	Block	No. of plots	Area in acres
1	2	3	4
1.	A Block	4	1.55
2.	B "	13	5.92
3.	C "	10	4.38
4.	D "	5	1.61
5.	E "	11	4.90
6.	F "	12	6.00
	Total	55	24.36

Irrigation facilities :

The main source of irrigation for the farm is Madur channel, a branch of Noolar which is the main channel of Cauveri. Two filter point tube wells were sunk in 'A' and 'B' blocks during 1960 and 1961 respectively to augment the supply of water and to raise the kuruvai paddy nursery ahead of the receipt of freshes in the irrigation canals. Another filter point has been sunk recently in 'F' block.

The improved varieties of paddy which are cultivated in the farm and their planting seasons are given in the table below :—

S. No.	Crop	Improved variety	Planting season
1	2	3	4
1.	Kuruvai	ADT_3	June–July
		ADT_{20}	
		TKM_6	
2.	Thaladi (Double crop after the harvest of Kuruvai)	CO_{25}	October–November
		ADT_8	
3.	Samba (Single crop)	CO_{25}	July–August
		ADT_8	
		ADT_1	

The nucleus seeds required for the farm were obtained from the Research Stations at Aduthurai, Coimbatore and Thirukuppam.

Investments :

The fixed investments on the farm like cost of land acquired, construction cost of irrigation facilities, seed store, office building etc., and other investments such as cost of livestock, implements, tools and irrigation fixtures are given in the following table for all the years since the inception of the farm.

(In Rupees & Paise)

		Fixed Investments			
S. No.	Year	Cost of land	Construction cost of irrigation facilities, seed store, etc.	Other investments (Livestock, implements, tools etc.)	Total
1	2	3	4	5	6
1.	1960-61	49,765.73	5,722.00	2,920.11	58,407.84
2.	1961-62	—	25,611.12	647.73	26,258.85
3.	1962-63	—	11,980.00	519.63	12,499.63
4.	1963-64	—	8,570.00	58.90	8,628.90
5.	1964-65	33,504.00	45,588.00	64.04	79,156.04
6.	1965-66	—	707.00	366.96	1,073.96
7.	1966-67	—	—	861.00	861.00
8.	1967-68	—	—	358.24	358.24
	Total	83,269.73	98,178.12	5,796.61	1,87,244.46

It may be seen from the above table that the total investment on the farm up to the end of 1967-68 amount to Rs. 1,87,244.46 of which the investment on land is Rs. 83,269.73 on construction cost of irrigation facilities, seed store and other structures, Rs. 98,178.12, on livestock, implements and tools Rs. 5,796.61.

General particulars of the State Seed Farm, Madagadipet (Pondicherry) :

The State Seed Farm, Madagadipet was established in February 1961 at Madagadipet (Pondicherry region) in an area of 25 acres. The farm is situated very close to the main road unlike the Madur Seed Farm which is about one and a half miles away from the highway. The site which was originally a barren land was acquired by the Government and then reclaimed. The cultivable area of the farm is 19 acres which is divided into 5 blocks A to E. The area and particulars of each block are given below :—

S. No.	Block	Area	Particulars
1	2	3	4
1.	A. Block	4.30	Garden land cultivation.
2.	B. ,,	6.00	Wet land cultivation.
3.	C. ,,	4.70	Garden land cultivation.
4.	D. ,,	2.00	do.
5.	E. ,,	2.00	Vegetable cultivation and coconut nurseries.
	Total	19.00	

The remaining area of 6 acres were not cultivated and were occupied by office building, seed store, roads, cattle shed, threshing floor etc. Unlike in Madur farm where the whole area is for paddy cultivation, in Madagadipet farm the area for wet land cultivation is only 6 acres. Even if the whole wet land area is brought under double crop, the maximum gross area covering paddy crop will be only 12 acres.

Irrigation facilities : There are three wells which supply water for irrigation purposes. All of them have inside tube wells and are provided with electric motors.

Crop and varieties : The important crops grown in the farm are paddy, ragi, groundnut and sugarcane. The various strains preferred by the ryots and multiplied in the farm are given below :

S. No.	Crop	Varieties
1	2	3
1.	Paddy	BAM_3, CO_{25}, TKM_6, ASD_5, ADT_{27}, BCP-1, IR_8, CO_{29}.
2.	Ragi	PLR-1, CO_5, CO-7.
3.	Groundnut	TMV_2, TMV_3.
4.	Sugarcane	CO-449, CO-658, CO-853, CO-997, CO-740.

The nucleus seeds required for the farm are obtained from the Experimental Research Farm at Reddiarpalayam (Pondicherry), Research Stations at Coimbatore, Tindivanam, Aduthurai, Cuddalore and Thiruvarkuppam.

Investments: The particulars regarding the fixed and other investments on the farm are given in the following table.

In Rupees & Paise

Serial No.	Year	Fixed investments: Cost of land	Fixed investments: Construction cost of irrigation facilities, seed store, etc.	Other investments (Livestock, implements, tools etc.)	Total
1	2	3	4	5	6
1.	1960-61	28,123.37	4,991.00	10,348.97	43,463.34
2.	1961-62	—	14,764.00	4,945.45	19,709.45
3.	1962-63	—	28,830.00	5,177.81	34,007.81
4.	1963-64	—	15,464.00	478.15	15,942.15
5.	1964-65	—	34,067.00	9.45	34,076.45
6.	1965-66	—	29,125.00	438.65	29,563.65
7.	1966-67	—	—	40.00	40.00
8.	1967-68	—	—	2,071.00	2,071.00
	Total	28,123.37	1,27,241.00	23,509.48	1,78,873.85

It may be seen from the above table that the total investments on the farm up to the end of 1967-68 amount to Rs. 1,78,873.85 of which the investment on land is Rs. 28,123.37 : on construction cost of irrigation facilities, seed store and other structures Rs. 1,27,241.00, on livestock, implements and tools etc., Rs. 23,509.48.

Economic Viability of the State Seed Farms :

The financial results of the working of the farms from their inception to the end of 1967-68 are shown in the following table in a summary form. The detailed profit and loss accounts of the farms are given in Appendix II.

