

Subsidy Recipient Sugarcane Farmers and Their Characteristics

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ABSTRACT

The study was conducted to find out the actual pattern of subsidy beneficiaries of sugarcane farmers. Data were collected from the secondary sources of Rajshahi sugar mills and Bangladesh Sugarcane Research Institute during 2008-09 payment years. It revealed that Rajshahi sugar mills distributed a total of Taka 5.45 million to 1995 sugarcane farmers of four categories. Among them, STP growers received the highest amount i.e. 2.16 million against 265.32 ha of sugarcane followed by ratoon growers who received taka 1.6 million for their 323.89 ha of production. Seed growers received taka 0.93 million for 100 ha of production and intercrop growers received the least amount i.e. taka 0.75 million for 69.53 ha. Highest area of a single recipient of STP was 3.17 ha and thus highest amount of taka received by a single STP farmer was Taka 25838.67. Similarly, highest area of a single recipient against intercrop cultivation was 2.47 ha and Taka 26843.96 for intercropping. The highest area of single recipients of seed grower was 1.62 ha who received taka 15205.32. The highest area of single recipient of ratoon was 1.62 ha who received tk. 8002.80 for ratooning. A recipient received minimum Taka 200 and maximum was Taka 54,954. The study also identified that 65% of total population farmers received total amount of subsidy taka 3000 or less. Similarly, 91.08% of total population farmers received total amount of subsidy taka 6000 or less. Only 0.35% farmers received total amount of subsidy taka 20,000 or more. About 98% farmers received up to taka 5000 or less for STP, more than 97% farmers received up to taka 4000 or less for intercrop, more than 98% farmers received up to taka 4000 or less for seed production and more than 99% farmers received up to taka 5000 or less for ratooning.

Key words: Subsidy, beneficiaries, sugarcane farmers

INTRODUCTION

Bangladesh is an agro based country. Agriculture sector contributes 23.5% GDP to the national economy (BBS 2003). Sugarcane is one of the major industrial crops of the north and western part of the country. Pal *et al.* (2005) mentioned that about 0.6 million farmers of Bangladesh directly depends on sugarcane cultivation. As sugarcane is a long duration and high input consuming crop, farmers cannot follow the technologies. Rahman *et al.* (2005) cited that per hectare production cost of sugarcane is taka 55,000 which is much higher than other crops. Farmers cannot apply all the inputs timely because of their financial crisis. This situation ultimately affects the production. Thus to protect the farmers as well as sugar industry, Government decided to pay subsidy to the sugarcane farmer since 2003. First three years, subsidy was paid against one technology only (i.e. STP), but after that it included four technologies i.e.. STP, intercropping, seed production and ratooning.

In fact, paying subsidy is however a great social incentive to the farmers provided by the Government. It was found that subsidy worked as a strong motivator to increase production per hectare (Roy, 2008). It was also found that a total of taka 8.5 million was gained by distributing taka 1.7 million as subsidy against sugarcane by Rajshahi Sugar mills during 2003-04 to 2005-06 (Roy, 2008). Alam *et al.* (2007) showed that a total of taka 617.48 million was gained by paying only taka

82.47 million to all over the country. Thus the subsidy fund was increased over the year. A question has now risen by many about who received what amount from the subsidy fund? Is subsidy making rich farmer more rich or poor farmer poorer? Present study was undertaken for exploring the answers of these questions.

MATERIALS AND METHODS

The study was based on information of subsidy receiving farmers of Rajshahi Sugar Mills Ltd. during 2008-09 cropping season. A total of 1995 sugarcane farmers were benefited from subsidy programme during the season. Study data were collected from the secondary sources of Rajshahi Sugar Mills and Bangladesh Sugarcane Research Institute as gathered just after the disbursement of subsidy money during July 2009. After collection of data it was tabulated and categorized as per study directives. To describe the actual beneficiaries of the subsidy, simple descriptive statistics like frequency, percentage and cumulative percentage were used. Data were categorized by using computer software SPSS.

