

Chapter IV

SOME IMPORTANT AGRO-ECONOMIC CHARACTERISTICS OF THE SELECTED FARMS

The use of various factors such as land, labour, capital and other resources accounts for the agro-economic character of farms¹. The important agro-economic characteristics of the sample farms selected for the present work are studied in this chapter.

4.1. Average Size and Distribution of Holding

Average size and distribution of operational holding of the selected farms over the four selected blocks of Cooch Behar district and in the district as a whole are presented in Table 4.1. From this table it is manifested that distribution of operational holding is more or less egalitarian over the four selected blocks except Linhata block I and in the district as a whole. Average size of holding corresponding to each size group is almost the same over the selected blocks. On an average in the district as a whole the average size of holding ranges from 6.15 bighas in the marginal size group to 25.86 bighas in the large size group.

1. Pal, A. (1990) Wheat Revolution in India (Constraints and Prospects), Mittal Publications, New Delhi-59, p. 18.

4.2. Farm Inventory Account

Farming operation requires the use of livestock animal along with various kinds of implements. Farm inventory account means the monetary account of the livestock animal and farm implements. More specifically, this is constituted of the value of draught animals and milch animals, buffaloes, goats, poultry birds and agricultural implements like plough, hoe, sickle, bullock cart, power pumps and other minor implements. Table 4.2 presents this account over the selected blocks of Cooch Behar district and in the district as a whole. From this table it is observed that value of livestock, value of agricultural implements and total value of farm inventory are increasing with the increase of the size of holdings over the selected blocks and in the district as a whole.

4.3. Bullock Labour

A study about the bullock labour use, still important in the cultivation of land in Cooch Behar district is shown in Table 4.3. From this table it is observed that almost all the farms in different sizes of holding (in a few cases cent per cent of farms) over the selected blocks of Cooch Behar district except marginal size of holding in Dinhata block I and Tufanganj block II and in the district as a whole occupy bullock labours. The table also shows that the

number and value of bullock labour per farm is increasing with the increase in the size of holding, while those per bigha is decreasing with the increase of the size of holding in all the selected blocks of Cooch Behar district and in the district as a whole.

Again, Table 4.4 shows another additional information relating to draught animal ownership. This table shows that a unremarkable percentage of farms operate their lands with a single pair of bullocks in the selected blocks except Haldibari block and Cooch Behar block II, and in the district as a whole. Notable inter-block difference in the source of bullock labour utilised is also recorded in Table 4.4. Bullock hiring activity is noticed to be more prominent in Tufanganj block II and Dinhata block I and negligible in Cooch Behar block II.

Area commanded by a single pair of bullock labour is presented in Table 4.5. Though there remains no inter-block variation in the area commanded by a pair of bullock labour, inter-size variation is highly pronounced in all the selected blocks of Cooch Behar district and in the district as a whole. Moreover, in relation to the conventional command area per pair of bullock labour in this district i.e., ten bighas, the same table shows the under-utilisation and

over- or excessive utilisation of bullock labour resource in the case of marginal as well as small and large-size holdings respectively. This is true for all the selected blocks of Cooch Behar district, except small size of holding in Cooch Behar block II and in the district as a whole.

4.4. Attached Farm Servant

The role of attached farm servant in the farming operation is still in vogue in this district. Table 4.6 shows that the employment of attached farm servant is a common practice in this district. This table also shows that the number of attached farm servants per farm as well as per bigha is increasing with the increase of the size of holding in every case.

Table 4.7 shows the form of wages paid to the attached farm servants. These servants are paid wages both in cash and in kind but the value of wages in kind is relatively higher than the cash form of wages in the case of all sizes of holding everywhere.

4.5. Cropping Pattern

Season-wise acreage allocation in absolute and percentage term or in other words cropping pattern is dependent upon a number of factors like climate, soil suitability,

water availability and access to market etc.² The cropping pattern followed by the selected cultivators under different sizes of holding over different blocks and in the district as a whole is displayed in Table 4.8. From this table it is noticed that there remains no size-wise variation in a particular season in a particular block. But there remains block-wise variation in the same in all the seasons except Khariff season.