Farm 1	Year 2	Total Expenditure * 3	Total Receipts 4	Loss (—) or Profit (+) 5
MADUR	1960–61	17,165.39	8,326.58	(—) 8,838.81
	1961–62	19,636.76	12,185.43	(—) 7,451.33
	1962–63	22,892.08	8,983.63	(—) 13,908.45
	1963–64	17,897.74	11,096.02	(—) 6,801.72
	1964–65	16,386.02	9,795.81	(—) 6,590.21
	1965–66	20,573.42	11,494.12	(—) 9,079.30
	1966–67	20,905.75	24,502.32	(+) 3,596.57
	1967–68	23,556.76	28,849.34	(+) 5,292.58
	Total	1,59,013.92	1,15,233.25	(—) 43,780.67

* Does not include Interest on capital.

Farm 1	Year 2	Total Expenditure ** 3	Total Receipts 4	Loss (—) or Profit (+) 5
MADA-GADI-PET.	1960–61	—	—	—
	1961–62	24,647.14	1,588.91	(—) 23,058.23
	1962–63	23,100.49	10,937.04	(—) 12,163.45
	1963–64	22,387.95	14,192.57	(—) 8,195.38
	1964–65	17,936.48	10,149.65	(—) 7,786.47
	1965–66	19,346.48	11,774.41	(—) 7,572.07
	1966–67	20,218.64	11,120.03	(—) 9,098.61
	1967–68	20,521.16	15,025.47	(—) 5,495.69
	Total	1,48,157.98	74,788.08	(—) 73,369.90

** Does not include Interest on capital and depreciation.

In this connection it may be pointed out that the total expenditure shown in col. 3 of the above table include the following items.

1. Working expenses :

   (i) Wages of regular mazdoors and casual coolis.

   (ii) Ploughing charges.

   (iii) Cost of seeds.

   (iv) Cost of manure and fertilizers.

   (v) Cost of insecticides and fungicides.

   (vi) Irrigation expenses.

   (vii) Temporary dead-stock.

   (viii) Maintenance of cattle.

   (ix) Miscellaneous.

2. Pay and allowances of establishment.

3. Depreciation on implements, livestock and buildings (for Madur Farm only).

The item "Depreciation" was not included in the total expenditure of the Madagadipet Farm, as the same was incorrectly reported by the Farm Manager. Further, the item "interest on capital invested" was not taken into account while working out the total expenditure of the Farms because it was not reported by the Madur Farm and incorrectly reported by the Madagadipet Farm. It is essential to make due provision towards these items if any realistic assessment of the working results of the farms is to be made. The ordinary business principles and procedures should be adopted in regard to the presentation of the financial results.

The esablishment charges reported by the Farm Manager of Madagadipet Farm included only the pay and allowances of the maistry. The expenditure incurred on the Farm Manager and other staff like Fieldman, Depot clerk and Peon have been omitted. Although the posts of Fieldman, Depot clerk and Peon have abolished for effecting economy under establishment charges, the expenditure on them for the period for which they were employed in the Farm, should appropriately be taken into account. An adjustment has been made accordingly.

It may be noticed from the above table that both the Farms were working at a loss right from their inception throughout except for the last two years when the Madur Farm realised some profits. The total losses incurred up to the end of 1967-68 were Rs. 43,780.67 in the case of Madur Farm and Rs. 73,369.90 in the case of Madagadipet Farm.

However the financial results of the Madur Farm were better as compared to those of the Madagadipet Farm. The former which incurred losses in the initial stages improved a lot and even realised profits during the last two years. It may be worthwhile to note that even in the case of Madagadipet Farm the losses which were Rs. 23,058 in 1961-62 had come down to Rs. 5,496 in 1967-68. If this trend is maintained it is likely that this farm may show some profit in the course of two or three years.

Output-Input ratio of financial results :

An analysis has been made of the financial results of the working of the farms in terms of an output-input ratio, based on the value of yield per acre in relation to overall expenditure per acre. The overall expenditure taken into account for the purpose represents the expenditure on the farm as a whole and the value of yield represents the income during the year from all crops raised in the farm. The results of the analysis are presented in the Table below :—

Output-input ratio based on value of yield per acre in relation to overall expenditure per acre

		Madur Seed Farm			Madagadipet Seed Farm		
Sl. No.	Year	Value of yield per acre	Overall expenditure * per acre	Output input ratio	Value of yield per acre	Overall expenditure per acre **	Output input ratio
1	2	3	4	5	6	7	8
1.	1960-61	350.88	723.36	0.48	—	—	—
2.	1961-62	451.98	728.36	0.62	250.02	3,180.27	0.06

3.	1962-63	362.39	923.44	0.39	540.10	1,140.76	0.47
4.	1963-64	423.99	683.90	0.62	818.01	1,290.37	0.63
5.	1964-65	416.31	696.38	0.60	489.13	864.39	0.56
6.	1965-66	312.00	558.45	0.56	682.57	1,121.53	0.60
7.	1966-67	653.74	557.78	1.17	654.11	1,189.33	0.55
8.	1967-68	673.57	550.00	1.22	639.38	873.24	0.73
	Average	455.61	677.70	0.67	575.47	1,379.98	0.42

* Does not include Interest on Capital.

** Does not include Interest on capital and depreciation.

As may be seen from the above table, both the farms have shown an average output-input ratio below unity, (0.67 for Madur Farm and 0.42 for Madagadipet Farm) the short-fall being greater in the case of Madagadipet Farm. Taking the yearwise performance, however, a ratio higher than unity has been recorded by the Madur Farm in 1966-67 and 1967-68. It is, therefore, evident that the Madur Farm whose performance was not satisfactory in the beginning improved a good deal in the last two years. But the performance of the Madagadipet farm was poor especially in the first year of its working when its output-input ratio was as low as 0.06. The main reason given in favour of the Madagadipet Farm for the poor results in the first year of its working was that the fertility of the soil was poor in the beginning as the land which was originally a barren land had to be reclaimed and gradually made fertile. Even allowing some margin for these difficulties in the initial stages, there could be no justification for such a poor performance. When the results of the Madagadipet Farm are compared with those of the Madur Farm, the overall expenditure of the Madagadipet Farm are very high (nearly double), but the value of yield per acre is better than those of the Madur Farm. Hence if the Madagadipet Farm reduces its overall expenditure than the output-input ratio would become at least equal to if not higher than unity. However, it is gratifying to note that in 1967-68 the output-input ratio was 0.73, the highest so far recorded by this farm and that the overall expenditure per acre have also been reduced considerably.

