

An Account of Sugarcane Farming In Parsa District, Nepal

Sohan K. Karna*

INDTRODUCTION

Nepal is one of the least developed country in the world with low per capita GNP. It is increasingly realised that not only the pace of a gricultural growth but its pattern determines its contribution to over all economic development. So agriculture has become the primary basis of economic development of Nepal. More than four fifth of the people are economically and actively engaged in producing about three fifth of the GDP. It contributes three quarters of total export earning and generates revenue of more than 50 percent of total national revenue. Agriculture is the only sector which has the potential to absorb a rapidly growing labour force in a productive manner. The number of people engaged in this sector is increasing by more than three and half lakhs every year. But productivity in agriculture has failed to rise and even has slightly declined during the last 25 years, slowing down the entire rate of growth in the economy. The average product per worker engaged in agriculture is estimated at as low as one fifth as compared to the per worker product of those engaged in non-agricultural sector. So it is evident that agricultural development so as to increase the per unit net output of those engaged in this occupation is of utmost need for the economic development of Nepal.

Although HMG/N has been investing a large amount of funds and resources in this sector, but the ourtcome has been very poor. The growth rate of GNP as against the population growth rate shows that food product has failed to keep up with population growth. So it is necessary to rapid and sustain increase in agriculture production to meet a growing demand for food in the country, to raise income and to provide employment opportunities for the overwhelmingly large portion of the population depended on agriculture.

Prosperity and development of Nepal depend entirely upon the growth of its agriculture production, certain agriculture commodities which yield high benefit both as the major foreign exchange earner and having the largest potentiality for growth within the country should be given top priority. In this respect cash crop plays a crucial role in Nepalese economy. Among cash crops sugarcane is the major ones occupying third position after oilseeds and potato currently in its contribution of the total gross value of agricultural output.

* *Mr. Karna is Lecturer, Central Department of Economics, Tribhuan University, Kirtipur, Kathmandu.*

SUGARCANE FARMING IN NEPAL

Sugarcane Which is known to be one of the oldest cultivated plants in the world is grown commercially in the tropics and sub-tropics. While the origin of sugarcane has not been definitely known, even though there is strong evidence that Indian canes appeared independently. In Northern India, Sugarcane has been in cultivation for over 2000 years.

In Nepal, sugarcane as a traditional cash crop has been cultivating since the ancient time. It was grown partly for family consumption and partly for sale, and used to be converted into *Sakkhar* by traditional crushing method.

Sugarcane was cultivated in the mountain, valley as well as in the low land of terai. In the mountain region, it was mostly concentrated along the warmer river *besi* (basin), such as Koshi, Trisuli, Dhunibesi and Nuakote and is a profitable article; but as the culture is expensive, the *jaghirdars* rarely raise more of it than they require for their own consumption.

It has been referred that raw sugar produced in Nepal is as much better quality than refined sugar in Bengal. But inspite of its profitability, the poor farmers did not cultivate sugarcane partly due to its high cost of production and partly because of its long growing period. It was grown mostly by the very crude flat method and the cultivation was on small scale. In the historical past sugarcane was grown on a considerable area even in the Kathmandu valley, particularly along *Tukucha besi* (original name was 'I' 'umati' meaning sugarcane in Sanskrit) and converted into *chakhu* and raw sugar by tusal cane crushing, Tokha and Khopa (Bhaktapur) were wellknown for the making of *chakhu*, derived mainly from sugarcane.

In large parts of terai sugarcane has been grown on small scale for local consumption in the form of *Sakkhar*. But the large scale production of sugarcane was started only in the recent decades with the establishment of three sugar mills at Biratnager, Birganj and Bhairahwa. Morang Sugar Mill, the first modern sugar mill of medium scale was established in 1946 at Biratnagar, and with a view to being self sufficient in sugar production, an agreement with Soviet Union in 1959 to establish a large scale sugar mill at Birganj namely Birganj Sugar Factory with a crushing capacity of 1000 tons of sugarcane per day was established. Later a third sugar mill namely Mahendra Sugar and General Industries was set up at Bhairahwa. Besides these there are four large scale enterprises namely Indushankar Sugar Industry, Lumbini Sugar Factory, Shree Ram Sugar Mills Ltd. and Everest Sugar Mill operating at Hariwan of Sarlahi district, Sunwal of Nawalparasi district, Garuda of Rautahat district and Ram Nagar, Goushalla of Mahottari district respectively. There are also seven *Khandsari* mills and some molasses industries in operation which undoubtedly make sugarcane cultivation more extensive.

