

PRODUCTION TECHNOLOGY OF TROPICAL SUGARBEET

A.S. CHAVAN

Department of Agronomy, Marathwada Krishi Vidyapeeth, PARBHANI (M.S.) INDIA

The tropical sugarbeet hybrids are suitable for cultivation (Couvery, Indus and Shubhra). The duration of these tropical hybrids will be 5 to 6 month depending on hybrids and climatic conditions prevailed during crop growth period.

Climate and soil :

Tropical sugarbeet requires good sunshine during its growth period, sugarbeet can be grown during October to march with a well distribution rainfall of 300 to 350 mm across the growing period. This condition favours vegetative growth and acts as a base for root enlargement. However, high soil moisture or continuous heavy rain may affect development of tuber and synthesis of sugar.

The sugarbeet crop requires an optimum temperature range of 20-25 for sugar accumulation. All kinds of well drained deep soil (45 cm) with stable and porous soil structure and sandy loam to clayey loam texture are suitable. Optimum pH range is from 6.5 to 9.0 but it can also grow in saline and alkaline soil. The soils with good organic matter status are more favorable for sugarbeet.

Season:

Sugarbeet is a cold weather crop season (*Rabi*). Hence, sugarbeet is sown from October to November and harvested during April to May.

Field preparation:

Sugarbeet being a root requires deep ploughing (45cm) followed by 2 to 3 ploughing. To obtaining a good soil tilth condition for favorable seed germination and root development. After proper leveling to ensure adequate drainage, ridges and furrow are formed at 50 cm apart.

Seed and sowing:

To maintain the required plant population of 1,00,000 ha⁻¹, use 5 pockets designer seeds. One pocket contains 20,000 seeds weighing 600g. The recommended spacing is 50x20 cm. The designer seed is dibbled at 2 cm depth on the top of the ridges at 20 cm apart at one seed per hole.

Weeding and earthing up:

The crops should be maintained weed free up to 75 days Pendimethalin @ 3.0 lit/ha or pretilachlor 50 EC @ 1.0 lit/ha can be dissolved in 500 liters of water and sprayed with hand operated sprayer on 3rd day after sowing. Followed by hand weeding on 25th and 50th days after sowing the earthing up operation coincides with top dressing of N fertilizer.

Manures and fertilizers:

Application for farm yard manures @ 12.5t/ha, Azospirillum and phosphobacteria @ 12.5 kg NPK/ha as basal 75 :75:75NPK kg/ha and 75 kg N/ha as top dressing on 30 and 60 days after sowing.

Irrigation:

Sugarbeet is very sensitive to water stagnation at all stages of its growth. Irrigation should be based on soil type and climatic conditions. Pre-sowing irrigation is essential at the time of sowing, since sufficient soil moisture is a pre-requisite for proper germination. First irrigation is crucial for the early establishment of the crop for light textured sandy



loamy soil, irrigation once is 5 to 7 days and for heavy textured clay loam soil irrigation ones in 8-10 days is recommended. Light and frequent irrigation is recommended for maintaining optimum soil moisture. The irrigation may be stopped at least 2 to 3 weeks before harvest. At the time of harvest if the soil too dry and hard it is necessary to give pre harvest irrigation for easy harvest.

Harvesting and yield :

Sugarbeet crop matures in about 5 to 6 months. The yellowing of lower leaf whorls of matures plant and root brix reading of 15 to 18 per cent indicate the maturity of root for harvest. The harvested root should be handled as gently as possible to remove soil and trash to minimize the beet breakage and bruising to get quality beets. The average yield of roots is 80-100 tones/ha.

Harvesting should be timed so that the root reach the factory within 48 hours for processing till such time the roots should be retained in the field.

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