Output-input ratio based on direct Working expenses :

In order to get a closer picture of management and operational efficiency of the farms, a study of the working results based on direct inputs, has been made. It is significant here that the direct working expenses account for a major part of the overall expenditure of the farms. The output-input ratio based on value of yield per acre in relation to direct working expenses should reveal the degree of efficiency of farm management. Such an anlysis, however, was possible only in the case of Madur Farm which is a homogeneous farm raising only paddy. In the case of Madagadipet farm, split up figures of working expenses in respect of the various crops raised were not available with the Farm Manager.

The items of direct working expenses which were taken into account for working out the output-input ratio are as follows :

1. Ploughing, cultivation and harvesting.
2. Seed.
3. Manure and fertilisers.
4. Insecticides and fungicides.
5. Irrigation expenses.
6. Miscellaneous.

The item 'Ploughing, cultivation and harvesting" includes wages of regular mazdoors, casual coolis and ploughing charges and the "Miscellaneous" item includes temporary dead-stock, maintenance of cattle and sundry expenses, like repair and maintenance of agricultural implements etc.

The following table shows the yearwise particulars of the Madur Farm, namely, the expenditure per acre for each of the above six items, the value of yield per acre and the output - input ratio.

Output-input ratio based on the value of yield per acre in relation to direct working expenses per acre for Madur Farm.

S. No.	Particulars	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	Average
1	2	3	4	5	6	7	8	9	10	11
1.	Ploughing, cultivation and harvesting	225.86	173.49	209.69	209.53	242.21	209.39	211.62	177.79	207.44
2.	Seed	12.60	18.53	20.50	6.46	39.15	9.38	8.36	10.85	15.72
3.	Manure and fertiliser	35.30	61.02	102.93	63.72	53.12	68.24	83.09	84.75	69.02
4.	Insecticides	1.16	1.00	1.09	3.93	4.60	1.25	3.10	2.88	2.37
5.	Irrigation expenses	6.71	12.57	12.60	8.22	16.20	21.02	19.49	65.77	20.32
6.	Miscellaneous	115.85	75.57	119.05	59.79	45.35	40.83	44.36	28.14	66.11
7.	Total working expenses per acre	397.48	342.18	465.86	351.65	400.63	350.11	370.02	370.18	380.98
8.	Value of yield per acre	350.88	451.98	362.39	423.99	416.31	312.00	653.74	673.57	455.61
9.	Output-input ratio	0.88	1.32	0.77	1.20	1.03	0.89	1.76	1.81	1.20

From the above table it may be seen that the output-input ratio is below unity in 1960-61, 1962-63 and 1965-66 and it is higher than unity for the remaining years.

Analysis of expenditure :

The following tables show the different items of expenditure and their percentages to overall expenditure for each farm. As pointed out earlier the average overall expenditure per acre (Rs. 1,379.98) incurred by the Madagadipet Farm in nearly double of that incurred by the Madur Farm (Rs. 677.70). More over the average amount spent on wages of mazdoors and casual coolis is 38.72% of the total expenditure for the Madagadipet Farm and 28.92% for the Madur Farm. Hence, the former should take steps to reduce the overall expenditure and especially the expenditure on wages which is very high.

Further the establishment charges form also a major portion of the overall expenditure of the farms besides wages of mazdoors and casual coolis. They constitute 30.26% and 34.91% of the overall expenditure of Madagadipet and Madur Farms respectively. For effecting economy under establishment charges the Department have abolished the posts of Fieldmen in 1962-63. and Depot Clerk and Peon in 1966-67.

Statement showing expenses per acre (Madur Seed Farm)

Particulars	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	Average
1	2	3	4	5	6	7	8	9	10
1. *Operating expenses :*									
(i) Wages of regular mazdoors and casual coolis. ...	225.86	164.47	202.65	199.27	234.82	190.30	199.27	151.43	196.01
(ii) Ploughing charges	—	9.02	7.04	10.26	7.39	19.09	12.35	26.36	11.43
(iii) Seeds and seed materials	12.60	18.53	20.50	6.46	39.15	9.38	8.36	10.85	15.72
(iv) Manure and fertilizers	35.30	61.02	102.93	63.72	53.12	68.24	83.09	84.75	69.02
(v) Insecticides and fungicides	1.16	1.00	1.09	3.93	4.60	1.25	3.10	2.88	2.37
(vi) Irrigation charges	6.71	12.57	12.60	8.22	16.20	21.02	19.49	65.77	20.32
(vii) Temporary dead stock	16.92	15.59	7.70	4.16	1.62	1.71	1.94	0.70	6.29
(viii) Maintenance of cattle	97.17	56.49	106.27	53.16	42.16	36.82	40.73	24.97	57.22
(ix) Miscellaneous	1.76	3.49	5.08	2.47	1.57	2.30	1.69	2.47	2.60
2. Pay and allowances of establishment	292.10	337.82	396.48	277.36	198.97	142.76	122.82	124.41	236.59
3. Depreciation	33.75	48.33	61.06	54.87	96.76	65.54	64.91	55.38	60.08
Overall expenditure per acre	723.36	728.36	923.44	683.90	696.38	558.45	557.78	550.00	677.70

Statement showing expenses per acre (Madagadipet Seed Farm)

Particulars 1	1961-62 2	1962-63 3	1963-64 4	1964-65 5	1965-66 6	1966-67 7	1967-68 8	Average 9
1. *Operating expenses :*								
(i) Wages of regular mazdoors	459.50	185.06	246.69	188.55	282.26	310.94	191.56	266.36
(ii) Wages of casual coolis	592.57	256.69	315.58	174.66	185.26	163.98	187.38	268.01
(iii) Seeds and seed materials	95.21	24.60	28.34	24.09	15.56	50.57	15.88	36.32
(iv) Manure and fertilizers	428.39	113.78	137.34	24.09	94.04	130.23	137.80	152.23
(v) Insecticides and fungicides	18.22	13.02	11.15	4.82	7.85	3.32	4.85	9.03
(vi) Irrigation charges	176.20	132.37	133.45	51.92	39.33	105.67	90.21	104.16
(vii) Maintenance of cattle	200.15	67.35	96.19	59.89	28.97	40.08	29.86	74.64
(viii) Miscellaneous	262.77	20.40	14.15	24.09	16.81	8.96	13.92	51.58
2. Pay and allowances of establishment ...	947.22	327.45	307.43	312.24	451.42	375.52	201.74	417.57
Overall expenditure per acre	3180.27	1140.76	1290.37	864.39	1121.53	1189.33	873.24	1379.98
Gross area cultivated (acres)	7.75	20.25	17.35	20.75	17.25	17.00	23.50	

Statement showing percentages of various items of expenses to total expenditure
(Madur Seed Farm.)