The farmers are recently realising commercial farming of sugarcane after the establishment of sugar mills. Sugarcane cultivation is becoming more and more attractive to farmers, its importance lies in the fact that out of 75 districts, sixty districts produce sugarcane. Major districts producing sugarcane are located mostly around sugar factories. The intensive and commercial farming of sugarcane is confined in ten major districts of Nepal namely Morang, Sunsari, Sarlahi, Siraha, Bara, Parsa, Rautahat, Rupandehi, Nawalparasi and Kapilvastu. If careful study is made of cane growing districts we can discern three distinct cane growing belts. First belt includes parts of mid-eastern tarai covering the districts of Sarlahi, Bara, Parsa and Rautahat; second belt comprises the entire-western tarai covering the districts of Nawalparasi, Rupandehi and Kapilvastu, and the third belt covers the parts of eastern-tarai including the districts of Morang, Sunsari and Siraha.

SUGARCANE FARMING IN NEPAL : SUBSTANTIATION FROM PARSA DISTRICT

Sugarcane is farmed in most of the warmer river basin of tarai belt. Jeetpur VDC is concerned in cane farming which started here since the ancient time for family consumption. It has developed commercially only after the establishment of Birganj sugar Factory.

Though the history of sugarcane farming in this VDC is not definitely known, the informations collected from the local people reveal that sugarcane farming history in this VDC can be classified into two periods: sugarcane farming before 1928 and after 1928.

Development of Sugarcane Farming Before 1928

Historical development of sugarcane farming before 1928 is considered as the beginning period of sugarcane farming in this VDC. According to some old aged people of this VDC sugarcane has been cultivating since one hundred thirty five years ago. According to them sugarcane plants were brought here by Muneshwar Ram of Alau VDC who was migrated from Sitamadhi district of Bihar, India. Having influenced with Indian culture Muneshwar Ram at that time had become quite familiar with various crops being cultivated in Bihar. Taking some variety of cane seeds from Riga, the then famous sugarcane farming place of Bihar, India, Muneshwar Ram started sugarcane cultivation at Alau VDC and gave impetus to local farmers for cultivation. At that time people used to cultivate sugarcane in a very limited area for fulfilling their local necessity, not for commercial purposes. But soon after the growing demand of sugarcane made Alau and its nearby VDCs most of the popular regions which latter led to the establishment of a sugar mill, currently known as Riga Sugar Company Ltd., at Riga Village of Sitamadhi district of Bihar by the then British Government in 1928 A.D. No doubt, the establishment of Riga Sugar Co.

Ltd. resulted a land mark impact in the method of sugarcane cultivation of Alau and its nearby VDCs.

Development of Sugarcane Farming After 1928.

After the establishment of Riga Sugar Co. Ltd. at Riga, the mill to get raw material, started to facilitate cane growers by agro-tools and equipments, chemical fertilisers, agricultural loan, improved varieties of seeds and advance technology of sugarcane cultivation. In this regard, the mill also extended its overheads to the growers of northern villages of Nepal to fulfill its huge demand of raw materials. The cane growers had encouragements to have better margins in cane farming and as a result they started cultivation in larger areas in accordance with the direction of mill. Farmers were much impressed with having improved varieties of sugarcane and gradually giving up the inferior varieties, they followed improved varieties.

