

Constraints to Increased Sugarcane Supply in Two Selected Sugar Mills of Bangladesh

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ABSTRACT

A study was conducted to identify the constraints to cane supply in two selected Sugar Mills at Carew and Co., Chuadanga and North Bengal Sugar Mills, Natore. Insect-pest and disease problems, fertilizer and chemical supply, credit and irrigation problems of different groups of sugarcane farms were identified as severe. Insect-pest and disease problems varied from 95 to 100 percent followed by fertilizer and chemicals supply from 89 to 100 percent, credit problem of 71 to 89 percent and irrigation problem of 50 to 79 percent. Ninety seven to 100 percent farmers of all the groups identified as severe problem in getting cane supply permit (*Purjee*) in the sugar mills. Eighty two to 100 percent farmers complained for delay in cane payments. Small farmers had more production problems than those of medium and large sugarcane farmers.

Key words : Sugarcane production, marketing, constraints, Bangladesh.

INTRODUCTION

Sugarcane is an important field cum cash crop in the Northern part of Bangladesh. It occupied an area of about 0.19 million hectares during 1991-92 cropping season which was estimated to be about 2.34 percent of net cultivated area (Anon., 1993b). Sugarcane production fluctuated from year to year due to fluctuation in sugarcane area (Sheikh and Haque, 1986). Bangladesh produced 7.45 million tons of sugarcane in 1992 (Anon., 1993a). Sugarcane production was the highest (4.70 million tons) in 1991 and was lowest (1.04 million tons) in 1972 in the mill zone (Anon., 1973., Anon., 1991). Lowest yield of sugarcane was recorded at 21.65 t ha⁻¹ in 1972 (Anon., 1973) and which has been increased to 49.20 t ha⁻¹ in the mill zone (Anon., 1991). However, yields and production could not be increased to the desired level due to various bottlenecks of which production and marketing constraints of sugarcane ranks at the top. Ahsan and Haque (1977) conducted some studies on constraints to production on different crops on Aman, Boro and Aus paddy, Ahmed and Clement (1983) on wheat; Elias *et al.* (1984) on potato and Elias *et al.* (1986) on pulses. But no such studies have been made in sugarcane crop. Therefore, the present study was undertaken to identify the major productions and marketing problems of sugarcane in two representative mills named Carew and Co. at Chuadanga under Khulna Division and NBSM at Natore under Rajshahi division.

MATERIALS AND METHODS

Two mill zone, namely Carew's & Co. and NBSM were selected from the major cane growing regions of Rajshahi and Khulna division respectively for this study. One sub-zone from each of the two mills zones, namely, Carew & Co and NBSM was selected for sampling. The sample included twelve villages of two cane purchasing centres (Puratan Ishurdi and Sara Gopalpur) from NBSM Ltd. and 13 villages from three purchasing centres (Chuadanga, Dingadaha and Belgachi) of Carew & Co.

Data were collected from Ishurdi and Chuadanga areas during 1994. In total 235 sample farmers of different eight categories were interviewed. One hundred and forty samples were drawn from Ishurdi and 95 from Chuadanga by using stratified random sampling. In this study, eight categories of farms were classified based on production viz., yield less than 18.66 tons, 18.67 to 37.31, 37.32 to 55.97, 55.98 to 74.63, 74.64 to 93.28, 93.29 to 111.94, 111.95 to 130.59 tons and above 130.60 tons. The farms were categorized as small (up to 1.00 ha), medium (1.01 to 2.00 ha) and large farms (above 2.00 ha). A questionnaire of 14 predetermined production problems and 9 marketing problems was formed and the sugarcane growers were requested to respond to these problems as severe, minor and no problem. In addition, they were requested to state any other problem faced in sugarcane production.

RESULTS AND DISCUSSION

Data in the Table 1 indicate that farmers from all groups of farms had no problem in obtaining seed cane except farmers of group 7 category who faced 25% severe and 25% minor problem. Farmers of all the groups responded that labour for cultivation was not a severe problem to them. Only 19% farmers of group 5 had minor problem in cultivation and the rest of the groups i.e., groups 1, 2, 3, 4, 5 and 8 and had 4% to 19% minor problems. For weeding 4% to 13% farmers of groups 1, 2, 3, 4, 5 and 8 had also minor problem of labour for weeding and 13% to 19% farmers of groups 2, 4, 5 and 8 had minor labour problem for harvesting. Group 1 and 3 had minor labour problem for harvesting covering 4% farmers of each group (Table 1).

There was severe irrigation problem to the farmers of all the groups which varied from 50% to 89% and 11% to 25% farmers had minor problem of irrigation. For credit facilities, 71% to 89% of all the groups had severe problem of credit. Sugarcane farmers of all groups and severe problem of insect-pest and diseases and those varied from 95% to 100% farms (Table 1). On an average, 66% farmers had no problem for their low yields (Table 3).

