

Chapter VIII

A COMPARATIVE VIEW OF THE COST OF PRODUCTION OF JUTE PER BIGHA AND YIELD RATE OVER DIFFERENT SIZES OF HOLDING IN THE SELECTED BLOCKS OF COOCH BEHAR DISTRICT

8.1. Introduction

In this chapter an attempt has been made to perform block-wise and size-wise comparative study of the cost of production of jute per bigha in Cooch Behar district. The specific objectives to be studied here are to find out:

(i) whether there remains any inter-block variation in the cost of production of jute per bigha and if so, what are its major explanatory factors.

(ii) whether there remains any variation as well as any relation between the size of holding and cost of production of jute per bigha and, if so, what are the factors responsible for it.

The study covers all the cost concepts namely, cost A_1 , cost B, cost C and cash expenditure considered.

However, the examinations of inter-block and inter-size variation in the cost of production of jute per bigha, if any, may remain incomplete if the implication of the inter-block and inter-size variation of the cost of production of jute per bigha has not become searched out in relation to its output. For this, the present chapter also examines:

(i) whether there remains any inter-block and inter-size

variation in the output of jute per bigha or not (ii) whether there exists any relation between yield rate of jute and the cost of production of jute vis-a-vis input intensity of jute per bigha.

8.2. Inter-Block Study on the Cost of Production of Jute per Bigha

Table 8.1 furnishes the block-wise magnitudes of the cost of production of jute per bigha in terms of all the cost concepts considered. From this table it is more or less understood that there remains inter-block variation in the cost of production of jute per bigha respective to each cost basis. The differences in the costs of production of jute per bigha relating to the cost concepts, cost A_1 , cost B, cost C and cash expenditure between the blocks confronting the highest and lowest magnitudes displayed in Table 8.2, clearly manifests the inter-block variation in the cost of production of jute per bigha. Table 8.3 visualizes the major factors bringing forth this variation. From this table it is noticed that the major shares in the difference between the highest and lowest cost of production of jute per bigha on the basis of cost A_1 are occupied by human labour, manures, bullock labour and fertilizers in a descending order of importance. In case of cost B and cost C the same are occupied by human labour, imputed value of owned land, manures, interest on

fixed capital and bullock labour in the said order of importance. The case of cash expenditure shows that the major shares in the difference between the highest and lowest cost of production of jute per bigha are occupied by human labour, fertilizers and insecticides and pesticides in a descending order of importance. Thus, it is evident that in case of all the cost concepts the difference on the human labour cost is the predominant factor which causes the inter-block variation in the cost of production of jute per bigha in this district. This difference in the human labour cost over the selected blocks of Cooch Behar district may be due to the existence of inter-block heterogeneity in the labour intensity as indicated in the previous chapter.

8.3. Inter-Size Study on the cost of Production of Jute per Bigha

Table 8.4 depicts the size-wise magnitudes of cost of production of jute per bigha measured in terms of the cost concepts considered in this chapter over the selected blocks of Cooch Behar district and in the district as a whole. A notable inter-size variation in the cost of production of jute per bigha may be assumed from this table in respect of cost A_1 , cost B, cost C and cash expenditure over the selected blocks of Cooch Behar district and in the district as a whole.

Besides this variation, it is noticeable that there remains positive relationship between the magnitudes of the cost of production of jute and the size of holding. In leaving some block-wise exceptions out of consideration, the overall view of all the selected blocks and in the district as a whole furnishes that this positive relationship is due to the size-wise higher cost on all the cost items except bullock labour, seed and manures in case of all the cost concepts considered. Again, the size-wise higher cost on all the cost items except bullock labour, seed and manures may be attributed to the size-wise higher input intensity implied by the size-wise higher degree of input market involvement and the size-wise higher intensity of the use of modern technological inputs as visualized from the previous chapter.