Particulars	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	Average
1	2	3	4	5	6	7	8	9	10
1. *Operating expenses :*									
(i) Wages of regular mazdoors and casual coolis	31.22	22.58	21.95	29.14	33.72	34.08	35.73	27.53	28.92
(ii) Ploughing charges	—	1.24	0.76	1.50	1.06	3.42	2.21	4.79	1.69
(iii) Seeds and seed materials	1.74	2.54	2.22	0.94	5.62	1.68	1.50	1.97	2.23
(iv) Manure and fertilizers	4.88	8.38	11.15	9.32	7.63	12.22	14.90	15.41	10.19
(v) Insecticides and fungicides	0.16	0.14	0.12	0.57	0.66	0.22	0.56	0.53	0.35
(vi) Irrigation charges	0.93	1.73	1.36	1.20	2.33	3.76	3.49	11.96	3.00
(vii) Temporary dead stock	2.34	2.14	0.83	0.61	0.23	0.31	0.35	0.13	0.93
(viii) Maintenance of cattle	13.43	7.76	11.51	7.77	6.06	6.59	7.30	4.54	8.14
(ix) Miscellaneous	0.25	0.48	0.55	0.37	0.23	0.42	0.30	0.45	0.38
2. Pay and allowances of establishment	40.38	46.38	42.94	40.56	28.57	25.56	22.02	22.62	34.91
3. Depreciation	4.67	6.63	6.61	8.02	13.89	11.74	11.64	10.07	8.87
Overall expenditure per acre	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Production of Foundation Seeds :

The next important aspect to be studied is the production of Foundation seeds. The main purpose for which the State Seed Farms were set up is the production of Foundation seeds for distribution to the ryots for further multiplication. The following table shows the quantity of Foundation seeds and total paddy produced by the Madur and Madagadipet Farms during each year since their inception.

(Figures in Kilograms)

Sl. No.	Year	Madur Farm		Madagadipet Farm		Total	
		Foundation Seed	Total Paddy	Foundation Seed	Total Paddy	Foundation Seed	Total Paddy
1	2	3	4	5	6	7	8
1.	1960-61	15,252	17,016	—	—	15,262	17,016
2.	1961-62	23,198	25,381	2,223	2,223	25,421	27,604
3.	1962-63	26,812	31,120	8,005	8,130	34,817	39,250
4.	1963-64	19,120	21,993	8,896	9,813	28,016	31,806
5.	1964-65	26,497	31,435	6,660	8,630	33,157	40,065
6.	1965-66	22,877	28,793	4,020	5,308	26,897	34,101
7.	1966-67	44,489	51,196	9,442	10,531	53,931	61,727
8.	1967-68	46,357	52,213	12,835	14,240	59,192	66,453

A quantity of 60 tons or 61.20 Metric Tonnes of Foundation seeds of paddy is to be produced and released every year from both the State Seed Farms, as per the target fixed in the Third Five Year Plan. As may be seen from the above table, the quantity of Foundation seeds produced by both the farms during the years 1960-61 to 1965-66 was far below the target. But during the subsequent two years, the farms showed considerable improvement and the quantity of Foundation seeds produced during this period came nearer to the target (53.931 Metric tonnes in 1966-67 and 59.192 Metric tonnes in 1967-68).

The percentage of the total produce that was converted into Foundation seeds. has been worked out for each farm and the results are presented in the following table.

Sl. No.	Year	Madur Farm			Madagadipet Farm		
		Total Paddy (kg.)	Foundation seeds (kg.)	Percentage	Total Paddy (kg.)	Foundation seeds (Kg.)	Percentage
1	2	3	4	5	6	7	8
1.	1960-61	17,016	15,252	89.6	—	—	—
2.	1961-62	25,381	23,198	91.3	2,223	2,223	100.0
3.	1962-63	31,120	26,812	86.1	8,130	8,005	98.4
4.	1963-64	21,993	19,120	86.9	9,813	8,896	90.6
5.	1964-65	31,435	26,497	84.2	8,630	6,660	77.1
6.	1965-66	28,793	22,877	79.4	5,308	4,020	75.7
7.	1966-67	51,196	44,489	86.8	10,531	9,442	89.6
8.	1967-68	52,213	46,357	88.7	14,240	12,835	90.1

It may be seen that in the case of Madagadipet Farm the percentage is below 80% for the years 1964-65 and 1965-66. Efforts should be taken by both the Farms to maximize the production of Foundation seeds thereby reducing the quantity of consumption paddy which is unsuitable for seed purposes.

Yield rates of paddy :

The total quantity of paddy produced (i. e. the Foundation seeds as well as the consumption paddy) has been taken into account while working out the yield rate per acre in the State Seed Farms. The performance of the Seed Farms with regard to their yield may be assessed by comparing their yield rates per acre with the average yield rates in their respective region. The following table shows the area under paddy and the yield rates of paddy in the Seed Farms, and the average yield rates in Pondicherry and Karaikal regions.

Sl. No.	Year	Madur Farm: Area under paddy (acres)	Madur Farm: Yield of paddy per acre (Kg.)	Madur Farm: Average yield rate in Karaikal region	Madagadipet Farm: Area under paddy (acres)	Madagadipet Farm: Yield of paddy per acre (Kg.)	Madagadipet Farm: Average yield rate in Pondicherry region
1	2	3	4	5	6	7	8
1.	1960-61	23.73	717	731	--	—	754
2.	1961-62	26.96	941	785	2.00	1,111	820
3.	1962-63	24.79	1,255	681	8.00	1,016	806
4.	1963-64	26.17	840	808	8.55	1,147	857
5.	1964-65	23.53	1,335	878	11.00	784	999
6.	1965-66	36.84	781	859	4.62	1,148	877
7.	1966-67	37.48	1,365	889	9.62	1,094	903
8.	1967-68	42,83	1,219	N.A.	12.00	1,186	N.A.

N.A.— Data not available.

It is evident from the above table that the yield rates of Madur Farm are higher than the average yield rates of Karaikal region for all the years except 1960-61 and 1965-66. For Madagadipet Farm also, the yield rates are higher than the average yield rates of Pondicherry region for all the years except 1964-65. However, both the seed Farms have not maintained a satisfactory trend in respect of the yield rates which were fluctuating from year to year.