In getting cane supply permit (purjee) from the sugar mills, 97% to 100% farmers of all the groups identified as a severe problem. Labour scarcity was also a severe problem to 7% farmers of group 8. It was a minor problem of 10 to 15% farmers of group 1, 2 and 4 and 4 to 6% of 3 and 5 groups of farmers (Table 2).

Severe transport problem was noted by 11% to 15% farmers of the groups of 2, 4, 6 and 8 and minor problem of 18% to 50% farmers to groups 1, 2, 3, 4, 5 and 8 those ranged from 6 to 13% farmers. Distance to supply centres was also a severe problem of 10% to 15% farmers of group 1, 2, 3, 4 and 8 (Table 2).

Farmers had to wait to supply canes to the factory for a period of time which ranged from 22% to 75% of all groups and it was highest to 75% farmers of group 7. It was a minor problem to all the groups of farmers that varied from 5% to 25% of the farmers. Delay in cane price payments was complained as severe problem by 82% to 100% farmers of all the group and 6 to 17% farmers of groups 1, 2, 3, 4, 5 and 6 identified it as a minor problem. Selling cane to gur makers was not a problem of 88% to 100% farmers of all the groups (Table 2).

Table 1. Problems associated with sugarcane production of total sample farm groups.

Groups/ Problems	Group 1			Group 2			Group 3			Group 4			Group 5			Group 6			Group 7			Group 8		
	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N
	Percentage																							
Obtaining seed	0	18	82	3	26	71	0	38	62	0	10	90	0	6	94	0	22	78	25	25	50	0	11	89
Labour for cultivation	0	4	96	0	10	90	0	4	96	0	10	90	0	19	81	0	0	100	0	00	100	0	7	93
Labour for weeding	0	4	96	0	13	87	0	4	96	0	10	90	0	13	87	0	0	100	0	0	100	0	11	89
Labour for harvesting	0	4	96	0	19	87	4	4	92	0	15	85	0	19	81	0	0	100	0	0	100	0	14	86
Lack of irrigation	66	19	15	67	23	10	79	17	4	60	15	25	69	19	12	89	11	0	50	25	25	61	11	28
Lack of fund	96	1	3	85	10	5	79	4	17	80	10	10	63	6	31	67	0	33	25	25	50	64	7	29
Low production	21	13	66	23	10	67	21	4	75	35	15	50	13	6	81	22	0	78	50	0	50	36	11	53
Fertilizer supply	95	5	0	97	3	0	92	8	0	90	5	5	94	6	0	100	0	0	100	0	0	89	11	0
Chemical supply	98	2	0	97	3	0	100	0	0	95	0	5	100	0	0	100	0	0	100	0	0	89	11	0
Lack of credit	84	14	2	77	23	0	88	8	4	75	20	5	75	19	6	89	11	0	75	0	25	71	18	11
Insect-pest attack	97	3	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0
Disease problem	98	2	0	100	0	0	100	0	0	100	0	0	95	5	0	0	100	0	0	100	0	0	96	4
Less profitable	1	4	95	3	8	89	0	0	100	10	20	70	0	6	94	0	0	100	0	0	100	11	14	75
Exhausts soil fertility	1	35	64	0	41	59	4	25	71	0	55	45	0	31	69	0	22	78	0	50	0	46	0	54

S = Severe, M = Minor, N = No.

Table 2. Problems associated with sugarcane marketing of all sample farm groups.

Groups/ Problems	Group 1			Group 2			Group 3			Group 4			Group 5			Group 6			Group 7			Group 8		
	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N	S	M	N
	Percentage																							
Difficult to get permit	100	00	0	97	3	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0
Labour scarcity	3	11	86	5	6	89	0	8	92	0	10	90	0	13	87	0	0	100	0	0	100	7	11	82
Distance to supply Centres	15	13	72	15	10	75	13	4	83	10	15	75	0	6	94	0	0	100	0	0	100	14	0	86
Transport problem	2	37	61	15	18	67	0	29	71	15	30	55	0	19	81	11	0	89	0	50	50	14	21	65
Weighment problem	48	45	7	38	54	8	29	54	17	65	35	0	31	63	6	56	44	0	25	50	25	29	54	17
Long period of stay for delivery of cane	49	7	44	52	10	38	29	25	46	60	5	35	31	13	56	22	11	67	75	25	0	50	11	39
Delayed cane price payments	91	8	1	82	15	3	83	17	0	90	10	0	94	6	0	89	11	0	100	0	0	100	0	0
Selling cane to gur makers	2	3	95	5	5	90	8	0	92	5	5	90	12	0	88	0	0	100	0	0	100	7	0	93

S = Severe, M = Minor, N = No

Table 3. Production and marketing problems of large, medium and small farm groups.