4.6. Cropping Intensity

Land being a very scarce resource, multiple cropping is the major alternative to increasing the effective area under crop production³. The extent of multiple cropping as reflected in the intensity of cropping is set out in Table 4.9 for the selected farms under different size groups over different blocks and in the district as a whole. This table manifests that there remains inter-block variation in the cropping intensity. It is also further evident from this table that cropping intensity is decreasing with the increase of the size of holding in all the selected blocks and in the district as a whole.

2. Ibid., p. 31

3. Ibid., p. 31

4.7. Irrigation Facilities

The extent of irrigation facilities over different sizes of holding in the selected blocks of Cooch Behar district is manifested in Table 4.10. From this table it is observed that the irrigation facilities in terms of percentage of irrigated area to the total area under operation is very poor and varied over different blocks. The percentage of area under irrigation is the highest in Dinhata block I and lowest in Tufanganj block II.

There remains positive relationship between percentage of area under irrigation and size of holding in Cooch Behar block II and Tufanganj block II and negative relationship in Dinhata block I while Haldibari block shows no such relation. However, the prospect in this regard relating to the district as a whole shows positive relationship between percentage of area under irrigation and size of holding.

Table 4.1 Distribution of Holdings, Cultivated Area and Average Size of Selected Farms in Various Size Groups in the Selected Blocks of Cooch Behar District and in the District as a Whole for the Year 1992-93

Name of the block	Size of holding (bighas)	Farm group	No. of selected holdings	Cultivated area of the selected farms (bighas)	Average size of the selected farms (bighas)
Haldibari	Upto 7.50	Marginal	31 (51.67)	197.0 (27.73)	6.35
	Above 7.50 to 15.00	Small	19 (31.67)	247.5 (34.83)	13.03
	Above 15.00	Large	10 (16.66)	266.0 (37.44)	26.60
	Total	All farms	60 (100.00)	710.5 (100.00)	11.84
Cooch Behar II	Upto 7.50	Marginal	33 (55.00)	202.75 (30.92)	6.14
	Above 7.50 to 15.00	Small	17 (28.33)	217.00 (33.09)	12.76
	Above 15.00	Large	10 (16.67)	236.00 (35.99)	23.60
	Total	All farms	60 (100.00)	655.75 (100.00)	10.93
Linhata I	Upto 7.50	Marginal	31 (51.67)	178.00 (25.59)	5.74
	Above 7.50 to 15.00	Small	18 (30.00)	226.50 (32.57)	12.58
	Above 15.00	Large	11 (18.33)	291.00 (41.84)	26.45
	Total	All Farms	60 (100.00)	695.50 (100.00)	11.59

Contd..

Table 4.1 (Contd..)

Name of the block	Size of holding (bighas)	Farm group	No. of selected holdings	Cultivated area of the selected farms (bighas)	Average size of the selected farms (bighas)
Tufanganj II	Upto 7.50	Marginal	37 (61.67)	233.50 (39.18)	6.31
	Above 7.50 to 15.00	Small	17 (28.33)	198.50 (33.30)	11.68
	Above 15.00	Large	6 (10.00)	164.00 (27.52)	27.33
	Total	All farms	60 (100.00)	596.00 (100.00)	9.93
Cooch Behar district	Upto 7.50	Marginal	132 (55.00)	811.25 (30.52)	6.15
	Above 7.50 to 15.00	Small	71 (29.58)	889.50 (33.47)	12.53
	Above 15.00	Large	37 (15.42)	957.00 (36.01)	25.86
	Total	All farms	240 (100.00)	2657.75 (100.00)	11.07

Note : Figures in the parentheses indicate the percentages of the respective totals.

