

Nursery techniques in Chinese potato

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Chinese potato (*Plectranthus rotundifolius*) is one of the important minor tropical tuber crops grown in India, Sri Lanka, South East Asia and parts of Africa mainly for edible purpose. In India, it is mainly cultivated in Kerala (Thrissur, Palakkad, Kasaragod and Kannur districts), Tamil Nadu (Tirunelveli, Tenkasi, Tuticorin, Virudhunagar and Kanyakumari districts) and in tribal settlements throughout the country. It is a bushy herbaceous annual with succulent stems and aromatic leaves. It grows well under tropical and sub tropical conditions. The crop is propagated by stem cuttings (suckers). Stem cuttings are raised from healthy seed tubers of Chinese potato.

Nursery area of 500 m² (12.5 cents) is required to produce sufficient stem cuttings (suckers) for planting in one hectare of land. Nursery is prepared approximately 1.5 to 2 months prior to planting. Mature, disease free and healthy seed tubers that weigh about 15-20 g are used for planting in nursery beds of 15 cm height and width of 1 m and convenient length. A total of 75-100 kg seed tubers are required for planting in 500 m² area. Farm yard manure or compost is applied @ 1 kg m⁻² and ridges/mounds are prepared at a spacing of 45 cm. The seed tubers are planted at a depth of 4 cm in rows with 45 x 30 cm spacing.

Irrigation is given immediately after planting to ensure adequate soil moisture for establishment of suckers. The tubers start sprouting within 15 days and grow to a height of 15-20 cm in about three weeks time. To ensure good vegetative growth, top dressing with urea @ 5 kg is applied at three weeks after planting. Irrigation is provided once in four days. The stem cuttings get ready for planting in the main field at about 45 to 60 days after planting. The stem cuttings of 10-15 cm length from top and middle portion are collected and stored under shade in bundles with intact leaves before planting in the main field. The plants can also be retained in the nursery for another 2-3 weeks for the onset of monsoon. To enable rapid multiplication, single node cuttings are planted directly in the secondary nursery. Such single node cuttings produce auxiliary shoots within one week. To control leaf folding caterpillars and stem borers, dipping the stem cuttings in insecticide solution (Dimethoate 30 EC @1.7 ml/l) for 10 minutes prior to planting is recommended as seed treatment.



Protocols



Healthy seed tuber



Land preparation for nursery



Nursery field view



Matured suckers



Collection of stem cuttings



Healthy stem cuttings



Stem cuttings with 10-15 cm length



Planting materials

Advantages

- Production of pest and disease-free healthy planting materials
- Large scale multiplication of planting materials from minimum area
- Cost effective and easy to practice
- Uniform crop establishment in the main field