

# **TROPICAL SUGARBEET**

## **Production technology**

### **1. What is sugarbeet?**

- It is a temperate crop but now it is suitable for tropical regions like Tamil Nadu
- 12 to 15% sugar content
- 5 to 6 months old tuber crop
- constitutes 45% of world sugar production

### **2. What is the use of sugarbeet?**

- Used for sugar production
- Used as raw material for production of Ethanol as bio-fuel
- Beet top and beet pulp used as cattle feed

### **3. What is the importance of sugarbeet?**

- Because of increasing demand for fuel, saving of Rs.12000 crores as foreign exchange through ethanol based fuel.
- Continuous supply of raw materials to sugar factory because of continuous demand for ethanol necessitate continuous functioning of sugar mills
- Less water requirement

### **4. Where the sugarbeet is cultivated in Tamil Nadu?**

It will be cultivated in tropical regions of Tamil Nadu

### **5. What are the suitable varieties for sugarbeet cultivation?**

Suitable varieties for tropical areas are Pasoda, HI 0064 and Doratea

### **6. Where can we buy the seeds of sugarbeet?**

- At present, sugarbeet seeds are not produced in our country
- Arrangements can be made to get through some seed agencies

### **7. What is the suitable season for sugarbeet cultivation?**

October - November (*Rabi*)

### **8. What are suitable soil types for sugarbeet?**

- Well drained, without water stagnated good aggregate soil type are suitable (sandy loam, clay loam)
- Soils with a pH of 6.5 to 8.5
- Can be cultivated in saline and alkali soils also

### **9. What is the seed rate / acre ?**

- 40,000 Numbers of 'designer' seeds (or)
- Require 2 pockets @ 20000 seeds (600 gram) (or)
- 1.2 kg seeds

### **10. How the seeds are sown?**

Dipple one seed per hole at 2 cm depth at a spacing of 20 cm between the seeds. The ridge to ridge spacing is 50 cm.

### **11. How the fertilizer management for sugarbeet will be done?**

Apply fertilizer based on soil test. In the absence of soil testing facilities, the following fertilizer dose can be applied.

<b>Basal dressing</b>	<b>(Acre)</b>
1. FYM	10000 kg
2. Nitrogen	30 kg
3. Phosphorus	24 kg
4. Potash	24 kg
5. Biofertilizer	
○ Azospirillum 10 pockets (2 kg)	
○ Phosphotobacteria 10 pockets (2 kg)	

#### **Top dressing – Nitrogen**

- First top dressing – 15 kg N at 30<sup>th</sup> Day after sowing
- Second top dressing – 15 kg N at 60<sup>th</sup> Day after sowing

## **12. How the weeds are managed in sugarbeet?**

- Dissolve pendimethalin 1.5 lit (stomp) in 300 litres of water and sprayed with hand sprayer on 3<sup>rd</sup> day after sowing.
- Hand weeding twice on 25<sup>th</sup> day and 50<sup>th</sup> day after sowing and earthing up the soil

## **13. What is the suitable water management practice for sugarbeet?**

- Irrigation should be given for once in 8 – 10 days for clay based soils and 5 – 7 days for sandy based soil types
- Normally the crop growth will be stunted in water stagnated area, hence irrigate the field based on soil types.
- Stop irrigation 2-3 weeks well in advance before the harvest of beet tuber
- To facilitate tuber harvest from the soil, irrigate the field just before harvest if the soil is too dry and hard

## **14. What are the diseases of sugarbeet and their control?**

- The major diseases are cercospora leaf spot, damping off or collar rot, powdery mildew and Fusarium yellow.
- To control damping off or collar rot, drench the soil at the base of plants with Ridomil MZ 72 or Blue copper 50 @ 2.5 – 3 g / litre of water.
- To manage other diseases, spray any systemic fungicides on need basis.

## **15. What are pests of sugarbeet and their control?**

- The major pests are spotted cutworm, white grub, beet armyworm and aphids.
- To control these pests, spray suitable systemic insecticides on need basis.

## **16. When the sugarbeet is harvested?**

- Average duration of sugarbeet is 5 to 6 months
- In matured plants, the outer lower leaf whorls near the base of plant showed yellow colour.
- Brix meter shows 15–18% of Brix reading, then the beet tuber can be harvested.