8.4. Block-wise and Size-wise Study on Yield Rate

Tables 8.5 and 8.6 exhibit inter-block and inter-size comparative magnitudes of output of jute per bigha in Cooch Behar district. From Table 8.5 it is observed that Cooch Behar block II registers the highest magnitude of yield rate to the extent of 1.96 quintals while Tufanganj block II exhibits the lowest magnitude of yield rate amounting to 1.75 quintals per bigha. Such disparate figures of highest and lowest yield rate confronted by Cooch Behar block II and Tufanganj block II

respectively do more or less imply that there remains inter-block variation in the yield rate of jute in Cooch Behar district.

From Table 8.6 it is clearly noticed that the magnitudes of yield rate over different sizes of holding are marginally varied in all the selected blocks of Cooch Behar district and in the district as a whole except Haldibari block where this variation extend from 1.74 quintals to 2.01 quintals per bigha.

8.5. Study on Yield Rate and Cost of Production of Jute

Table 8.7 demonstrates yield rate and cost of production of jute on the basis of cost A_1 , cost B, cost C and cash expenditure over the selected blocks of Cooch Behar district. From this table no relationship between the magnitude of the cost of production of jute measured in either term and that of yield rate is observed. Table 8.8 exhibiting the ranks of blocks in terms of yield rate and in terms of cost of production measured in terms of the cost bases considered confirms the stated fact. As positive relationship is observed previously between the cost of production and factor intensity, from this probe it may be stated that there remains no relationship between yield rate and factor intensity in the district of Cooch Behar.

Table 8.6 again demonstrates that there exists positive relationship between yield rate and size of holding in Cooch Behar II and Tufanganj II blocks and negative relationship between these two in Dinhata block I, while Haldibari block and in the district as a whole shows no kind of relationship. Therefore, in this context the block-wise view is admixed. And considering the view of the district as a whole as the generalised state about the relationship between yield rate and size of holding it may be discerned that there exists no relationship between yield rate and size of holding. As there remains positive relationship between cost of production and size of holding vis-a-vis input intensity explored previously, so in this case also it may be said that there remains no relationship between the yield rate and cost of production of jute as well as input intensity.

8.6. Findings

From the foregoing analysis in the purview of the chapter it is broadly observed that there remains not only inter-block and inter-size variation in the cost of production of jute per bigha irrespective of cost basis but also positive relationship between cost of production of jute irrespective of measures and the size of holding. Inter-block variation in the magnitudes of the cost of production of jute largely hinges upon the inter-block variation in the cost on human

labour which is partly due to the existence of inter-block heterogeneity in the labour intensity of jute.

Inter-size variation in the cost of production of jute along with the positive relationship between the cost of production of jute and the size of holding is caused by the size-wise higher cost on all the cost items except bullock labour, seed and manures. Size-wise higher input intensity may be regarded as the explanatory factor behind the size-wise higher costs on all the inputs in the production of jute except bullock labour, seed and manures.

Thus it is revealed that the inter-block and inter-size variation in the cost of production of jute per bigha are due to the existence of inter-block and inter-size heterogeneity in the input intensity. The positive relationship between the cost of production of jute and size of holding originates due to size-wise higher degree of input intensity. Therefore, the heterogeneity of the input intensity is not only found to explain inter-block and inter-size variation in the cost of production of jute but also the positive relationship between the cost of production of jute and the size of holding.

However, the yield rate of jute in this district shows inter-block and inter-size variation. But no kind of relationship between yield rate and size of holding is observed. Above

all, the magnitudes of yield rate and that of the cost of production of jute vis-a-vis input intensity are noticed unrelated. The existence of no kind of relationship between yield rate and cost of production vis-a-vis factor intensity helps one to conclude that in Cooch Behar district the variation of yield rate originates due to the variation of rainfall, fertility of soil, time of sowing, time of harvesting etc., rather than the variation in the cost of production.