Table 4.2 Value of Farm Inventory under Different Sizes of Farms in the Selected Blocks of Cooch Behar District and in the District as a Whole during the Year 1992-93

(in Rs)

Name of the block	Farm size	Value of live stock	Value of agricultural implements	Total value of farm inventory
Haldibari	Marginal	6949.19	1059.68	8008.87
	Small	13526.32	3759.47	17285.79
	Large	21160.00	9000.00	30160.00
	All farms	11400.42	3238.00	14638.42
Cooch Behar II	Marginal	8754.85	1101.51	9856.36
	Small	13320.59	2259.41	15580.00
	Large	23035.00	18448.50	41483.50
	All farms	12428.50	4320.75	16749.25
Dinhata I	Marginal	7364.52	780.65	8145.17
	Small	15684.44	2890.55	18574.99
	Large	27054.54	6979.54	34034.08
	All farms	13470.33	2550.08	16020.41
Tufanganj II	Marginal	6178.38	547.30	6725.68
	Small	12488.23	1870.59	14358.82
	Large	21908.33	6358.33	28266.66
	All farms	9539.17	1503.33	11042.50
Cooch Behar district	Marginal	7282.08	860.98	8143.06
	Small	13775.63	2727.75	16503.38
	Large	23540.54	10524.59	34065.13
	All farms	11709.60	2903.04	14612.64

Table 4.3 Distribution of Number and Value of Bullocks per Holding and per Bigha in Various Size Groups of Farms Owning Bullocks in the Selected Blocks of Cooch Behar District and in the District as a whole during the year 1992-93

Description	Haldibari				Cooch Behar II			
	Marginal	Small	Large	All farms	Marginal	Small	Large	All farms
Number of farms owning bullock labour	28 (90.32)	19 (100.00)	10 (100.00)	57 (95.00)	30 (90.91)	16 (94.12)	9 (90.00)	55 (91.67)
Number of bullock labour	1.68	2.89	4.20	2.48	1.82	2.53	3.20	2.25
Per farm	0.26	0.22	0.16	0.21	0.30	0.20	0.14	0.21
Per bigha								
Value of bullock labour (Rs)	4177.42	7563.16	10850.00	6361.67	5127.27	6841.18	9100.00	6275.00
Per farm	657.36	580.61	407.89	537.23	834.52	535.94	385.59	574.15
Per bigha								

Note : Figures in the parentheses are the percentages of total number of selected farms under each category.

Marginal	Dinhata I			Marginal	Tufanganj II			Marginal	Cooch Behar district			All farms
	Small	Large	All farms		Small	Large	All farms		Small	Large	All farms	
22 (70.97)	17 (94.44)	11 (100.00)	50 (83.33)	29 (78.38)	17 (100.00)	6 (100.00)	52 (86.67)	109 (82.58)	69 (97.18)	36 (97.30)	214 (89.17)	
1.42	3.00	4.82	2.52	1.35	2.35	4.17	1.92	1.56	2.70	4.11	2.29	
0.25	0.24	0.18	0.22	0.21	0.20	0.15	0.19	0.25	0.22	0.16	0.21	
3572.58	7777.78	13936.36	6734.17	3356.76	6058.82	10716.67	4852.33	4042.80	7084.51	11272.97	60572	
622.19	618.10	526.80	580.95	531.91	518.89	392.07	489.09	657.81	565.49	435.84	546.98	

Table 4.4 Frequency Distribution of Holding with Reference to Number of Bullocks Owned in the Selected Blocks of Cooch Behar District and in the District as a Whole for the Year 1992-93

Number of bullocks	Number of holding				
	Haldibari	Cooch Behar II	Dinhata I	Tufangaj II	Cooch Behar district
0	3 (5.00)	5 (8.33)	10 (16.67)	8 (13.33)	26 (10.83)
1	5 (8.33)	2 (3.33)	8 (13.33)	14 (23.33)	29 (12.08)
2	37 (61.67)	41 (68.33)	15 (25.00)	22 (36.67)	115 (47.92)
3	2 (3.33)	1 (1.67)	7 (11.67)	11 (18.33)	21 (8.75)
4	9 (15.00)	9 (15.00)	13 (21.67)	2 (3.33)	33 (13.75)
5	1 (1.67)	-	2 (3.33)	2 (3.33)	5 (2.08)
6	1 (1.67)	2 (3.33)	5 (8.33)	1 (1.67)	9 (3.75)
Above 6	2 (3.33)	-	-	-	2 (0.83)
Total	60 (100.00)	60 (100.00)	60 (100.00)	60 (100.00)	240 (100.00)

Note : Figures in the parentheses indicate the percentages of the respective totals.

