

CHAPTER X

COST OF CULTIVATION OF THE PRINCIPAL CROPS

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10.1 Introduction

The present chapter is planned to make an estimate for the cost of cultivation of the principal crops like paddy, wheat and jute produced by the farm-families during the period under study in sample villages.

The estimate of cost for the other crops like mug, musur, khesari, potatoes, onions, sarisa, til, lanka, etc. has not been included here because of the following reasons : firstly, very little requisite data and information relevant for this purpose were available in this regard ; secondly, they did not cultivate these regularly and in a systematic manner ; thirdly, they cultivated very little of their cultivable landholdings for these crops and whatever very little of these crops produced by them did not follow a systematic cropping -pattern ; and lastly, while calculating income of the farm-families, the income from these sources also had been calculated and there the same have been grouped under miscellaneous source and the reasons for doing

the same also have been stated there. While calculating income from these sources, the cost of cultivation of these crops also has been considered and to avoid repetition, this is excluded from this chapter.

10.2 Items Considered

To arrive at the estimate, the following heads have been identified :

- (i) Cost of seeds ;
- (ii) Cost of manures and fertilisers ;
- (iii) Expenses for cultivation ;
- (iv) Expenses for cutting the crops ; and
- (v) Expenses for 'marai' and 'jharai'.

10.3 Limitations of the Present Study

(i) Requisite data and information were not always available ;

(ii) The respondents did not generally keep a record of their expenditure for cultivation and whatever they said to the present investigator came from their memories and to that extent the same were approximations to reality. Conflicting information were also identified in some cases. In such cases, the average of the findings

has been considered for the present study. It may be difficult to say to what extent such an average is meaningful. But efforts have been made to arrive at meaningful findings and to the extent such efforts are successful, to that extent the findings are meaningful. Much accuracy is, however, not claimed in this regard ;

(iii) it had been observed that some of the respondents did not like to divulge some of the information because of their personal apprehensions, feelings, attitude, etc. towards the utility or otherwise of divulging such information to the present investigator who had to apply tact, intelligence, foresight, endurance, etc. to gather relevant information from them. To the extent he was successful to gather the same, to that extent estimate was also meaningful ; and

(iv) cost for depreciation, if any, has not been included in this estimate. Because, requisite data and information were not available in this regard.

10.4 Cost of Producing Wheat

Different heads of cost of producing wheat are analysed below.

10.4.1 Cost of Seeds :

The farmers generally buy seeds from the open village markets. Better-off farmers supply seeds from the

stock of previous produce. Seeds of high yielding variety were not found to be used in any village. Cost varies from village to village and from time to time depending on the demand for and supply of seeds. During the period under study, the cost of seeds varied from Rs. 2.30 to Rs. 2.70 per kg. in the village markets, the average coming to Rs. 2.50 per kg. In one bigha of land, on the average, 16 kg. seeds are required.

10.4.2 Cost of Manures :

For the cultivation of wheat, cowdung manure, patash, uria and sufala No. 1515 were found to be used. Cost of cowdung varied between the period from Rs. 12.00 to Rs. 20.00 per cart load, depending on the availability, the average being Rs. 16.00 per cart load. The cost of chemical manures was same in all villages as they were supplied from the office of the Block Development Officer. These chemical manures were sold at Rs. 2.50 per kg. during the period under review.

10.4.3 Expenses of Cultivation :

The field is to be ploughed for ten times. If one labour is engaged with a pair of bullocks and a plough, he requires 10 days to complete ploughing of one

bigha of land. After ploughing, the ground is to be levelled with 'Mai' for three times. One worker takes 3 days to level one bigha of land for three times. During the period of growth of the plants, weeds are to be cleared off at least for three times. One worker takes 3 days to do this work in one bigha of land. During the period, the wage of one labour for doing such job varied between Rs. 4.00 to Rs. 8.00 per day, the average being Rs. 6.00 per day. The variation depends on the demand for and supply of labour. After 21 days of seeding, water pump or other method of irrigation is required for 3 times after a gap of say 10 days after each watering. The cost was found to be Rs. 45.00 per bigha of land.