RESULTS AND DISCUSSION

Nine sub-zone of Rajshahi sugar mills distributed a total of Taka 5.45 million among 1995 sugarcane farmers of four categories. Highest amount of taka 1.23 million were distributed among 435 growers in Puthia Subzone to their followed by who taka 0.69 million distributed in Nandangachi subzone among 221 farmers. Rajshahi sadar subzone distributed the lowest amount of subsidy i.e. taka 0.44 million among 126 sugarcane farmers.

Other Subzone i.e. Mills gate B, Kashidanga, Sardaha, Charghat, and Arani Subzones distributed tk. 0.48, 0.48, 0.49, 0.52, 0.52 and 0.56 millions taka respectively. Number of farmers received subsidy in the above Subzones are 252, 252, 166, 184, 146 and 224 respectively.

According to categories, STP growers received the highest amount of taka 2.16 million against 265.32 ha of sugarcane followed by ratoon growers who received taka 1.6 million for 323.89 ha of sugarcane. Seed growers received taka 0.93 million for 100 ha of sugarcane and intercrop growers received 0.75 million for 69.53 ha (Table 1).

Table 1. Sub-zone wise distribution of subsidy recipients

Subzone	No. Farmers	STP		Intercrop		Seed		Ratoon		Total (taka)
		Area (ha)	Taka	Area (ha)	Taka	Area (ha)	Taka	Area (ha)	Taka	
Mills gate A	241	23.70	193149	8.83	95964	11.20	105108	20.22	99880	494101
Mills gate B	252	22.88	186483	6.06	65868	8.71	81776	29.73	146880	481007
Rajshahi	126	16.22	132231	7.63	82896	10.93	102600	26.32	130000	447727
Kashidanga	166	19.25	156915	8.50	92400	11.92	111910	26.32	130000	491225
Sardaha	184	23.89	194700	6.48	70400	9.31	87400	34.41	170000	522500
Charghat	146	25.30	206217	6.48	70400	9.31	87400	32.47	160400	524417
Arani	224	31.98	260700	6.88	74800	9.72	91200	27.52	135960	562660
Nandangachi	221	38.33	312444	4.91	53328	9.46	88768	48.38	239000	693540
Puthia	435	63.77	519750	13.77	149600	19.43	182400	78.52	387880	1239630
Total	1995	265.32	2162589	69.53	755656	100	938562	323.89	1600000	5456807

Data regarding areas and payments were arranged and presented in Table 2. It was found that a highest area of a single recipient of STP was 3.17 hectare receiving the highest amount of Taka 25838.67. Similarly highest area of a single recipient of intercrop was 2.47 hectare who received Taka 26843.96. Highest areas of a single recipient of seed was 1.62 hectare who received Taka 15205.32. Highest areas of a single recipient of ratoon was 1.62 hectare receives Taka 8002.80. A recipient of total amount (taka) was as minimum as Taka 200 to maximum Taka 54,954 against adoption of multiple technologies. These were on the basis of different payment rates (STP Tk. 8151 / Hectare, intercrop Tk 10868/ Hectare, seed Tk 9386 / Hectare and ratoon Tk.4940 / Hectare)(Table 2).

Table 2. Range of Areas and Payments of different items of Subsidy

	Minimum	Maximum	Rate of payments
STP Area (Hectare)	00.00	3.17	
Payment for STP (Taka)	00.00	25838.67	Tk. 8151 / Hectare
Intercrop Area (Hectare)	00.00	2.47	
Payment for Intercrop (Taka)	00.00	26843.96	Tk 10868/ Hectare
Seed Area (Hectare)	00.00	1.62	
Payment for Seed (Taka)	00.00	15205.32	Tk 9386 / Hectare
Ratoon Areas (Hectare)	00.00	1.62	
Payment for Ratoon (Taka)	00.00	8002.80	Tk.4940 / Hectare
Total Payment (Taka)	200.00	54954.00	