Table 4.5 Area Commanded by a pair of Bullock Under Different Sizes of Holding in the Selected Blocks of Cooch Behar District and in the District as a Whole during the Year 1992-93

Size group	(in bighas)				
	Haldibari	Cooch Behar II	Dinhata I	Tufanganj II	Cooch Behar district
Marginal	7.58	6.76	8.09	9.34	7.88
Small	9.00	10.09	8.39	9.93	9.27
Large	12.67	14.75	10.98	13.12	12.59
All farms	9.54	9.71	9.21	10.37	9.66

Table 4.6 Number of Attached Farm Servants per Farm and per Bigha under Different Size Groups in the Selected Blocks of Cooch Behar District, and in the District as a whole during the Year 1992-93

Size group	Number of attached farm servants in crop production									
	Haldibari		Cooch Behar II		Dinhata I		Tufanganj II		Cooch Behear district	
	Per farm	Per bigha	Per farm	Per bigha	Per farm	Per bigha	Per farm	Per bigha	Per farm	Per bigha
Marginal	0.06	0.01	-	-	0.06	0.01	0.05	0.01	0.05	0.01
Small	0.26	0.02	0.18	0.01	0.67	0.05	0.24	0.02	0.34	0.03
Large	1.00	0.04	0.60	0.03	1.73	0.07	0.83	0.03	1.08	0.04
All farms	0.28	0.02	0.15	0.01	0.55	0.05	0.18	0.02	0.29	0.03

Table 4.7 Annual Cash and Kind Wages Paid to Attached Farm Servants Engaged in Crop Production by Various Size Groups of Farms in the Selected Blocks of Cooch Behar District and in the District as a Whole during the Year 1992-93 (in Rs.)

Name of the block	Size group	Cash wages paid	kind wages paid	Total wages paid
Haldibari	Marginal	3075.00	3800.00	6875.00
	Small	2520.00	3920.00	6440.00
	Large	2092.00	4098.00	6190.00
	All farms	2333.53	4010.59	6344.12
Cooch Behar II	Marginal	-	-	-
	Small	2233.33	3900.00	6133.33
	Large	2266.67	4025.00	6291.67
	All farms	2255.56	3983.33	6238.89
Dinhata I	Marginal	1950.00	4025.00	5975.00
	Small	1950.00	3979.17	5929.17
	Large	1936.84	3992.11	5928.95
	All farms	1942.42	3989.39	5931.81
Tufanganj II	Marginal	2200.00	3750.00	5950.00
	Small	2250.00	3712.50	5962.50
	Large	2260.00	3680.00	5940.00
	All farms	2245.45	3704.55	5950.00
Cooch Behar district	Marginal	2408.33	3858.33	6266.66
	Small	2154.17	3912.50	6066.67
	Large	2065.50	3984.50	6050.00
	All farms	2125.28	3949.00	6074.28

Table 4.8 Seasonwise Allocation of Area under Different Crops in Various Size Groups of Selected Farms over the Selected Blocks of Cooch Behar District and in the District as a whole during the Year 1992-93

(in bighas)

