Chapter IX

AN ACCOUNT OF RELATIVE PROFITABILITY ALONG WITH THE PROSPECT OF SIZE-WISE ABSOLUTE PROFITABILITY OF JUTE CULTIVATION IN COOCH BEHAR DISTRICT

9.1. Introduction

Economic rationality dictates that acreage allocation under different crops in an agricultural season should be according to the relative profitabilities of the crops. Therefore, in the context of this chapter categorically the questions are : (i) whether jute cultivation is relatively profitable to aus paddy cultivation or not, (ii) if jute is found to yield higher profit relative to aus paddy then what is the factor originating higher profitability of jute, and (iii) if jute is found to be relatively profitable to aus paddy then whether acreage allocation under jute is made according to its profitability or not.

Hence, profitability is measured in terms of surpluses over cost A_1 that is, farm business income; cost B that is, family labour income, cost C that is, net income, and cash expenditure.

9.2. Relative Profitabilities of Jute and Aus Paddy Crops

Table 9.1 furnishes all the surpluses mentioned above. From the magnitudes of the surpluses over different cost concepts presented in this table it is observed that surpluses

over cost B and cost C in the cases of both jute and aus
paddy crops in all the selected blocks of Cooch Behar district
and in the district as a whole are negative. As these sur-
pluses are negative so the forthcoming analysis relating to
the questions set above considers only surpluses over cost
A_1 and cash expenditure which are positive. A comparative
study of the surpluses over cost A_1 and cash expenditure
regarding both jute and aus paddy crops explicits that the
surpluses over cost A_1 and cash expenditure respective to
the cultivation of jute per bigha are higher than those of
aus paddy in all the selected blocks of Cooch Behar district
and in the district as a whole. This helps one to hold the
view that the profitability of jute is relatively higher
than that of aus paddy in this district.

9.3. Factors Explaining Higher Profitability of Jute

The factors explaining the higher profitability of
jute may be assumed from Table 9.2. From this table it is
observed that the ratio between per bigha jute - aus income
difference and jute-aus cost difference respective to cost
A_1 and cash expenditure are remarkably higher than one in
all the selected blocks of Cooch Behar district and in the
district as a whole. Such high magnitudes of these ratios
imply that the margin of cost in addition to the cost of
production of aus paddy per bigha, incurred on producing

jute adds remarkably higher margin of income than the addi-
tional margin of cost required in producing jute. It means
that although the cost of production of jute per bigha is
higher than that of aus paddy crop, it yields remarkably
higher level of income per bigha compared with its cost of
production. This relatively higher income-generating capacity
of jute against its higher cost of production, relative to
that of aus paddy per bigha causes relatively higher profit-
ability of this crop enterprise.

Now coming across the same table one may identify the
factors responsible behind the said state of income-generating
capacity of jute production. With the exception of Dinhata
block I regarding yield rate, yield rate and price per
quintal of jute are everywhere remarkably higher than those
of aus paddy in this district. Such higher position of jute
in terms of its yield rate and price per quintal relative
to that of aus paddy is the cause of relatively higher
profitability of jute in comparison to aus paddy. In a
different manner it may be stated that higher price per
quintal and yield rate of jute compared to aus paddy generate
remarkably higher level of income per bigha of jute than that
of aus paddy against higher cost of production of jute per
bigha relative to that of aus paddy and thereby causes
relatively higher profitability of it compared to aus paddy.

9.4. Relative Profitabilities and Acreage Allocations of Jute and Aus Paddy Crops

Table 9.3 exhibits the acreage allocation under jute and aus paddy crops along with its profitabilities measured in terms of surpluses over cost A_1 and cash expenditure. From this table it is noticed that the share of area under jute in the combined area of jute and aus paddy crops is remarkably higher relative to that of aus paddy in all the selected blocks except Dinhata block I and Tufanganj block II where the share of aus paddy crop in the combined area of jute and aus paddy is higher than that of jute in spite of higher relative profitability of jute confronted by these two blocks. Thus the disaggregated view over the selected blocks shows no unique relationship between acreage allocation under jute and aus paddy crops and their relative profitabilities. However, through an aggregative manner one may observe the existence of the conformity between the acreage allocation of jute and aus paddy crops and its relative profitabilities in the district as a whole.