Area, Production And Productivity Of Sugarcane In Nepal

Sugarcane is a traditional cash crop of Nepal. It's cultivation is fairly widespread but so far large scale production is concerned, it has a tendency to be concentrated near the sugar mill or traditional sugar crushing centres. Physical condition and the processing facility seem to be the important locational factors so far the distribution of sugarcane growing area is concerned. Almost all sugarcane farms are within the radius of 30 km. from sugar mill. Area, production and productivity of cane are correlated. Production is effected by area and productivity as well marketing and price are equally responsible. The other agents responsible for it are seeds, improved agricultural know how and cultural practices and agricultural input. Data on annual area, production and productivity of cane from 1964/65 to 1995/96 are presented in Table 1. As it can be seen from the table, the area for the cultivation of sugarcane is increasing every year. Production of cane is increased as the sugarcane cultivated area increased. The table clearly shows that cane farming is in increasing trend not only in the quantitative use of land and quantitative volume of production but on the productivity also. There is an increment in the cane area during three decades of cane cultivation. In 1967/68 the area under cultivation of cane was just 11010 thousand hectares, which further reached to about five times, 44820 hectares, in 1995/96.

From 1985/86 there has been an increasing trend in cane area. The area increased from 23010 hectares to 44820 hectares. The increasing trend in the area of cane cultivation during these periods is undoubtedly due to the remunerative price the sugar mills provided to cane growers compared to the government's minimum purchasing price (Table 2). So the remunerative price offered by the sugar mills to cane farmers is the major

cause of increasing cane area, though, the extension of sugar manufacturing unit, seeds improvement in farming practices and agricultural inputs are also equally responsible factors in this context.

The production of sugarcane has been increasing trend. In the year 1967/68 cane production was only 169483 metric tons which further raised to 1568700 metric tons, 825.58 percent in 1995/96.

As it can be seen from the Table 1 that the productivity of sugarcane is very appreciable, range of yields varied from 15.36 ton/hactare to 35.63 ton/hactare between the years 1967/68 to 1995/96.

Table 1
Area, Production And Productivity Of Sugarcane In Nepal
(Area in Hactare, Production in Metric Ton, Productivity in Ton/Hactare)

Year	Area	Production	Productivity
1967/68	11010	169483	15.36 +
1968/69	12303	189381	15.75 +
1969/70	13490	215680	16.62 +
1970/71	14390	235610	16.37 -
1971/72	15110	244820	16.20 -
1972/73	14890	245640	16.50 +
1973/74	15870	266760	16.81 +
1974/75	15200	251430	16.54 -
1975/76	15080	253030	16.77 +
1976/77	17990	311380	17.30 +
1977/78	22880	387100	16.91 -
1978/79	21990	369930	16.82 -
1979/80	22420	385070	17.17 +
1980/81	23960	479780	20.02 +
1981/82	25170	590000	23.44 +
1982/83	25410	616090	24.24 +
1983/84	22740	509070	22.38 -
1984/85	17480	408260	23.35 +
1985/86	23010	558340	24.26 +
1986/87	24910	616580	24.75 +
1987/88	29520	814400	27.58 +
1988/89	29550	903010	30.56 +
1989/90	31500	988300	31.37 +
1990/91	32960	1105960	33.53 +
1991/92	37410	1291340	34.52 +
1992/93	38330	1365870	35.63 +
1993/94	40290	1430570	35.50 -
1994/95	43583	1469214	33.71 +
1995/96	44820	1568700	35.00 +

Source : Statistical Year Book of Nepal, 1995, NPCS, CBS,HMG/N.
Agriculture Statistios of Nepal, 1986, MOA, ASD, HMG/N.
Statistical Infromation on Nepalese Agriculture 1995/96,
MOA,ASD ,HMG/N.

Note : Plus denotes gain, Mines denotes loss.

Table 2
Fixation Of Cane Price By HMG/N And Birgunj Sugar Factory From
1964/65 to 1995/96

Fiscal Year	Price of HMG/NRs Per Metric Ton	Price Of BSF NRs Per Metric Ton
1964/65	85.70	85.80
1965/66	85.70	85.70
1966/67	80.00	80.70
1967/68	120.00	150.00
1968/69	120.00	150.00
1969/70	120.00	145.00
1970/71	120.00	135.00
1971/72	120.00	135.00
1972/73	120.00	145.00
1973/74	120.00	155.00
1974/75	180.00	190.00
1975/76	230.00	240.00
1976/77	230.00	260.00
1977/78	230.00	260.00
1978/79	190.00	190.00
1979/80	210.00	210.00
1980/81	280.00	320.00
1981/82	280.00	300.00
1982/83	280.00	300.00
1983/84	280.00	320.00
1984/85	280.00	340.00
1985/86	550.00	400.00
1986/87	350.00	410.00
1987/88	350.00	445.00
1988/89	460.00	520.00
1989/90	560.00	660.00
1990/91	600.00	700.00
1991/92	600.00	700.00
1992/93	630.00	720.00
1993/94	630.00	860.00
1994/95	630.00	910.00
1995/96	630.00	1050.00

Source : Birgunj Sugar Factory, Birgunj, Parsa.