Table 8.1 Absolute Magnitudes of the Cost of Production of Jute per Bigha in the Selected Blocks of Cooch Behar District and in the District as a Whole for the Year 1992-93

| Name of the block | Cost per bigha (in Rs.) on the basis of | | | |
|----------------------|---|---------|---------|------------------|
| | Cost A ₁ | Cost B | Cost C | Cash expenditure |
| Haldibari | 806.24 | 1130.76 | 1388.68 | 688.89 |
| Cooch Behar II | 747.86 | 1033.61 | 1310.81 | 623.69 |
| Dinhata I | 611.28 | 864.67 | 1101.92 | 524.35 |
| Tufanganj II | 627.63 | 877.14 | 1182.76 | 515.43 |
| Cooch Behar district | 698.25 | 976.54 | 1246.04 | 588.08 |

Table 8.2 Magnitudes of Differences of the Cost of Production of Jute per Bigha between the Blocks Associated with the Highest and Lowest Costs Measured in Terms of Cost A₁, Cost B, Cost C and Cash Expenditure in the District of Cooch Behar for the Year 1992-93

| Cost concepts | Name of the blocks exhibiting the highest and lowest cost of production of jute per bigha | | Differences between the highest and lowest cost (in Rs.) |
|---------------------|---|--------------|--|
| | Highest cost | Lowest cost | |
| Cost A ₁ | Haldibari | Dinhata I | 194.96 |
| Cost B | Haldibari | Dinhata I | 266.09 |
| Cost C | Haldibari | Dinhata I | 286.76 |
| Cash expenditure | Haldibari | Tufanganj II | 173.46 |

Table 8.3 Absolute and Percentage Shares of Different Cost Items in the Difference between the Highest and Lowest Cost of Production of Jute per Bigha Measured in Terms of Cost A₁ Cost B, Cost C and Cash Expenditure in the District of Cooch Behar for the year 1992-93.

| Cost concepts | Differences between the highest cost and lowest cost (in Rs.) | Item-wise absolute (in Rs.) and percentage share in the difference | | | | | |
|---------------------|---|--|------------------|-------------------|------------------|------------------|------------------|
| | | Human labour | Bullock labour | Machinery charges | Seed | Manures | Fertilizers |
| Cost A ₁ | 194.96 (100.00) | 127.17 (65.23) | 13.30 (6.82) | 2.17 (1.11) | -1.38 (-0.71) | 25.53 (13.10) | 10.32 (5.29) |
| Cost B | 266.09 (100.00) | 127.17 (47.79) | 13.30 (5.00) | 2.17 (0.82) | -1.38 (-0.52) | 25.53 (9.59) | 10.32 (3.88) |
| Cost C | 286.76 (100.00) | 147.84 (51.56) | 13.30 (4.64) | 2.17 (0.76) | -1.38 (-0.48) | 25.53 (8.90) | 10.32 (3.60) |
| Cash expenditure | 173.46 (100.00) | 152.36 (87.84) | -2.39 (-1.38) | 2.17 (1.25) | -2.74 (-1.58) | -4.39 (-2.53) | 19.23 (11.09) |

| between the highest and lowest cost of production of jute per bigha | | | | | | |
|---|--------------------|------------------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------------|
| Insecticides and pesticides | Irrigation charges | Land revenue, cess and other taxes | Depreciation on machineries | Interest on working capital | Imputed value of owned land | Interest on fixed capital |
| 8.67 (4.45) | -3.58 (-1.83) | 0.56 (0.29) | 7.26 (3.72) | 4.94 (2.53) | - | - |
| 8.67 (3.26) | -3.58 (-1.35) | 0.56 (0.21) | 7.26 (2.73) | 4.94 (1.86) | 56.14 (21.10) | 14.99 (5.63) |
| 8.67 (3.02) | -3.58 (-1.25) | 0.56 (0.19) | 7.26 (2.53) | 4.94 (1.72) | 56.14 (19.58) | 14.99 (5.23) |
| 7.55 (4.35) | 1.67 (0.96) | - | - | - | - | - |