Yield rates of ragi and groundnut :

As stated earlier, the Madagadipet Farm raises ragi, groundnut, sugarcane, tapioca and vegetables in addition to paddy. In respect of these crops, split up figures of expenditure were not available with the Farm Manager. In the absence of these particulars, it is not possible to work out output-input ratios. The only practical method of assessing the working results in respect of these crops is to compare the productivity in respect of each crop with the average yield rate in Pondicherry region. Such a comparison has been made in the following tables which give the details of area under the crop and yield per acre in the Madagadipet Farm and the average yield rate in Pondicherry region.

Sl. No.	Year	RAGI		
		Area under the crop (acres)	Yield per acre (Kg.)	Average yield per acre in Pondicherry region (Kg.)
1	2	3	4	5
1.	1961-62	0.75	706	622
2.	1962-63	4.50	542	634
3.	1963-64	0.50	926	602
4.	1964-65	2.50	960	582
5.	1965-66	2.00	620	591
6.	1966-67	1.00	487	635
7.	1967-68	1.00	500	N.A.

It may be seen from the above table that the yield rate of ragi was below the region average in 1962-63 and 1966-67. The farm started well in the early years with yields exceeding the region average (except 1962-63). This trend, however, was not maintained uniformly in the later years.

Particulars regarding the yield of groundnut are given in the following table.

Sl. No.	Year	Groundnut		
		Area under the crop (acres)	Yield per aere (Kg.)	Average yield per acre in Pondicherry region (Kg.)
1	2	3	4	5
1.	1961-62	4.50	96	437
2.	1962-63	4.25	116	404
3.	1963-64	—	—	442
4.	1964-65	2.50	232	484
5.	1965-66	1.00	520	400
6.	1966-67	1.00	866	457
7.	1967-68	—	—	N.A.

It may be seen from the table that the farm did not show satisfactory performance in the first three years. But in 1965-66 and 1966-67 it recorded a yield higher than the region average.

Conclusions :

1. The financial results of the working of the State Seed Farms as reported by the Farm Managers do not take into account such factors as interest on capital and depreciation. (Depreciation reported by Madur Farm only). It is essential to make due provision towards these factors, if any realistic assessment of the working results of the farms is to be made. The ordinary business principles and procedures should be adopted in regard to the presentation of the financial results.

2. It is needless to emphasize that the Farm Managers should prepare regularly *pro forma* accounts in a proper form. The Farm Manager of Madagadipet Farm should maintain cultivation accounts for each crop separately.

3. The establishment charges reported by the Farm Manager of Madagadipet Farm included only the pay and allowances of the maistry. But for a correct assessment of profit or loss of the farm, the expenditure incurred on other staff should also be taken into account.

4. For assessing the economic viability of individual Seed Farms, an analysis of output-input ratio based on value of yield per acre in relation to overall expenditure per acre has been made. It was noticed that both the farms showed an average output-input ratio below unity (0.67 for Madur Farm and 0.42 for Madagadipet Farm, the short-fall being greater in the case of Madagadipet Farm. Taking the yearwise performance, it was found however that the Madur Farm improved a good deal in the last two years. But the Madagadipet Farm whose highest output-input ratio so far recorded was only 0.73, has to put in more efforts and show better performance.

5. As the direct working expenses constitute a major portion of the overall expenditure, the ultimate working results of a farm will be influenced significantly by the direct working expenses. Hence in order to get a closer picture of management and operational efficiency of individual farms, an analysis of output-input ratio based on value of yield per acre in relation to direct working expenses per acre was made. Such an analysis, however, was possible only in the case of Madur Farm (an homogeneous Farm raising only paddy). It was found that the output-input ratio was below unity for 1960-61, 62-63 and 65-66 and higher than unity for other years. Efforts have to be made by both the farms to reduce its working expenses and especially its labour charges which are very high. In this connection it may be added that norms for working expenses per acre, namely cost of cultivation, ploughing and harvesting, other labour costs manures and pesticides, irrigation costs etc., have not so far been prescribed. Only when such norms are fixed per acre, the input levels can be scrutinised and checked. It is, therefore, suggested that such norms should be fixed by the Agriculture Department.

6. The total quantity of Foundation seeds produced by both the farms during each year from their inception up to 1965-66 was far below the target of 60 Tons or 61.20 Metric Tonnes. But during the subsequent two years the farms showed considerable improvement and the quantity of Foundation seeds produced during this period came nearer to the target (53.931 Metric tonnes in 1966-67 and 59.192 Metric tonnes in 1967-68). In this connection it may be pointed out that in Madagadipet Farm the area under paddy cultivation was only 6 acres. This area was brought under double crop in full only in the year 1967-68. The gross area under paddy crop was very low in 1961-62 (2.00 acres) and 1965-66 (4.62 acres). In the order to maximize the production of Foundation seeds of paddy in Madagadipet Farm, the area of wet lands has to be increased. It was reported by the Farm Manager that there was a proposal of reclaiming the "A" block (4.30 acres) by the addition of tank silt and making it suitable for paddy cultivation. An additional

bore-well was also being sunk for this purpose at the time of visit of the Evaluation Officer to the Farm. At any rate there is paramount need for the Madagadipet Farm to increase its production of Foundation seeds of paddy. The requirements of Foundation seeds in Pondicherry region are at present partly met by the Research Station at Reddiarpalayam. As per the target fixed in the Third Five Year Plan, the requirements of Pondicherry region should be met in full by the Madagadipet Seed Farm.

7. As regards paddy the yield rates of Madur Farm are higher than the average yield rates of Karaikal region for all the years except 1960-61 and 1965-66. For Madagadipet Farm the yield rates are higher than the average yield rates of Pondicherry region for all the years except 1964-65.

8. In respect of ragi, the Madagadipet Farm started well in the early years with yields exceeding the region average This trend however, was not maintained uniformly in the later years.

9. In respect of groundnut, the Madagadipet Farm did not show a satisfactory performance in the first three years. However in 1965-66 and 66-67 it recorded a yield higher than the region average.

10. The main reason for the poor performance of Madagadipet Farm was that the site selected for the farm was orgiginally a barren land which had to be reclaimed and gradually made suitable for cultivation. This is a costly mistake since the farm has to start with great handicap i. e., poor quality of the soil and lack of irrigation facility. The farm is yet to overcome this difficulty. It is felt that much greater care should have been bestowed at the earliest stage with regard to the selection of land and the organisation of the farm.