Subsidy users were further classified on the basis of total amount of subsidy they received against different technologies and presented in Table 3. It was found that among 1995 receiver, most of them (550) received between Taka 1001 to 2000 which constituted 27.57% of the subsidy receivers. About 22% farmers received subsidy between Taka 501-1000, 16% subsidy receiving farmers received subsidy ranged of Taka 2001-3000. These three groups represented 65.62% of total population. About 4.7% farmers received taka 500 or less, 9.72% farmers got between Taka 3001-4000, 7.02% farmers obtained Taka 4001-5000 and 4.01% farmers received between taka 5001-6000. Cumulative percentage of these 7 groups was 91.08. Considering present valuation of money, Taka 6000 is not a big amount subsidy incentives for a year-long crop like sugarcane. Thus it can be concluded that subsidy money is being distributed homogeneously among the marginal sugarcane farmers. From the other angle, we can see that, only 0.35% farmers received taka 20000 and above; 1.65% farmers received between taka 10001-20000; 0.65% farmers received between taka 9001-10000; 1.45% farmers received between taka 8001-9000; 1.90% farmers received between taka 7001-8000 and 2.91% farmers received between taka 6001-7000. These 6 groups represented only 8.92% of total population which is very much rational for a crop like sugarcane.

Table 3. Recipients of Total Amount Taka

Categories	Number of farmers	Percent	Cumulative Percent
Tk 200 - Tk 500	94	4.71	4.71
Tk 501 - 1000	442	22.16	26.87
Tk 1001 - 2000	550	27.57	54.44
Tk 2001 - 3000	317	15.89	70.33
Tk 3001 - 4000	194	9.72	80.05
Tk 4001 - 5000	140	7.02	87.07
Tk 5001 - 6000	80	4.01	91.08
Tk 6001 - 7000	58	2.91	93.99
Tk 7001 - 8000	38	1.90	95.89
Tk 8001 - 9000	29	1.45	97.34
Tk 9001 - 10000	13	0.65	97.99
Tk 10001 - 20000	33	1.65	99.65
Tk 20001 and above	7	0.35	100.0
Total	1995	100.0	100.0

As discussed earlier, sugarcane subsidy was distributed against four major technologies, so data of different technology adopter receivers were also collected and presented in Tables 4, 5, 6 and 7. According to Table 4, it was found that about 40% farmers did not receive any subsidy for STP. About 57.93% farmers received up to taka 5000 or less. Only few (1.95%) farmers received taka more than 5000 for this category of technology. STP is a yield increasing, low input but labour intensive technology, which demands more attention. In fact, subsidy was started earlier with this STP technology only for the greater interest of the country, but most of the year target was not achieved (Alam *et al.* 2007) due to many factors. However the above study also reported that during 2003 to 2006, a total of extra sugar worth Taka 617.48 million was produced by using only extra amount of subsidy Taka 82.47 million. Thus it is necessary to enhance the amount of per hectare subsidy for STP.

Table 4. Subsidy Recipients Categories against STP Plantation

Categories	Number of farmers	Percent	Subgroup Percent	Cumulative Percent
00	800	40.12	40.12	40.12
Upto Tk 500	114	5.71	57.93	45.81
Tk 501 - 1000	274	13.73		59.54
Tk 1001 - 2000	476	23.86		83.40
Tk 2001 - 3000	162	8.12		91.52
Tk 3001 - 4000	95	4.76		96.28
Tk 4001 - 5000	35	1.75		98.03
Tk 5001 - 6000	13	0.65		98.68
Tk 6001 - 7000	10	0.50	1.95	99.20
Tk 7001 - and above	16	0.80		100.00
Total	1995	100.00	100.00	100.0

In Table 5, it was found that about 85.71% farmers did not receive any money for intercrop production. About 11.58% farmers received subsidy up to taka 4000 or less. Only few (2.71%) farmers received taka more than 4000 against intercropping. Intercropping is a total production increasing, high input and labour intensive technology, which also demands more attention. In our country arable land is decreasing day by day demanding adoption of intercropping for enhancing total per unit production. Farmers can not fully adopt this technology because of their money crisis at the time of plantation. Thus it is necessary to increase the amount of per hectare subsidy for intercropping as well as to cover more farmers for adopting this technology.