9.5. Prospect of Size-wise Absolute Profitability of Jute Cultivation

The advantageous position of jute cultivation in terms of profitability relative to that of aus paddy as visualized earlier in this chapter initiates us to enquire about who

benefits how much from the jute cultivation. More categorically, what size of holding gets how much benefit in terms of profit from the cultivation of jute in this district. Therefore, the relevant objectives to be studied here are : (i) to show the prospect of profitability (absolute profitability) of jute cultivation over different sizes of holding in the selected blocks of Cooch Behar district; (ii) to identify the reasons behind the observed situation of profitability over the size of holding; and (iii) to search out the implication of the observed situation relating to profitability of jute over the size of holding.

Table 9.4 shows the profitability of jute per bigha measured in terms of surpluses over cost A_1 and cash expenditure in the cases of marginal, small and large sizes of holding over the selected blocks and in the district as a whole. Although this table shows no kind of relationship between the profitability of jute and size of holding in case of Haldibari block, it presents inverse relationship between the profitability of jute irrespective of measures and size of holding over other selected blocks and in the district as a whole. This helps us to hold the view that in the district of Cooch Behar profitability of jute per bigha is inversely related with the size of holding.

The inverse relationship between the profitability of jute cultivation and the size of holding as appears in Table 9.4 may be explained from Table 9.5. From the latter table it is observed that gross return per bigha of jute relative to the cost of production of jute measured on the basis of cost A_1 and cash expenditure is declining as the size of holding increases in the three selected blocks namely, Cooch Behar II, Dinhata I and Tufanganj II and in the district as a whole showing the inverse relationship between the profitability of jute and size of holding. Therefore, it may be stated that the declining benefit-cost ratio over marginal, small and large size of holding is responsible for inverse relationship between profitability of jute and the size of holding as observed in Table 9.4 in the cases of most of the selected blocks and in the district as a whole.

The inverse relationship between the profitability of jute and size of holding and the same relationship between the gross return relative to the cost of production of jute per bigha, that is, the benefit-cost ratio, or in other words, the rate of return and the size of holding examined in the previous paragraph are seen to decline in Cooch Behar II, Dinhata I and Tufanganj II blocks and in the district as a whole as the size of holding increases. That is, in this district, the lower is the size of holding, the higher is

the efficiency in the cultivation of jute and the higher is
the benefit accruing in the form of profit.

9.6. Findings

The foregoing discussion broadly shows that in the
district of Cooch Behar jute cultivation is relatively
profitable to aus paddy cultivation and this relative pro-
fitability of jute arises due to its higher income-generating
capacity caused by higher yield rate and higher level of
price per quintal relative to those of aus paddy. The acreage
allocation of jute and aus paddy is made in accordance with
the relative profitabilities of both these crops in this
district.

Therefore, from all these it may be said that in this
district jute production is comparatively advantageous in
terms of its profitability relative to that of aus paddy.
The farmers are here observed to reap the relative benefit
of jute production. And hence the farmers in this district
are observed to behave according to economic rationality.

Besides, in this district, the profitability of jute
per bigha declines over the marginal, small and large size
of holding due to the declining benefit-cost ratio over the
sizes. This indicates that the efficiency in the cultivation
of jute in this district decreases as the size of holding

becomes higher and higher. This may help one to state that in the cultivation of jute marginal size of holding is the most efficient and reaps the highest level of benefit.

Table 9.1 Surpluses per Bigha of Jute and Aus Crops over Cost A_1, Cost B, Cost C and Cash
Expenditure in the Selected Blocks of Cooch Behar District and in the District
as a Whole for the Year 1992-93

Name of the block	Surplus (in Rs.) of jute per bigha over				Surplus (in Rs.) of aus per bigha over			
	Cost A_1	Cost B	Cost C	Cash expenditure	Cost A_1	Cost B	Cost C	Cash expenditure
Haldibari	250.44	-74.08	-332.00	367.79	13.45	-158.30	-336.44	120.64
Cooch Behar II	156.49	-129.26	-406.46	280.66	115.82	-85.98	-275.85	226.54
Dinhata I	218.55	-34.84	-272.09	305.48	181.34	-24.03	-176.29	263.19
Tufanganj II	213.23	-36.28	-341.90	325.43	145.48	-30.54	-233.96	247.14
Cooch Behar district	244.93	-33.36	-302.86	355.10	145.06	-48.09	-229.85	242.80

Table 9.2 Surpluses per Bigha of Jute and Aus Crops over Cost A_1 and Cash Expenditure, Yield Rate and Price per Quintal of Both These Crops and Other Related Information in the Selected Blocks of Cooch Behar District and in the District as a Whole for the Year 1992-93

