



Sugarcane Farming with Jaggery Production – A sweeter scope for Farmers in Assam

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INTRODUCTION

The cultivation of sugarcane primarily through cuttings is called sugarcane farming. Coming from the Poaceae family with the botanical name *Saccharum officinarum*, sugarcane stands slanting, sweet & tall in the fertile fields of cultivation. From quenching the thirst of urban citizens with a glass of chilled juice to eaten raw, sugarcane also holds paramount importance in religious & cultural aspects of Assamese households. Sugarcane is widely cultivated more or less in all the districts of Assam with Golaghat, Karbi Anglong, Nagaon, Sonitpur and Dima Hasao being the major growing districts. Like other cash crops, sugarcane is also highly potent in immense cash generation for the farmers while providing scope & employment opportunities for rural youth. Sugarcane cultivation almost covers 30 thousand ha. of land of Assam with different varieties adapted under different growing conditions and locations. It is interesting to say that even though cane cultivation demands maximum job of the farmer, jaggery takes away all of the attention, i.e. jaggery locally called *gur* is extensively used in almost all Assamese household. Hence maximum sugarcane cultivation is aimed for the sole purpose of jaggery production by the farmers in the major sugarcane growing districts of Assam.

Scope of jaggery production in Assam

Majority of the village households starts their morning with a cup of red tea and a bite of jaggery instead of processed sugar. Various food items cooked or prepared during bihu and other festivals such as rice cake/*pithas*, *jolpaan*, *laddus* etc are incomplete without the exploitation of jaggery under flame.

Jaggery is also preferred by individuals showing concern for fitness and nutrition as a healthier option as compared to other forms of sweeteners. Jaggery also provides nutrients such as magnesium, iron, manganese and potassium thus giving a competitive advantage over processed sugar. A natural sweetener added to delicacies can also enhance the taste and texture. Moreover as there is a growing global concern for environmental sustainability in agriculture, more emphasis is given on the value addition concept of harvested products. This has led to rise to the reinforcement over manufacturing of jaggery by the sugarcane farmers. Jaggery production is mainly carried out near to the farms of sugarcane cultivation so as to minimize the constraints regarded to transportation and storage or sometimes carried out in the farmers' household itself. Usually, a middleman is involved during the manufacturing & marketing of the jaggery produced. Jaggery manufacturing generally starts from the month of December on the onset of bihu festival with a view to meet the demand of jaggery for the celebration. It also continues till the month of March and April.

Scope of Sugarcane Farming

With the capability of sugarcane to quench our thirst, it is itself one of the thirstiest crops in regard to nutrient & water requirement due to its large biomass production. Well-drained fertile & high fertile soil is what its cultivation prefers. Grown usually in rainfed areas, the planting season is generally kept upto April or May due to the high moisture stress in the early period. The peak heavy monsoon showers received in the month of June to September in Assam is enough to meet the water requirement of the crop for set germination & planting. It is well known that the optimum water requirement of the crop is 1000–2000 mm which can be met at a region like Assam where average annual rainfall is 2300 mm/year.

Climatic factors

The quality of cane produced & juice formed is directly correlated with the changing climatic

condition. Temperature along with rainfall patterns plays a major role among all the meteorological parameters. Duration of sugarcane crop usually lasts 10–12 months and a warm, humid weather is what the growth phase demands for. While Assam experiences a temperature rise of 35–38°C in summer serves for the purpose. Prevalent temperature during the month of March/April encourages bud germination promoting planting of sets for spring.

Additionally, the ripening & sucrose accumulation of sugarcane usually occurs at a temp not less than 7°C which can also be easily attained in this region. Drier & cooler climate during winters accelerates sucrose accumulation in the stalk with cessation in vegetative growth. A temperature range of minimum 18°C & maximum of 29°C leads to transfer of energy in sucrose accumulation & cane maturity restricting vegetative growth. The crop attains maturity during the month of November–December depending on the variety cultivated. It is worth mentioning that nowadays the regional shifting or diversification of sugarcane growing areas is also witnessed where sugarcane is also cultivated in the char areas of Assam in the autumn season, just after cessation of flood.

Soil factors

The upland districts of Dima Hasao and Karbi Anglong in the southern part of Brahmaputra provides ideal clayey loam and sandy loam soil texture for sugarcane farming. In addition deep soils of the foothills of Karbi Anglong, Dima Hasao, Sonitpur and Cachar with a depth of water table >2m & up to 10m with ideal drainage capacity proves to be a green flag for sugarcane cultivation. The medium land situation of Nagaon, Morigaon, Sivasagar and Jorhat also offers preferable silt clay loam textured soil for cultivation of sugarcane.

CONCLUSION

An important cash crop, sugarcane acts as a potent source for income generation through raw

cane production along with post-harvest products like jaggery & sugar. ThiNagaraja “Sustainable farming practices in sugarcane cultivation”, Kisan world, A journal of Agriculture and Rural Development, Vol 40, Jan 2013, pp. 28 – 31s trendy combination of sugarcane & jaggery production goes hand in hand opening new doors of opportunities for Assamese farmers. Although there has been a consequent decline in the number of sugarcane mills in the state due to lack of capital,adequate market facilities and migration of labours to tea industry. The sugarcane farms are rapidly replaced by tea gardens to meet the export market demand. However there is always a growing demand and increase in price of jaggery and sugar. Hence there is an ample scope for sugarcane farming and its industrialization is always possible with the adoption of more strategies

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