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PRODUCTION PACKAGE OF DESSERT SUGARCANE

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Sweet sorghum (*Sorghum bicolor* (L.) Moench is C_4 crop, which can grow in warm season. It can tolerate drought, salinity and acidic condition. It can adopt in subtropical and temperate regions. It is a short-day crop. The native of sweet sorghum is Africa. It is cultivated in Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh, Madhya Pradesh, Uttar Pradesh, Rajasthan and Gujarat. The total duration of crop was 115 - 125 days. It is known as "sugarcane of dessert" and also "camel among the crops" due its tolerance of drought. Sweet sorghum is the only crop which provides both grain and stem, that can be used for sugar, alcohol, syrup, jaggery, fodder, fuel, bedding, roofing, fencing, paper and chewing.

The field should be ploughed once or twice till it gets fine or good tilth. Apply 12.5 t ha^{-1} of farmyard manure at last ploughing. The ridges and furrow / broad bed and furrow are prepared for sowing of crop. The two varieties of sweet sorghum are cultivated in Tamil Nadu, they are SSV84 and RSSV9. The seed rate of sweet sorghum a.i. 8 - 10 kg ha^{-1} with spacing of 45 x 15 cm. The seed treatment should be done prior 24 hrs of sowing with captan or thiram 2g kg^{-1} of seeds or 3 packets (600g) of Azospirillum. The method of sowing suitable for sweet sorghum is dibbling and thinning is done at 12 - 15 days after sowing.

The nutrient recommendation of sweet sorghum was 120:40:40 kg ha^{-1} of Nitrogen, Phosphorous and Potassium. Though it is rainfed crop, irrigation is important at vegetative and flowering stages. The spraying of pre-emergence herbicide atrazine with 0.5-1 kg ha^{-1} helps to control the weeds. The important parasitic weed in sweet sorghum field was striga that can be controlled by spraying 2,4 D with 2 kg ha^{-1} or by crop rotation with cotton, sunflower and groundnut.

The major pest in sweet sorghum is shoot fly, earhead bug and stem borer, whereas diseases are downy mildew, leaf spot, grain mould and ergot. This would affect the yield of sweet sorghum, recommended control measure should be carried out to avoid this losses.

The optimum time for harvest of the sweet sorghum is soft dough stage (average duration of 110 – 115 days) and the brix content should be 18° brix. The average yield of sweet sorghum is 40 - 60 t ha^{-1}. The juice yield of sweet sorghum is 40 % and it contains 15 - 18% of fermentable sugars. The sugar includes sucrose (70 - 80%), fructose and glucose. Most of sugar is present in stalk and

only 2 % in leaves and inflorescences. It has rationing ability which will reduce the seed cost and duration of crop in next season.

Sweet sorghum can be cultivated in dry areas for sugar production. During off season of sugarcane, sugar industry can procure sweet sorghum as raw material which increases the productivity. The industry can make a contractual agreement with farmers for cultivation of sweet sorghum as like sugarcane.

Reason behind the least popularity of sweet sorghum is there is no awareness among the people about its profitability and drought resistance. High yielding variety and quality seeds should be produced and available for farmers. For production of sweet sorghum, standard agro technique should be identified. The government shall provide scheme and policy for sweet sorghum cultivation. There are no industries for sweet sorghum processing.