10.4.4 Expenses for Cutting the Bunches of Crops :

In the district, 90 to 110 days are required for producing wheat. For cutting the bunches of crops of one bigha of land, one worker takes 2 days. The average wage rate was Rs. 6.00 per day.

10.4.5 Expenses for 'Marai and Jharai' :

The process followed for separating the crops from straws is locally known as 'Marai' and the process

followed for cleaning the dust and straw-particles from the corns collected is known as 'jharai'. This is generally done by the female workers. One labour takes 4 days on the average to complete this two processes with the average yield of one bigha of land of the area under study. The average wage of such a workers was Rs. 4.00 per day, the minimum and maximum ranging between Rs. 3.00 and Rs. 5.00.

10.4.6 Accounts of Cost of Producing Wheat :

The following was the account of the average cost of producing wheat in one acre of land in the sample villages, the variation in total cost being very little as the villages are within the same district.

1. Seeds - 48 Kg. @ Rs. 2.50 per Kg.	= Rs. 120.00
2. Manures -	
a) 15 cart-load @ Rs. 48.00 per cart-load	= Rs. 720.00
b) Patash - 6 Kg. @ Rs.2.50 per Kg.	= Rs. 15.00
c) Suphala No. 1515 - 45 Kg. @ Rs. 2.50 per Kg.	= Rs. 112.50
d) Uria - 18 Kg. @ Rs.2.50 per Kg.	= Rs. 45.00

3. Labour charges for cultivation i.e.

(i) ploughing and levelling 1 labour for 13 days @ Rs. 6.00 per day	=	Rs. 78.00
(ii) Irrigation - 3 times Rs.45.00 x 3	=	Rs.135.00
(iii) Nirani (clearing of weeds) 1 labour for 9 days @ Rs.6.00 per day	=	Rs. 54.00

4. Charges for cutting the bunches of crops -

1 labour for 6 days @ Rs. 6.00 per day	=	Rs. 36.00
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5. Marai and Jharai -

1 labour for 12 days @ Rs.4.00 per day	=	Rs. 48.00
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Total	=	<u>Rs.1363.50</u>
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6. Output : Varied between 12 to 14 quintals,
average being 13 quintals
per acre

. . Average cost per quintal = Rs.104.88

10.5 Cost of Producing Paddy

Mainly Aman paddy is cultivated in the sample villages. Though Aush crop is cultivated, but its production is negligible. Crop loan is also given by the different institutions on Aman crop. Considering all these, the cost

of producing Aman paddy in the area has been studied.

The cost of producing paddy may be analysed under the following heads :

- (1) Cost of seeds ;
- (2) Cost of manures ;
- (3) Labour charges of cultivation ;
- (4) Cost of cutting the bunches of crops ; and
- (5) Cost of 'Marai' and 'Jharai'.

10.5.1 Cost of Seeds :

Seeds are procured from the village markets (Hats), or supplied from the stock of previous year's produce. The farmers were not found interested in using seeds of high yielding variety. The present investigator was told by the farmers that the use of high yielding variety seeds requires irrigation and use of chemical manures on a wide scale. But in the area, there is no scope for irrigation. Construction of deep tube-well and use of pump-set involve huge capital expenditure which is beyond the capacity of most of the farmers. Besides this, chemical manures are very costly, and if such manures are used once, then they are to be used every year as it is found by the farmers from their practical experience that chemical manures may affect adversely the natural .

fertility of the soil. Paddy is the main source of income of the cultivators. So the farmers are very afraid of making any experiment so far as production of paddy is concerned. The price of seeds was between Rs. 1.80 to Rs. 2.25 per kg. in the sample villages during the period under study. The average price was Rs. 2.03 per kg. On the average in one bigha of land, 8 kg. of paddy seeds are required.

10.5.2 Cost of Manures :

Farmers were found to use only cowdung as manures. Chemical manures were not used because of their high prices and reluctance of the farmers. For manuring one bigha of land, 3 to 7 cart loads of cowdung were found to be used. On the average, it can be said, 5 cart loads of cowdung were applied in one bigha of land. The average cost of one cart load of cowdung was Rs. 16.00 per cart load.