Name of the block	Surplus (in Rs.) of jute per bigha over		Surplus (in Rs.) of aus per bigha over		Yield rate of jute (in quintals)	Price per quintal of jute (in Rs.)	Yield rate of aus (in quintals)	Price per quintal of aus (in Rs.)
	Cost A_1	Cash expenditure	Cost A_1	Cash expenditure				
Haldibari	250.44	367.79	13.45	120.64	1.91	500.16	1.51	299.33
Cooch Behar II	156.49	280.66	115.82	226.54	1.96	406.05	1.85	303.12
Dinhata I	218.55	305.48	181.34	263.19	1.79	411.62	2.04	299.59
Tufanganj II	213.23	325.43	145.48	247.14	1.75	419.88	1.70	301.74
Cooch Behar district	244.93	355.10	145.06	242.80	1.88	447.31	1.85	301.35

Gross income per bigha of jute (in Rs.)	Gross income per bigha of aus (in Rs.)	Jute-aus cost difference (in Rs.) on the basis of		Jute-aus income difference (in Rs.)	Ratios of income and cost difference on the basis of	
		Cost A_1	Cash expenditure		Cost A_1	Cash expenditure
1056.68	490.66	329.03	318.87	566.02	1.72	1.78
904.35	597.42	266.26	252.81	306.93	1.15	1.21
829.83	655.61	137.01	131.93	174.22	1.27	1.32
840.86	550.30	222.81	212.27	290.56	1.30	1.37
943.18	596.94	246.37	233.94	346.24	1.41	1.48

Table 9.3 Surpluses per Bigha of Jute and Aus Crops over Cost A_1 and Cash Expenditure and Absolute and Percentage Shares of Jute and Aus Crops in the Combined Area of These Two Crops in the Selected Blocks of Cooch Behar District and in the District as a Whole for the Year 1992-93

Name of the block	Surplus (in Rs.) of jute per bigha over		Surplus (in Rs.) of aus per bigha over		Area under jute in absolute (in bighas) and percentage term	Area under aus in absolute (in bighas) and percentage term	Combined area of jute and aus (in bighas)
	Cost A_1	Cash expenditure	Cost A_1	Cash expenditure			
Haldibari	250.44	367.79	13.45	120.64	376.00 (98.04)	7.50 (1.96)	383.50 (100.00)
Cooch Behar II	156.49	280.66	115.82	226.54	243.00 (60.11)	161.25 (39.89)	404.25 (100.00)
Dinhata I	218.55	305.48	181.34	263.19	168.50 (48.21)	181.00 (51.79)	349.50 (100.00)
Tufanganj II	213.23	325.43	145.48	247.15	156.00 (42.11)	214.50 (57.89)	370.50 (100.00)
Cooch Behar district	244.93	355.10	145.06	242.80	943.50 (62.58)	564.25 (37.42)	1507.75 (100.00)

Note : Figures in the parentheses are the respective percentages

Table 9.4   Size-wise Surpluses per Bigha of Jute over Cost A_1 and Cash Expenditure 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	Gross income per bigha of jute (in Rs.)	Surplus (in Rs.) of jute per bigha over	
			Cost A_1	Cash expenditure
Haldibari	Marginal	914.16	196.81	304.57
	Small	1137.22	294.56	413.53
	Large	1108.79	99.87	240.80
Cooch Behar II	Marginal	872.74	175.96	291.64
	Small	889.58	129.30	251.81
	Large	952.24	33.82	174.48
Dinhata I	Marginal	824.45	314.86	384.66
	Small	853.09	170.95	270.16
	Large	816.24	37.92	149.06
Tufanganj II	Marginal	814.88	271.36	371.10
	Small	854.31	132.71	257.38
	Large	877.85	13.42	151.93
Cooch Behar district	Marginal	868.26	253.57	352.14
	Small	971.68	218.42	334.59
	Large	988.99	96.53	228.13

Table 9.5 Gross Return Relative to Cost of Production per Bigha (Benefit-Cost Ratio) Measured in Terms of Cost A_1 and Cash Expenditure over Different 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	Benefit cost ratios relating to	
		Cost A_1	Cash expenditure
Haldibari	Marginal	1.27	1.50
	Small	1.35	1.57
	Large	1.10	1.28
Cooch Behar II	Marginal	1.25	1.50
	Small	1.17	1.39
	Large	1.04	1.22
Dinhata I	Marginal	1.62	1.87
	Small	1.25	1.46
	Large	1.05	1.22
Tufanganj II	Marginal	1.50	1.84
	Small	1.18	1.43
	Large	1.02	1.21
Cooch Behar district	Marginal	1.41	1.68
	Small	1.29	1.53
	Large	1.11	1.30