CONSTRAINTS OF SUGARCANE GROWERS

Agricultural Credit

Agricultural credit is essential for people who are devoted to the cultivation of sugarcane, for purchasing of improved seeds, chemical fertilisers and for farm works. Previously Birgunj Sugar Factory used to extend loans directly to the farmers but now ADB/N provides loans to the farmers for the cultivation of sugarcane.

Marketing Facility

An efficient marketing system is of vital importance. Marketing bridges the gap between producers and consumers, and marketing channels occupy an important place and render valuable services to the society. Cane market is seasonal in nature. It does not have market throughout the year as other cash crops. It is perishable because it dries quickly and ultimately it becomes useless. Storing does not add value to this product. Thus cane marketing starts immediately after harvest.

In Nepal the market structure of sugar cane is monopolistic in nature because there are few buyers, sugar mills, of sugarcane each controlling certain specific supply areas, while sellers are many. Therefore, the monopolistic structure of the cane market should be dismantled by establishing sugarcane purchasing cooperative society.

Lack of Improved seeds

Much of sugarcane seeds are imported from India and are distributed to growers. Occasionally non availability of desired quantities of improved seeds and chemical fertilizers in time greatly impedes in cultivation of sugarcane.

Pricing Policy

The price of sugarcane is generally fixed by sugarmill and it remains constant for a number of years. Low prices received by the farmers for their product are making them disinterested in cane cultivation. The market price of cane is gradually becoming more uncompetitive to those of other crops. There is no pricing policy and price support for cane in the country. The annual cane prices also greatly vary from year to year.

Irrigational and Transpotation

Irrigation facility for the cultivation of sugarcane in this area is inadequate and this has resulted in low productivity. The sugarcane has to be crushed within 24 hours of its harvesting. Delay in crushing will reduce the sugar recovery percentage. Lack of good network of rural roads in the sugarcane growing districts seems to be a serious bottleneck.

Cane Cultivation in Marginal Land

Beause of unremunerative nature of cane cultivation, cane cultivation is being more and more pushed to the poor marginal land category. Many cane farmers now devote their poor marginal land with low soil fertility for cane cultivation with main purpose of meeting domestic needs.

CONCLUSION

The economy of Nepal is based mainly on agriculture and production of sugarcane is one of the major cash crop. It occupies third position after oilseeds and potato, earlier jute and tobacco, in its contribution of the total gross value of agricultural output.

Physical condition and the processing facility seem to be the important locational factors so far as the distribution of sugarcane growing areas is concerned. Firstly, sugar cane requires comparatively warm climatic condition throughout the year and adequate rainfall. This requirement confirms the growing of sugarcane in the terai and inner terai. Secondly, cane crushing facility affects greatly in distribution of sugarcane growing areas. The traditional cane crushing has limited crushing capacity and does not require large quantity of raw cane. The cane has to be crushed within 24 hours of the harvesting. Hence, the location of sugar mill influences to a considerable extent for the distribution of sugarcane growing areas. Because of such locative effect most of the sugarcane growing areas are concentrated around the sugar mills. Almost all sugarcane farms are within the radius of 30 kilometer from sugar mill.

From the case of Jeetpur VDC it can be said cane farming is playing significant role to generate cash income of the farmers. The scenario of sugarcane farming is bright with comparision to other cash crops, as farming is comparatively increasing in the large scale both in terms of area cultivation and the production after having known its commerical importance, though the production and productivity of cane have not incresed in comparision to its area and the families involved. Causes of low yield of cane are undoubtedly due to the factors such as lack of irrigational and drainage facility, low standard of agronomic management, inadequate application of agricultural inputs, weather, pest and disease, poor varietal position, inadquate plants protection measures and lack of capital and mechanisation.

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