Problems /size	Large			Medium			Small			All farms (average)		
	S	M	N	S	M	N	S	M	N	S	M	N
	Percentage											
Obtaining seed	0	15	85	0	20	80	1	20	79	0	19	81
Labour for cultivation	0	6	94	0	12	88	0	5	95	0	7	93
Labour for weeding	0	6	94	0	12	88	0	6	94	0	7	93
Labour for harvesting	0	9	91	2	15	83	0	6	94	1	8	91
Lack of irrigation	74	9	17	66	17	17	65	12	23	67	12	21
Lack of fund	62	6	32	73	7	20	90	4	6	81	5	14
Low production	21	9	70	24	7	69	25	12	63	24	10	66
Fertilizer supply	94	6	0	90	7	3	97	3	0	95	5	0
Chemicals supply	94	6	0	98	2	0	93	7	0	94	6	0
Lack of credit	82	9	9	71	22	7	86	12	2	83	13	4
Insect-pest attack	100	0	0	100	0	0	98	2	0	99	1	0
Disease problem	98	0	2	98	0	2	98	2	0	98	1	1
Less profitable than other crops	4	9	87	5	7	88	1	5	94	3	6	91
Exhausts soil fertility	0	30	70	0	41	59	1	5	94	0	16	84
Difficult to get cane supply permit	100	0	0	100	0	0	100	0	0	100	0	0
Labour scarcity	4	6	90	0	12	88	2	13	85	2	11	87
Distance to supply centres	6	0	94	10	7	83	14	21	65	11	14	75
Transport problem	6	17	77	10	24	66	10	29	61	9	26	65
Weighment problem	15	21	64	27	27	46	41	16	43	33	19	48
Long period of stay for delivery of cane	94	6	0	90	10	0	88	11	1	89	10	1
Delayed cane price payments	30	0	70	44	0	56	44	1	55	42	0	58
Selling cane to gur makers	4	0	96	10	2	88	8	3	89	8	3	89

S= Severe, M = Minor, N = No.

The farmers of large, medium, and small sugarcane farms had no severe problem in obtaining seed, labour for weeding, cultivation, and harvesting except seed problem of 1% farmers of small farms. All the farm size groups had minor problem in obtaining seed which was identified by 15% to 20% farmers. All the farm size groups had minor labour problem as said by 5% to 9% large and small farms and 12% to 15% medium farms (Table 3).

Lack of irrigation was a severe problem as identified by 74%, 66% and 65% farmers of large, medium and small farm size respectively. On the average, 67% farmers stated it as a severe problem and 12% as minor problem (Table 3).

Lack of fund was a severe problem to the farmers of large, medium and small farm group as identified by 62%, 73% and 90% farmers respectively. On the average, 81% farmers identified it as a severe problem and 5% as a minor problem. Low production was a severe problem to large, medium, and small farms as said by 21%, 24% and 25% farmers respectively. On the average, it was identified by 24% farmers as a severe and 10% as minor problem (Table 3).

Fertilizer supply was a severe problem to the farms of large (94%), medium (90%) and small (97%) farms. On the average, it was identified as a severe problem by 95% farmers and a minor problem to 5% farmers. As regard to chemical supply, 94%, 98% and 93% farmers of large, medium and small farms identified it as a severe problem. On the average, it was a severe problem to 94% and minor problem to 6% farmers (Table 3).

Lack of credit was a severe problem to 82%, 71% and 86% of large, medium and small farm groups respectively. On the average, it was a severe problem to 83% farmers and a minor problem to 13% farmers. Insect-pest attack was a severe problem to 100% farmers of large and medium farm and 98% to small farms. Disease problem was denoted as a severe one by 98% farmers of large, medium and small farm size groups (Table 3).

On the average, less profitability was not a problem to 91 percent farmers. It is evident from various studies that sugarcane alone and a combination with other crops is much more remunerative and profitable over other competing crops and thereby less profitability from sugarcane was not a problem to the farmers (Muqtadir, 1986; BSRI Annual Report, 1997). It is reported that farmers' usually cultivate sugarcane in less fertile land and thereby sugarcane cultivation exhausts soil fertility was not a problem to 84 percent farmers. Hundred percent farmers of large, medium and small farms identified availability of cane supply permit from the sugar mills as severe problem. Labour scarcity was not a problem to 90%, 88% and 85% farmers of large, medium and small farm groups respectively and in average considered a severe problem to 2 percent farmers (Table 3).

Distance to cane supply centre was a severe problem to 6%, 10% and 14% of the large, medium and small farms respectively and on the average, it was a severe to 11 percent farmers. Fourteen percent farmers identified it as a minor problem. Transportation of sugarcane was a severe problem to 6% farmers of large and 10% to each of the medium and small farm groups. Weighment was a severe problem as responded by 15%, 27% and 42% farmers of large, medium and small groups respectively. On the average, it was a severe problem to 33% farmers. In aggregate, long periods of stay in mills and delay in cane payments were severe problems to 89% and 41% farmers respectively (Table 3). The present study recognizes that the productions and marketing of sugarcane have serious problems in the mill zone areas. The results of the present study may be useful to the planners, policy makers and sugarcane planters of Bangladesh.

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