10.5.3 Labour Charges of Cultivation :

A paddy field is ploughed in the area with a pair of bullocks for five times on the average. After ploughing, the field is to be levelled with 'Mai' for two times. For ploughing and levelling one bigha of land, one labour is to be engaged for 7 days. For ploughing and

levelling only male workers were found to be engaged. Replantation of the paddy plants is known as 'Rupni' in the local language. For Rupni work, 4 workers are required to work in one bigha of land. For Rupni, both male and female workers were found to be engaged at an average wage of Rs. 5.00 per day. The average wage of a male and a female workers was Rs. 6.00 and Rs. 4.00 per head in the areas under study.

10.5.4 Cost of Cutting the Bunches of Crops :

After 140 to 150 days, harvesting of crops starts. The bunches of crops are to be cut from the paddy field. For harvesting also, the primitive method of the use of axes were found. For this work, only males were found to be engaged in different villages. For harvesting the crops of one bigha in the area under study 2 workers are required to be engaged for one day. The average wage of such workers was Rs. 6.00 per head per day.

10.5.5 Cost of 'Marai and 'Jharai' :

As in the case of production of wheat, in producing rice also paddy corns are to be seperated from straws by the process of 'Marai'. The crops of one bigha of land can be seperated by 2 workers in one day.

This work is done in the area both by male and by female workers. The average labour charge for this was Rs.5.00 per day. In case of paddy also, for clearing the dust and particles of straws, 'Jharai' work is to be done. Mainly female workers were found to be engaged in this job and it was found in the case of wheat production that at an average rate of Rs. 4.00 per day, 2 female workers are to be engaged to do this work with the produce of one bigha of land in the areas studied.

The yield per acre in these areas is between 6 quintals to 10 quintals, the average being 8 quintals per acre.

10.5.6 Accounts of Cost of Producing Paddy :

The average cost of producing Aman paddy in one acre of land in the sample villages was as follows :

1.	Seeds - 24 Kg. @ Rs.2.00 per Kg.	= Rs. 48.00
2.	Manures- 15 carts load @ Rs.16.00 per cart load	= 240.00
3.	Cultivation expenses -	
	(a) Labour charges for ploughing 15 x Rs.6.00	= 90.00
	(b) Labour charges for levelling by 'Mai' 6 x Rs.6.00	= 36.00
	(c) Labour charges for Rupni - 12 x Rs.5.00	= 60.00

4. Labour charges of harvesting - 6 x Rs.6.00	=	Rs. 36.00
5. Labour charges for Marai - 6 x Rs.5.00	=	30.00
6. Labour charges for Jharai - 6 x Rs.4.00	=	24.00
		Total = Rs.564.00

Average production - 8 quintals per acre.

Average cost of production - per quintal = Rs. 70.05

10.6 Cost of Jute Cultivation

The total cost of jute cultivation may be analysed under the following heads :

1. Cost of seeds ;
2. Cost of manures ;
3. Cost of cultivation ;
4. Cost of cutting and plunging the plants ; and
5. Cost of taking out, washing, drying and baling of Jute fibres.

10.6.1 Cost of Seeds :

Farmers were found to sow seeds, buying them from

the local markets. High yielding variety is not popular in these areas. A few farmers were found to use their own cultivated seeds. The cost of seeds was Rs. 8.00 per Kg. during the period under study, variation between the highest and lowest price was Rs. 2.00 per Kg. In one bigha of land one Kg. of seeds was found to be used.

10.6.2 Cost of Manures :

For the cultivation of jute both cowdung and chemical manures are used in these villages. In one bigha of land 3 carts-load of cowdung were used on the average. During the period of jute cultivation, the average price of a cart load of cowdung was Rs. 10.00. As chemical manures, balanced mixed manures (Sufala No. 151515) was found to be used. In one bigha of land, 27 Kg. of sufala was used at an average price of Rs. 2.50 per Kg.

10.6.3 Cost of Cultivation :

Before sowing seeds, field is to be ploughed well. In the area under study, field is to be ploughed for eight times for jute cultivation. One cultivator can do this work on one bigha of land in 8 days. After ploughing the ground is to be levelled for 3 times. 3 cultivators are required for one day to do the work in one bigha of land. Plants are

to be sorted out and thined for two times. To work in a bigha of land, 16 workers are required to be engaged for one day. The average wage paid was Rs. 5.00 per day. Only male workers were found to be engaged in most of the cases.

