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SUGARCANE CULTIVATION FOR SUGAR INDUSTRY AT SEVENAGALA

Summarised and translated from the report of a project carried out by K T Dilan, a student in Grade 13 at D S Senanayake College, Colombo

This study was performed on sugarcane cultivation in Kovulara farmer village in relation with sugar factory at Sevenagala and Sevanagala Sugar manufacture. *The report of the project is comprehensive and it consists 14 A4 size pages and six photographs showing various activities of sugar cultivation.*

Introduction and Climatic factors

Sugarcane is a useful plant which belongs to the family *Graminiae*. Its botanical name is *Saccharaum officinarum. The details on climatic factors which suit to sugar cultivation such as soil, temperature and rainfall have been reported in detail.* The common soil type in this area is Reddish Brown Earth and its pH varies between 6.0 and 7.5. As the temperature prevails between 28 - 32^{0}C, a dry climate exists in the area. A rainfall of 50" - 75" is obtained distributed throughout the year, which is quite sufficient for sugarcane cultivation. The sugarcane variety which has been selected as suitable for cultivation in this area is mainly C. O. 775 in addition S. L. 8306 and S. L. 121 have also been identified as suitable. The damage to sugarcane cultivation by insects is at a minimum but a considerable damage is caused to the cultivation by wild elephants and wild boar.

Land preparation

Methods of land preparation for sugarcane cultivation have been indicated together with the details of assistance received by farmers from the factory. The factory has given 0.75 hectare of land to each farmer who cultivates with the support of irrigation systems, 1/2 acre of muddy land for paddy cultivation and 1/2 acre of land for building a house.

Before cultivation activities are started, deforestation is being done by farmers by cutting and burning the forests and also by clearing the land using heavy vehicles like bulldozers.

The farmers who have engaged in cultivating with the aid of irrigation systems generally level the lands. But other farmers take water to a higher elevated place of the land and allow water to uniformly spread throughout the land. One strategy which is practised in this cultivation is the planting on the contour which helps to minimise the soil erosion from rain.

To facilitate the water drain off, a drain is built everytime. Once the land is prepared in this way, the loosening of soil is done upto a depth of 18" by a process unique to this cultivation. Once the soil is eased in this way, it is then broken up. After this, the farmers prepare the land by the building of drains and bunds on the contour in order to minimise soil erosion.

Planting of seed sugarcane

The sugarcane seeds(pieces) which are used for normal planting are taken from 7 to 8 months old sticks. Only recommended sugar varieties for the area are selected. The farmer also gives attention to other important factors related to selecting of seeds. Farmers usually say that about 37000 - 39000 pieces of sugarcane are required to cultivate a extent of one hectare. When planting, sugarcane sticks are spread over the land and a soil layer is spread over it

and pressed down by foot. During sprouting, the first shoot emerges within a period of 7-21 days after burying. Farmers expect that about 7- 8 plants are arised from one clump.

Water Supply

The water is received for sugar cultivation in this area by rain and irrigated water. Watering of the plants during the first 11 months is essential and a water supply of 3' is required per week during this period. The irrigated water is received from the left canal of the Walawe reservoir. When the plant is 11 months old it is well grown and water will not be required as maturation starts from this period.

Manure and use of weedicides

The cultivation should be maintained without weeds. To achieve this, weeds are controlled by mammotting. Diuron is sprayed as a weedicide at the age of 11/2 - 3 months of the cultivation. Before planting sticks 'Basela' manure mixture is applied. After 11/2 months of planting, first surface application of manure is done using Ammonium sulphate and a second application of Ammonium sulphate manure to the plantation is done before completion of 3 1/2 months.

Diseases

Grassy shoot disease, Smut disease and damages to shoot and leaf are the main diseases which have affected the plant population. *The details of symptoms, control of the diseases, spread, and disease causing insects have been studied and reported.*

Harvesting

Farmers are aware that the right time for harvesting is reached when the sugarcane is 12-14 months old. The maturity is confirmed by a test. The sugarcane is cut as sticks from the ground level using a knife of a special type. Human labour is used for cutting of sugarcane. Afterwards the cut pieces are transported to the factory within a period of 24 hours.

The problems faced by farmers, the main partners, of the industry have been identified by this study. They are summarised below:

- The farmers have been exploited by sugarcane cutters
- Farmers cannot afford the high costs charged for sugarcane cutting
- Loss of large quantity of sugarcane due to irregular cutting of sugarcane sticks at a height of about 6-8" from the ground level. This has affected the income of farmers
- Not cutting the sugarcane according to the standards required by the factory
- Rejection of sugarcane by the factory due to presence of wastes in the sugarcane has caused a another loss for the farmers since farmers will have to bear the cost for cleaning of harvest
- It is necessary to take care to minimise the unnecessary profits made by external people apart from farmers

As the cultivation is based purely on the farmer, the sugar production varies with the productivity of the cultivation. It is important to note that a good harvest could be obtained from sugar cultivation that would help to increase the sugar production. The economy of the country could be enhanced by increasing sugar production while decreasing imports of sugar.