11. It was reported that the Orchard-cum-nursery which was close to the Madagadipet Farm was working with profit and that a part of the dry land of the seed farm may be better used for orchard-cum-nursery. A team of experts from Madras had also visited the farm and their opinion on this matter is awaited.

12. The operations of the farms have to be regulated in accordance with a plan. The seed requirements of the region which the farm intends to cater have to be estimated.

13. There should be a periodic supervision of the operations of the farms by higher officers for removing difficulties, if any, and ensuring satisfactory progress.

14. The State Seed Farms should serve as Model Farms to the agriculturists in the use of improved agricultural practices, use of improved implements and use of proper dosage of fertilizers.

COMMENTS OF THE DIRECTOR OF AGRICULTURE

The figures mentioned in the report are furnished by the Farm Managers of the State Seed Farm, Madur and Madagadipet as per the schedules and Questionnaire sent to the Farm Managers by the Evaluation Officer of the Statistical Department. Since the figures furnished by the respective Farm Managers of the State Seed Farms have not been audited we can take these figures as *ad hoc* for the present.

With regard to the observations of the Evaluation Officer, I furnish the following remarks :

1. I agree with the views of the Evaluation Officer that interest on capital and depreciation should be taken into consideration for working out the expenditure of the State Seed Farms. Necessary instructions are being given to the Farm Managers to take into consideration interest on capital and depreciation while working out the profit and loss account of the Farm.

2. The preparation of *pro forma* accounts for the State Seed Farms is a new item of work entrusted to the Farm Managers of the State Seed Farms. Hence, it is likely that the Farm Managers of the State Seed Farms would have erred in the preparation of *pro forma* accounts for the farms. Necessary instructions were already issued to the Farm Managers to prepare the accounts of their respective farms every year as per the instructions given by the auditors of the Accountant-General, Madras. These accounts have not been audited so far as in Tamil Nadu for want of required staff and the same will be completed next year. The accounts cannot be *pro forma* accounts but only profit and loss accounts since State Seed Farms can never be considered as Commercial units for various reasons. (i) The main reason is, that Farm Manager in-charge of the State Seed Farm is not given the freedom of having his own cropping pattern with a view to get profit. He is not given the option of fixing the sale price of seeds and other

produce as he likes. (ii) He is not also given all the facilities needed to run the farm efficiently. The Farm Manager, State Seed Farm, Madagadipet is being instructed to maintain cultivation accounts for each crop separately.

3. I agree with the views of the Evaluation Officer that the Establishment charges should include the pay and allowances of the entire staff appointed in the State Seed Farms. Instructions are being issued to the Farm Managers in this regard.

4. The main reason for the low output-input ratio in the State Seed Farm, Madagadipet is due to the low fertility of the soil. The State Seed Farm, Madagadipet was established in the uncultivable barren lands, the soil of which is sandy. We have taken action to build up the soil fertility by adding tank silt, compost manure and green leave manure every year. With our intensive effort we were able to convert about six acres of land fit for paddy cultivation with the utilisation of the available water from the borewells. In the rest of the land crops like sugar cane, ragi and groundnut are cultivated. Action will be taken to improve the fertility status of the soil of the State Seed Farm, Madagadipet by taking up reclamation and providing adequate water supply by means of deep borewells. Action has already been taken to sink a deep borewell in the State Seed Farm, Madagadipet with the departmental power drill. We have also provided funds in our budget for the reclamation of land every year by adding tank silt. But this adds to the expenditure considerably.

5. Action is being taken to fix up norms for working expenses per acre viz., cost of cultivation, ploughing and harrowing, other labour costs, manures and pesticides, irrigation cost, etc.

The reason for the low unity of the output-input ratio during 1960-61 and 1962-63 in the State Seed Farm, Madur is due to the low fertility status of the soil. When the lands were purchased during 1960-61 it was not so fertile up to the expectation and in some places alkalinity was also noticed in the farm. In the subsequent years, action was taken to build up the fertility status of the soil and also to correct alkalinity of the soil, wherever it was noticed, which has increased the output, input ratio than the unity in the subsequent years.

6. The low production of foundation seeds of paddy to the targetted quantity of 60 tonnes per annum was due to the main reason that paddy crop could not be cultivated in the entire area of the State Seed Farm, Madagadipet as programmed. The cultivation of paddy in the State Seed Farm, Madagadipet could not be taken up due to the low fertility and want of sufficient quantity of irrigation water from the borewells. Eventhough paddy is now cultivated in the about 12 acres (gross) in the State Seed Farm, Madagadipet, in a year, we are able to produce about 10 M.T. of foundation seeds. With this quantity of 10 M.T. of foundation seeds, we are able to raise about 450 acres of secondary seed farms in the ryots holdings and produce about 250 M.T. of secondary seeds, which could cover about 11,250 acres, the one-third of the cropped area every year. Our object of implementing "Seed Multiplication and Distribution Scheme" is to provide secondary seeds every year to cover the one-third of the cropped area, with a view to saturate the entire cropped area with the improved seeds once in three years. Our object has been fulfilled with the production of 10 M.T. of foundation seeds of paddy in the State Seed Farm, Madagadipet. If we produce larger quantity of foundation seeds in the State Seed Farm, Madagadipet we will distribute foundation seeds to the ryots every year over and above the quantity supplied to them for raising the secondary seed Farms.

7. The low yield of paddy in the State Seed Farm, Madur than the average for the region during 1960-61 was due to the reason that this was the first year of taking possession of the land by the department and cultivation was taken up without studying the full fertility status of the soil. During 1965-66 the water supply in the Madur Channel was not adequate, since water supply in the Mettur Irrigation System was poor. As a result of

poor supply of water the crops in the State Seed Farm, Madur were affected and has given poor yield than the State average. The Public Works Department authorities of Karaikal region have been approached for doing improvement in the Madur Channel for giving full supply of water during the cropping period.

In the State Seed Farm, Madagadipet the yield was very low during 1964-65 when compared to the average yield of the region, and the reason was due to poor supply of water from the existing bore-wells due to adverse seasonal conditions.

8. In the State Seed Farm, Madagadipet, ragi crop has given very good yield and has exceeded the region average in some years. In some years ragi crop raised in the State Seed Farm, Madagadipet was highly affected by blast disease. Eventhough we have taken up remedial and control measures, we could not get maximum yield than the expectation. The attack of disease in the ragi crop was the main reason for lowering the average yield of the crop than the region average.

