PACKAGE OF PRACTICES

CROP: BEET ROOT

Sl. No	Particulars/operations /Practice	Details of operation
1	**Suitability for the area/ Agro climatic zone**	Temperature Beetroot is a cool-weather crop that is hardy and tolerates some freezing. It grows best in spring and autumn. Beetroot seeds germinate at soil temperatures from 4.5 to 30°C, with the optimum being 18 to 24 °C.
2	**Land / Soil**	Beetroot does best on deep and well-drained, loose, loamy to sandy soils. Beetroot prefers a soil pH of 5.8 to 7.0, but can tolerate a pH of up to 7.6.
3	**Season/sowing time**	The sowing times differ with production areas. In winter rainfall areas, seed may be sown from August to end of March and from end of August to middle of March in areas with cool summer.
4	**Seed rate**	7-8 kg/ha
5	**Preparation of Main field and planting**	The seedbed should be well prepared by ploughing 15 to 20 cm deep to break up clods. The soil should also be as level as possible, have a good crumb structure and enough moisture, and be free of rotted plant material.
6	**Spacing**	25cm×45cm
7	**Seed treatment before sowing**	All seeds to be planted should be washed in running water for at least 2 hours. The seed is soaked in a 0.5 % Aretan solution for 20 minutes after washing and dried for at least 6 hours at room temperature before sowing.
8	**Manures and Fertilizers**	Nitrogen fertilizer is important and 120-160 kg/acre of limestone, ammonium nitrate or ammonium sulphate, depending on soil analysis, are applied in 2 or 3 dressings during the growing season. About 60 kg/acre of nitrogen is usually applied at planting time and the rest when the plants are about 10 to 15 cm high. A total of 200-240 kg/acre of superphosphate and 80-120 kg/acre of potassium chloride are applied just before sowing. Alternatively, a fertilizer mixture of 2:3:2 (22) at 400-480 kg/acre may be applied. It should be noted that these are general recommendations and actual amounts of fertilizers should be based on soil analysis.
9	**Irrigation schedule**	The soil should never be allowed to become dry and it should be kept moist to a depth of 20 to 25 cm. The plantings should receive light water applications daily until the young seedlings come up. About 30 mm of water should be supplied per irrigation. Large fluctuations in soil moisture content will result in poor quality roots that are malformed and have many small hairs or side roots.
10	**Weeding/ inter-cultivation**	Weeds must be controlled before they can compete with beet seedlings and interfere with their growth. All weeds between the rows must be removed by hand to avoid damaging the roots. Weed control can also be achieved chemically by applying herbicides and instructions on the container should be thoroughly followed.

11	**Pest and Disease control**	**Pests control:** **Aphids (*Aphis fabae*) -** Spray Avant @2ml/ltr , at 15 days interval **Red spider (*Tetranychus cinnabarinus)* -** Spray Oberon 0.5@ml/ltr , at 15 days interval **Disease control:** **Cercospora leaf spot (*Cercospora beticola*) -** Crop rotation • Seed treatment with Captan • Avoiding over watering **Downy mildew (*Peronospora* schachtii) -** Spray Amistar @1ml/ltr at 15 days interval, Maintain sanitation **Scab (*Actinomyces scabies*) -** Soil analysis to determine level of lime and get advice on that **Root rot, damping-off (*Phoma betae*) -** Seed should only be sown in soils with a good structure. • Seed should be treated with thiram. • Practice crop rotation. • The crop should not lack sufficient boron. • Planting should be at the right time and not too deep. **Heart rot -** It is advisable to plant resistant cultivars.
12	**Expected yield**	Crop is ready for harvest at 70-80 days after sowing. Yields 8-10 tons/ha from a well managed crop.