Table 5. Recipients Categories of Subsidy Taka for Intercropping

Categories	Number of farmers	Percent	Subgroup Percent	Cumulative Percent
00	760	85.71	85.71	85.71
Upto Tk 500	5	0.25	11.58	85.96
Tk 501 - 1000	19	0.95		86.91
Tk 1001 - 2000	75	3.76		90.67
Tk 2001 - 3000	111	5.56		96.23
Tk 3001 - 4000	21	1.06		97.29
Tk 4001 - 5000	39	1.96	2.71	99.25
Tk 5001 - 6000	5	0.25		99.50
Tk 6001 - 7000	5	0.25		99.75
Tk 7001 - and above	5	0.25		100.00
Total	1995	100.00		100.00

In Table 6, it was found that about 79.59% farmers did not receive any subsidy for seed production. About 19.11% farmers received subsidy up to taka 4000 or less. Only few (1.3%) farmers received taka more than 4000 for this category of technology. Seed production is a high input and labour intensive technology, which also demands more attention. Without quality seed it is impossible to increase the production. Farmers should produce quality seed at least for meeting their requirement. But most farmers do not follow this technology because of their awareness-lacking as well as money and labour crisis at the time of plantation. Thus it is necessary to enhance knowledge of the farmers for quality seed use increase the amount of per hectare subsidy for seed production as well as covering more farmers to adopt this technology.

Table 6. Recipients Categories of subsidy Taka for Seed Production

Categories	Number of farmers	Percent	Subgroup Percent	Cumulative Percent
00	1588	79.59	79.59	79.59
Upto Tk 500	3	0.15	19.11	79.74
Tk 501 - 1000	48	2.41		82.15
Tk 1001 - 2000	232	11.64		93.79
Tk 2001 - 3000	35	1.75		95.54
Tk 3001 - 4000	63	3.16		98.70
Tk 4001 - 5000	11	0.55	1.30	99.25
Tk 5001 - 6000	5	0.25		99.50
Tk 6001 - 7000	2	0.10		99.60
Tk 7001 - and above	9	0.40		100.00
Total	1995	100.00	100.00	100.00

In Table 7, it was found that about 41.7% farmers did not receive any subsidy fund for improved ratoon management. Though most of the population farmers received money against this technology, the amount was very small. About 57.54% farmers received subsidy up to taka 5000 or less. Only few (0.76%) farmers received subsidy of more than Tk.5000 for this category. Ratoon production is neglected, although it is a low input technology. Better ratoon management produces identical cane yield to that of plant cane with less production cost benefiting the farmers. On the other hand ratoon cane can gives higher recovery yielding more sugar in the factory. So, better ratoon management through methodical cultivation is very important both for the farmers as well as for the sugar factories. Enhancing subsidy (both number of farmers and per hectare taka) is very important in the context of farmers' profitability and total sugar production of the country.

Table 7. Recipients Categories of Subsidy Received against Ratoon Management

Categories	Number of farmers	Percent	Subgroup Percent	Cumulative Percent
00	832	41.70	41.70	41.7
Upto Tk 500	84	4.21	57.54	45.91
Tk 501 - 1000	331	16.59		62.5
Tk 1001 - 2000	464	23.26		85.76
Tk 2001 - 3000	191	9.57		95.33
Tk 3001 - 4000	48	2.41		97.74
Tk 4001 - 5000	30	1.50		99.24
Tk 5001 - 6000	11	0.56	0.76	99.80
Tk 6001 - 7000	2	0.10		99.90
Tk 7001 - and above	2	0.10		100
Total	1995	100.00	100.00	100.00

The study findings reflected that major portion of the subsidy money disbursed against majority of the population study farmers. As farm size considered very important parameter of resource ownership, future studies to be concentrated on quantum of subsidy diverted towards sugarcane farmers of different farm categories.

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