Name of the crop	Haldibari				Cooch Behar II			
	Marginal	Small	Large	All farms	Marginal	Small	Large	All farms
<u>Pre-Khariff Season</u>								
Aus paddy	2.50 (1.73)	4.00 (2.56)	1.00 (0.61)	7.50 (1.61)	52.25 (38.21)	52.00 (35.86)	57.00 (40.71)	161.25 (38.23)
HYV (Boro)paddy	-	-	-	-	2.00 (1.46)	-	-	2.00 (0.47)
Jute	116.50 (80.62)	124.50 (79.55)	135.00 (81.82)	376.00 (80.69)	76.50 (55.94)	89.50 (61.73)	77.00 (55.00)	243.00 (57.62)
Vegetables	20.50 (14.19)	26.00 (16.61)	27.00 (16.36)	73.50 (15.77)	6.00 (4.39)	3.50 (2.41)	6.00 (4.29)	15.50 (3.68)
Other cereal	5.00 (3.46)	2.00 (1.28)	2.00 (1.21)	9.00 (1.93)	-	-	-	-
Total	144.50 (100.00)	156.50 (100.00)	165.00 (100.00)	466.00 (100.00)	136.75 (100.00)	145.00 (100.00)	140.00 (100.00)	421.75 (100.00)
<u>Khariff season</u>								
Aman paddy (local)	133.50 (81.16)	158.00 (71.49)	167.00 (77.67)	458.50 (76.35)	170.50 (87.66)	160.00 (82.90)	167.00 (80.68)	497.50 (83.68)
HYV paddy	29.00 (17.63)	60.00 (27.15)	43.00 (20.00)	132.00 (21.98)	24.00 (12.34)	33.00 (17.10)	36.00 (17.39)	93.00 (15.64)
Vegetables	2.00 (1.21)	3.00 (1.36)	5.00 (2.33)	10.00 (1.67)	-	-	4.00 (1.93)	4.00 (0.67)
Total	164.50 (100.00)	221.00 (100.00)	215.00 (100.00)	600.50 (100.00)	194.50 (100.00)	193.00 (100.00)	207.00 (100.00)	594.50 (100.00)

Dinhata I			Tufanganj II				Cooch Behar district				
Marginal	Small	Large	All farms	Marginal	Small	Large	All farms	Marginal	Small	Large	All farms
67.50	59.50	54.00	181.00	91.00	74.50	49.00	214.50	213.25	190.00	161.00	564.25
(43.69)	(45.07)	(41.38)	(43.41)	(45.84)	(51.92)	(49.50)	(48.64)	(33.62)	(32.93)	(30.12)	(32.32)
6.00	7.50	9.50	23.00	2.00	2.50	-	4.50	10.00	10.00	9.50	29.50
(3.88)	(5.69)	(7.28)	(5.51)	(1.01)	(1.74)		(1.02)	(1.58)	(1.73)	(1.78)	(1.69)
65.50	55.00	48.00	168.50	72.50	50.50	33.00	156.00	331.00	319.50	293.00	943.50
(42.40)	(41.67)	(36.78)	(40.41)	(36.52)	(35.19)	(33.33)	(35.37)	(52.19)	(55.37)	(54.82)	(54.05)
1.50	1.00	5.00	7.50	10.00	3.00	4.00	17.00	38.00	33.50	42.00	113.50
(0.97)	(0.76)	(3.83)	(1.80)	(5.04)	(2.09)	(4.04)	(3.86)	(5.99)	(5.81)	(7.86)	(6.50)
14.00	9.00	14.00	37.00	23.00	13.00	13.00	49.00	42.00	24.00	29.00	95.00
(9.06)	(6.82)	(10.73)	(8.87)	(11.59)	(9.06)	(13.13)	(11.11)	(6.62)	(4.16)	(5.42)	(5.44)
154.50	132.00	130.50	417.00	198.50	143.50	99.00	441.00	634.25	577.00	534.50	1745.75
(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)
144.00	171.00	209.00	524.00	166.00	142.00	105.00	413.00	614.00	631.00	648.00	1893.00
(84.46)	(80.47)	(30.38)	(81.49)	(79.05)	(86.59)	(86.78)	(83.43)	(83.03)	(79.82)	(80.70)	(81.14)
26.00	41.50	50.00	117.50	42.50	20.50	16.00	79.00	121.50	155.00	145.00	421.50
(15.25)	(19.53)	(19.23)	(18.27)	(20.24)	(12.50)	(13.22)	(15.96)	(16.43)	(19.61)	(18.06)	(18.07)
0.50	-	1.00	1.50	1.50	1.50	-	3.00	4.00	4.50	10.00	18.50
(0.29)		(0.39)	(0.23)	(0.71)	(0.91)		(0.61)	(0.54)	(0.57)	(1.24)	(0.79)
170.50	212.50	260.00	643.00	210.00	164.00	121.00	495.00	739.50	790.50	803.00	2333.00
(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)

Contd..