10.6.4 Cost of Cutting and Plunging the Plants :

When the jute plants are matured, then they are cut from the bottom and plunged in water. For such work with the average produce of one bigha of land in these areas, 4 workers are to work for one day for cutting the plants, and 2 workers are required for a day to plunge the plants. The average wage rate was Rs. 5.00 per day.

10.6.5 Cost of Taking out, Washing, Drying and Baling of Fibres :

Plunging the plants for about 2 weeks, the fibres are taken out from the jute-sticks. 4 workers were engaged for a day to do the job with the produce of one bigha of land. Then the fibres are to be washed. The quality of jute depends much on washing. Five workers were engaged for one day to do this job with the produce of one bigha of land. Then, the fibres are to be dried up and baled in bunches of 1 Kg. each.

For this job, 2 workers are required for 1 day per bigha of land. Both male and female workers were found to work in this stage. But all were paid at a uniform rate which was Rs. 5.00 per day per head. In one acre of land, the average production was 12 quintals. The production becomes complete in 120 days.

10.6.6 Accounts of Cost of Producing Jute :

The average cost of cultivating jute in one acre of land was as follows during the period under study :

1.	Cost of seeds - 3 Kg. @ Rs.8.00 per Kg.	=	Rs. 24.00
2.	Cost of manures :		
	(a) 9 carts-load of cowdung @ Rs.10.00 per cart-load	=	90.00
	(b) 81 Kg. of Sufala No. 151515 @ Rs.2.50 per Kg.	=	202.50
3.	Cost of ploughing :		
	(a) 24 workers for 1 day @ Rs.5.00 per head for ploughing	=	120.00
	(b) 9 workers for 1 day @ Rs.5.00 per head	=	45.00
	(c) Sorting and thinning for two times 48 workers @ Rs.5.00 per head	=	240.00
4.	Cutting of plants - 12 workers for 1 day @ Rs. 5.00 per day	=	60.00
5.	Plunging of plants - 6 workers for 1 day @ Rs. 5.00 per head	=	30.00

6. Taking out of fibres - 12 workers for 1 day @ Rs.5.00 per head	= Rs. 60.00
7. Washing of fibres - 15 workers for 1 day @ Rs.5.00 per head	= 75.00
8. Drying up and baling of fibres - 6 workers @ Rs.5.00 per head	= 30.00
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Total :	<u>Rs.976.00</u>

Average production :

13 quintals per acre

. . Average cost per quintal = Rs. 81.33

10.7 Limitations in Accounting

Following reasons are given below to indicate the difficulties faced in presenting the accounting of the cost of production of the principal crops produced correctly :

1. Agricultural workers engaged for the whole day are also used by the farmers for doing their household work, though they are engaged for farm works. There is no record how many labour-hours are spent for doing household works in this way. It was not possible to find the exact labour-hours spent for farm work. So, actual labour cost was less than what was shown, but to what extent was not

adequately known to the present investigator.

2. Seeds are purchased from the local village markets. It was not possible to account for the quantity of dust and mildews in a kilogram of seeds sown. Moreover, sometimes the poor farmers also consume a part of seeds in times of their extreme poverty. But no record was available as to how much of seeds has been consumed in this way. So, it was not possible to assess the exact quantity of seeds sown.

3. The cost analysis did not take account of the possible expenses paid for repairing and maintenance of plants and equipments. It was gathered that during the periods under study, such expenses were incurred, but there was no record as to the amount so spent, and the date of such expenses. It was considered prudent not to include this because of lack of requisite data and information in this regard.

4. Male and female workers are paid at different rates of wages. But there was no record how many male and how many female workers were engaged at various stages. So, the account had to be made in most of the cases at the rate of wage applicable to the male workers.

5. The farmers also used their own cowdung as manures. There was no record how many cart-loads they used from their own stock. Just a rough estimate had been taken in accounting.

6. Most of the farmers are illiterate. They did not keep records from which their actual cost of cultivation might be calculated. The present investigator had to depend on the partial documents and statements of the farmers in this regard.