Note : Figures in the parentheses are the respective percentages

Table 8.4 Size-wise Absolute Magnitudes of the Cost of Production of Jute per Bigha in the Selected Blocks of Cooch Behar District and in the District as a Whole for the Year 1992-93

| Name of the block | Farm size | Cost per bigha (in Rs.) on the basis of | | | |
|----------------------|-----------|---|---------|---------|------------------|
| | | Cost A ₁ | Cost B | Cost C | Cash expenditure |
| Haldibari | Marginal | 717.35 | 993.62 | 1295.51 | 609.59 |
| | Small | 842.66 | 1190.92 | 1425.90 | 723.69 |
| | Large | 1008.92 | 1353.84 | 1517.73 | 867.99 |
| Cooch Behar II | Marginal | 696.78 | 972.57 | 1277.11 | 581.10 |
| | Small | 760.28 | 1028.55 | 1306.43 | 637.77 |
| | Large | 918.42 | 1231.45 | 1415.34 | 777.76 |
| Dinhata I | Marginal | 509.59 | 751.39 | 1065.83 | 439.79 |
| | Small | 682.14 | 945.86 | 1130.30 | 582.93 |
| | Large | 778.32 | 1032.82 | 1138.93 | 667.18 |
| Tufanganj II | Marginal | 543.52 | 781.83 | 1120.71 | 443.78 |
| | Small | 721.60 | 976.75 | 1252.38 | 596.93 |
| | Large | 864.43 | 1128.67 | 1313.35 | 725.92 |
| Cooch Behar district | Marginal | 614.69 | 872.10 | 1187.97 | 516.12 |
| | Small | 753.26 | 1038.64 | 1280.81 | 637.09 |
| | Large | 892.46 | 1188.80 | 1344.29 | 760.86 |

Table 8.5 Output of Jute per Bigha in the Selected Blocks of Cooch Behar District and in the District as a Whole for the Year 1992-93

| Name of the block | Output per bigha of jute (in quintals) |
|----------------------|---|
| Haldibari | 1.91 |
| Cooch Behar II | 1.96 |
| Dinhata I | 1.79 |
| Tufanganj II | 1.75 |
| Cooch Behar district | 1.88 |

Table 8.6 Output per Bigha of Jute over the Sizes of Holding in the Selected Blocks of Cooch Behar District and in the District as a Whole for the Year 1992-93

| Name of the block | Farm size | Output per bigha of jute (in quintals) |
|----------------------|-----------|---|
| Haldibari | Marginal | 1.74 |
| | Small | 2.01 |
| | Large | 1.97 |
| Cooch Behar II | Marginal | 1.94 |
| | Small | 1.95 |
| | Large | 1.99 |
| Dinhata I | Marginal | 1.83 |
| | Small | 1.82 |
| | Large | 1.71 |
| Tufanganj II | Marginal | 1.70 |
| | Small | 1.78 |
| | Large | 1.81 |
| Cooch Behar district | Marginal | 1.80 |
| | Small | 1.92 |
| | Large | 1.91 |

Table 8.7 Magnitudes of Output and Cost of Production of Jute per Bigha on the Basis of Cost A₁, Cost B, Cost C and Cash Expenditure in the Selected Blocks of Cooch Behar District for the Year 1992-93

| Name of the block | Yield rate (in quintals) | Cost on the basis of (in Rs.) | | | |
|-------------------|-----------------------------|-------------------------------|---------|---------|------------------|
| | | Cost A ₁ | Cost B | Cost C | Cash expenditure |
| Haldibari | 1.91 | 806.24 | 1130.76 | 1388.68 | 688.89 |
| Cooch Behar II | 1.96 | 747.86 | 1033.61 | 1310.81 | 623.69 |
| Dinhata I | 1.79 | 611.28 | 864.67 | 1101.92 | 524.35 |
| Tufanganj II | 1.75 | 627.63 | 877.14 | 1182.76 | 515.43 |

Table 8.8 Ranks of the Blocks in Terms of Yield Rate and Cost of Production of Jute per Bigha Measured in Terms of Cost A₁, Cost B, Cost C and Cash Expenditure in the Selected Blocks of Cooch Behar District for the Year 1992-93

| Name of the block | Ranks given in terms of yield rate | Ranks given in terms of cost of production | | | |
|-------------------|------------------------------------|--|--------|--------|------------------|
| | | Cost A ₁ | Cost B | Cost C | Cash expenditure |
| Haldibari | 2 | 1 | 1 | 1 | 1 |
| Cooch Behar II | 1 | 2 | 2 | 2 | 2 |
| Dinhata I | 3 | 4 | 4 | 4 | 3 |
| Tufanganj II | 4 | 3 | 3 | 3 | 4 |