9. Due to the low fertility of the soil groundnut crop in the State Seed Farm, Madagadipet has not fared well in the initial stages. But, however, it has given good results in the subsequent years due to heaving, manuring, etc.

10. For setting up the State Seed Farm, Madagadipet during 1960-61 we have tried our level best to acquire fertile lands in Pondicherry region, but we could not get the lands in spite of our best efforts. Hence the uncultivated waste lands at Madagadipet was acquired with a view to reclaim the lands for taking up cultivation. The cost of this barren land was low when compared to the high cost of the cultivable lands round about. Eventhough we have incurred some initial expenditure for bringing this land suitable for cultivation, it seems economical to purchase such lands with low cost when compared to invest large amount in purchasing the cultivable lands. Taking into consideration the economic aspect, the setting up of the farm in the present

lands at Madagadipet is not a costly mistake as pointed out in the Evaluation Report. The handicaps now encountered in the Farm is only temporary which can be remedied and the production increased in due course if the land development programme is taken up in the coming years. In fact it is already meeting the requirements of foundation seeds of paddy and ragi of the region. In one or two years the farm will run on profit if the programme of development is undertaken.

11. The Expert Team of the Government of Tamil Nadu which has recently inspected the farm has recommended that the existing State Seed Farm at Madagadipet could be annexed with the Orchard-cum-Nursery situated adjacent to the State Seed Farm and the area expanded to take up orchard development as per the programme envisaged in the Fourth Plan period, and to select alternate site for locating the State Seed Farm in Pondicherry region. Action is also being taken on the recommendations of the Expert Team of the Government of Tamil Nadu.

12. The requirement of foundation seed of Pondicherry region under each variety is assessed and according to which the cropping programme in the State Seed Farm is regulated.

13. The State Seed Farms are periodically inspected by the respective Project Agricultural Officers and the Director of Agriculture and the difficulties of the Farm Managers are redressed then and there, and thereby the satisfactory functioning of the farms are ensured.

14. The State Seed Farms are at present utilised as model farms and the agriculturists in the respective regions are very much benefited in knowing the improved agricultural practices

adopted in the farm. Farmers Training Camps are also conducted in the State Seed Farms and the entire farm is utilised as a media for educating the agriculturists in the improved agricultural practices. During the Fourth Five Year Plan we intend to have a Farmers Training Programme as a Centrally sponsored scheme and the State Seed Farm will be best utilised for accurately demonstrating the improved agricultural practices for the cultivation of crops.

APPENDIX-I

SCHEDULE I

Questionnaire to Farm Manager

Name of Seed Farm :

Seed Farm Area and Cropping Return.

SL. No.	Years	Total area (acres)	Area cultivated		Unculti-vated	Cropping Pattern — Area under Crops.								
			Irri-gated	Unirri-gated		Paddy	Ragi	Other millets (specify)	Ground-nut	Sugar-cane	Cotton	Vegeta-bles	Other crops (specify)	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.	1960-61													
2.	1961-62													
3.	1962-63													
4.	1963-64													
5.	1964-65													
6.	1965-66													
7.	1966-67													
8.	1967-68													

Production of Foundation Seeds

Sl. No.	Years	Crop	Variety	Area under the variety	Quantity of seed issued	Quantity Produced (Kg.)		
						Seed	Grain	Total
1	2	3	4	5	6	7	8	9
				(Acres)	(Kg.)			
1.	1960-61							
2.	1961-62							
3.	1962-63							
4.	1963-64							
5.	1964-65							
6.	1965-66							
7.	1966-67							
8.	1967-68							

SCHEDULE II

Questionnaire to Farm Manager

Name of Seed Farm

S. No.	Particulars	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68
1	2	3	4	5	6	7	8	9	10
1. Total investment on the Farm :									
	(i) Fixed investment :								
	(a) Cost of land acquired								
	(b) Construction cost of irrigation facilities ..								
	(c) Construction of seed stores and other structures ..								
	(ii) Other investments, i. e., livestock, implements, tools, irrigation fixtures. ..								
	Total								
2. Annual Expenses :									
	1. Opening balance								
	2. Rent								
	3. Interest on capital invested on land								
	4. Depreciation and repair of tools and implements ...								
	5. Annual farm establishments								

6. Operating expenses
7. Maintenance of cattle
8. Miscellaneous
9. Profit

Total

3. Annual Receipts:

1. Value of Seeds (transfer and sales)
2. Value of fodder produced
3. Value of bye-products
4. Value of standing crops
5. Closing stock (value)
6. Any other source of income
7. Loss

Total

SCHEDULE III

Details of staff employed in the Seed Farm

S. No.	Designation of staff	Number	Qualification	Experience
1	2	3	4	5

Varieties preferred by the cultivators and varieties grown in the Farm

S. No.	Crop	Varieties preferred by the cultivators	Varieties produced by the farm
1	2	3	4

Details of Improved Agricultural Practices adopted

(For the latest year)

Sl. No.	Crop	Method of sowing	Manures used	Fertilizers used	Plant Protection measures adopted	Remarks
1	2	3	4	5	6	7

NOTE : *Method of sowing :* Broadcast, transplanting, drill sown and Japanese method of cultivation, line sowing, etc.

Manure : Green manure, oil cake, farm yard manure and compost.

Fertiliser : Ammonium sulphate, superphosphate, calcium, ammonium nitrate and mixtures.

Plant protection measures : Chemical pesticides.

SCHEDULE IV

Questions to be put to the Farm Manager for eliciting further information.

1. Whether the Seed Farm has been set up on Government land or on land taken on lease?

2. What are the methods employed for ensuring purity of crops?

3. (a) Are the cross-fertilized crops grown in separate blocks?

   (b) Is rogueing of crops done in the field?

4. Whether the threshing floor is pucca for maintaining purity of crop varieties threshed?

5. Whether the technical supervision is exercised by a Plant Breeder or any local Agricultural Officer?

6. (a) Is the Farm Manager trained in identification of different crop varieties?

   (b) If so, has he received the training from the Crop Specialist?