Table 4.8 (Contd..)

Name of the crop	Haldibari				Cooch Behar II			
	Marginal	Small	Large	All farms	Marginal	Small	Large	All farms
<u>Rabi season</u>								
Wheat	7.00 (7.04)	2.50 (2.65)	5.50 (7.72)	15.00 (5.66)	25.00 (29.59)	22.50 (29.70)	24.00 (29.63)	71.50 (29.64)
Pulses	0.50 (0.50)	-	-	0.50 (0.19)	6.00 (7.10)	7.00 (9.24)	6.00 (7.41)	19.00 (7.87)
Oilseed	-	-	-	-	9.00 (10.65)	20.00 (26.40)	9.00 (11.11)	38.00 (15.75)
Potato	10.75 (10.80)	17.50 (18.52)	10.75 (15.09)	39.00 (14.70)	19.00 (22.48)	14.00 (18.48)	23.50 (29.01)	56.50 (23.42)
Tomato	23.00 (23.12)	22.50 (23.81)	17.50 (24.56)	63.00 (23.75)	1.50 (1.78)	-	2.50 (3.09)	4.00 (1.66)
Chilli	39.50 (39.70)	35.50 (37.56)	25.25 (35.44)	100.25 (37.79)	3.50 (4.14)	2.75 (3.63)	2.00 (2.47)	8.25 (3.42)
Vegetables	14.75 (14.82)	16.50 (17.46)	12.25 (17.19)	43.50 (16.40)	17.50 (20.71)	6.50 (8.58)	14.00 (17.28)	38.00 (15.75)
Tobacco	4.00 (4.02)	-	-	4.00 (1.51)	3.00 (3.55)	3.00 (3.96)	-	6.00 (2.49)
Total	99.50 (100.00)	94.50 (100.00)	71.25 (100.00)	265.25 (100.00)	84.50 (100.00)	75.75 (100.00)	81.00 (100.00)	241.25 (100.00)

Note: Figures in the parentheses indicate the percentages of respective totals.

Table 4.9 Size-wise Cropping Intensity in the Selected Blocks of Cooch Behar District and in the District as a Whole during the Year 1992-93

Name of the block	Size group	Net cropped area (in bighas)	Grossed cropped area (in bighas)	Intensity of cropping
Haldibari	Marginal	197.0	408.50	207.36
	Small	247.5	472.00	190.71
	Large	266.0	451.25	169.64
	All farms	710.5	1331.75	187.44
Cooch Behar II	Marginal	202.75	415.75	205.06
	Small	217.00	413.75	190.67
	Large	236.00	428.00	181.36
	All farms	655.75	1257.50	191.77
Dinhata I	Marginal	178.00	439.00	246.63
	Small	226.50	474.25	209.38
	Large	291.00	520.75	178.95
	All farms	695.50	1434.00	206.18
Tufanganj II	Marginal	233.50	488.50	209.21
	Small	198.50	379.00	190.93
	Large	164.00	263.00	160.37
	All farms	596.00	1130.50	189.68
Cooch Behar district	Marginal	811.25	1751.75	215.93
	Small	889.50	1739.00	195.50
	Large	957.00	1663.00	173.77
	All farms	2657.75	5153.75	193.91

Table 4.10 Extent of Irrigated Areas under 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	Irrigated area under operational holding (in bighas)	Percentage of irrigated area to the total area under operation
Haldibari	Marginal	24.75	12.56
	Small	57.50	23.23
	Large	58.75	22.09
	All farms	141.00	19.85
Cooch Behar II	Marginal	27.50	13.56
	Small	41.75	19.24
	Large	52.00	22.03
	All farms	121.25	18.49
Dinhata I	Marginal	46.00	25.84
	Small	50.25	22.19
	Large	61.75	21.22
	All farms	158.00	22.72
Tufanganj II	Marginal	18.50	7.92
	Small	22.00	11.08
	Large	18.50	11.28
	All farms	59.00	9.90
Cooch Behar district	Marginal	116.75	14.39
	Small	171.50	19.28
	Large	191.00	19.96
	All farms	479.25	18.03