7. Is the seed produced in the farm tested before distribution?

8. General remarks by the Farm Manager about the farm.

APPENDIX-II

Profit and Loss Account of Madur Seed Farm

S.No.	Particulars	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967 68
1	2	3	4	5	6	7	8	9	10
A. Expenditure :									
1. Operating expenses :-									
	i) Wages of regular mazdoors and casual coolis ...	5,359.83	4,434.30	5,023.81	5,214 93	5,525.35	7,010.70	7,468.57	6,485.70
	ii) Ploughing charges...	—	243.25	174.50	268.50	174.00	703 50	463.00	1,129.39
	iii) Seeds and seed materials ...	299.15	499.63	508.39	169.20	921 29	345.67	313.60	465.00
	iv) Manure and fertilizers ...	847.80	1,645.31	2,551.75	1,667.79	1,250.11	2,514.28	3,114 26	3,630.18
	v) Insecticides and fungicides ...	27.54	27.16	27.23	102.93	108.24	46.40	116.55	123.54
	vi) Irrigation charges ...	159.27	339.03	312.53	215.27	381.30	774.68	730.61	2,817.23
	vii) Temporary dead stock ...	401.62	420.40	191.00	108.90	38.11	62.98	72.86	30.10

viii) Maintenance of cattle ...	2,305.94	1,522 85	2,634.52	1,391.28	992.08	1,356.29	1,526.72	1,069.45
ix) Miscellaneous expenses ...	41.79	94.17	125.92	64.55	36.98	85.03	63.23	105.82
Total (i to ix) ...	9,432.94	9,226.10	11,549.65	9,203.35	9,427.46	12,899.53	13,869.40	15,856 41
2. Pay and allowances of establishment ...	6,931.55	9,107.74	9,828.72	7,258.51	4,681.85	5,259.45	4,603.40	5,328.50
3. Depreciation ...	800.90	1,302.92	1,513.71	1,435.71	2,276.71	2,414.44	2,432.95	2,371.85
Total Expenditure...	17,165.39	19,636.76	22,892.08	17,897.74	16,386.02	20,573.42	20,905.75	23,556.76
B. Receipts:								
1. Value of seeds transferred and sold ...	7,830.99	9,991.02	6,295.18	8,237.04	8,229.86	9,000.22	20,608.85	27,075.09
2. Value of fodder produced ...	314.79	882.00	669.46	357.00	487.47	692.80	483.29	988.94
3. Value of bye-products	180.80	1,312.41	2,018.99	2,501.98	1,078.48	1,801.10	3,410.18	785.31
Total Receipts ...	8,326.58	12,185.43	8,983.63	11,096.02	9,795.81	11,494.12	24,502.32	28,849.34
Profit (+) or Loss (-)..	-8,838.81	-7,451.33	-13,908.45	-6,801.72	-6,590.21	-9,079.30	+3,596.57	+5,292.58

viii) Maintenance of cattle ...	2,305.94	1,522 85	2,634.52	1,391.28	992.08	1,356.29	1,526.72	1,069.45
ix) Miscellaneous expenses ...	41.79	94.17	125.92	64.55	36.98	85.03	63.23	105.82
Total (i to ix) ...	9,432.94	9,226.10	11,549.65	9,203.35	9,427.46	12,899.53	13,869.40	15,856 41
2. Pay and allowances of establishment ...	6,931.55	9,107.74	9,828.72	7,258.51	4,681.85	5,259.45	4,603.40	5,328.50
3. Depreciation ...	800.90	1,302.92	1,513.71	1,435.71	2,276.71	2,414.44	2,432.95	2,371.85
Total Expenditure...	17,165.39	19,636.76	22,892.08	17,897.74	16,386.02	20,573.42	20,905.75	23,556.76
B. Receipts:								
1. Value of seeds transferred and sold ...	7,830.99	9,991.02	6,295.18	8,237.04	8,229.86	9,000.22	20,608.85	27,075.09
2. Value of fodder produced ...	314.79	882.00	669.46	357.00	487.47	692.80	483.29	988.94
3. Value of bye-products	180.80	1,312.41	2,018.99	2,501.98	1,078.48	1,801.10	3,410.18	785.31
Total Receipts ...	8,326.58	12,185.43	8,983.63	11,096.02	9,795.81	11,494.12	24,502.32	28,849.34
Profit (+) or Loss (-)..	-8,838.81	-7,451.33	-13,908.45	-6,801.72	-6,590.21	-9,079.30	+3,596.57	+5,292.58

Profit and Loss Account of Madagadipet Seed Farm

S. No. 1	Particulars 2	1961–62 3	1962–63 4	1963–64 5	1964–65 6	1965–66 7	1966 67 8	1967–68 9
A. Expenditure :								
1.	Operating expenses :—							
	(i) Wages of regular mazdoors	3,561.20	3,747.47	4,280.10	3,912.50	4,869.00	5,286.12	4,501 75
	(ii) Wages of casual coolis	4,592.49	5,198.12	5,475.41	3,624.34	3,195.82	2,787.79	4,403.43
	(iii) Seeds and seed materials	737.91	498.31	491.86	500.00	268.50	859.75	373.35
	(iv) Manure and fertilizers	3,320.09	2 304.11	2,383.00	500.00	1,622.19	2,214.04	3,238.53
	(v) Insecticides and fungicides	141.22	263.71	193 59	100.00	135.57	56 60	114.00
	(vi) Irrigation charges	1,365.56	2,680.60	2,315.39	1,077.50	678.52	1,796.40	2,120.00
	(vii) Maintenance of cattle	1,551.20	1,363.93	1,669.05	1,242.78	499.86	681.50	701.90
	(viii) Miscellaneous expenses	2,036.47	413.24	245.55	500.00	290.02	152 44	327.15
	Total (i to viii)	17,306.14	16,469.49	17,053.95	11,457.12	11,559.48	13,834.64	15,780.11
2.	Pay and allowances of establishment ..	7,341.00	6,631 00	5,334.00	6,479.00	7,787.00	6,384.00	4,741.05
	Total expenditure	24,647.14	23,100.49	22,387.95	17,936.12	19,346.48	20,218.64	20,521.16
B. Receipts :								
1.	Value of seeds transferred and sold ...	1,479.22	9,047.77	12,615.27	8,971.89	11,652.21	10,396.03	14,441.47
2.	Value of fodder produced	66.69	466.00	247.75	898.40	122.20	240.00	320.00
3.	Value of bye-products	43.00	1,423.27	1,329.55	279.36	—	484.00	264.00
	Total Receipts	1,588.91	10,937.04	14,192.57	10,149.65	11,774.41	11,120.03	15,025.47
C.	Profit (+) or Loss (—)	-23,058.23	-12,163.45	- 8,195.38	- 7,786 47	- 7,572.07	- 9,098.61	- 5,495.69