

# Nursery techniques in sweet potato

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**SWEET POTATO** is a herbaceous and perennial plant and is grown as an annual by vegetative propagation usually by vine cuttings and occasionally using tubers. To obtain vine cuttings, a nursery is raised from tubers or from the vines of freshly harvested crop. The nursery can be raised in two stages to produce the required planting materials.

## Primary nursery

To produce vine cuttings for planting one hectare of land, about 100 m<sup>2</sup> of land and about 100 kg medium sized (125-150g), weevil free and healthy tubers are required. Ridges are taken 60 cm apart, the tubers are planted horizontally at a spacing of 20 cm and covered with a thin layer of soil. The nursery is irrigated on alternative days for the first 10 days and once in three days thereafter. Within a week's time tubers start sprouting. To ensure quick growth of vines, top dressing with 1.5 kg urea per 100 m<sup>2</sup> at 15 days after planting is recommended. After 45 days of growth, the vines are cut to a length of 20-30 cm for further multiplication in secondary nursery.

## Secondary nursery

Vines collected from primary nursery are further multiplied in the secondary nursery in an area of 500 m<sup>2</sup> to produce enough cuttings for planting one hectare of land. Farmyard manure or compost is applied @1 kg / m<sup>2</sup> and ridges are formed at a spacing of 60 cm. Vines obtained from primary nursery or from freshly harvested crop are planted at a spacing of 20 cm on ridges. Before planting, dip the vines in 0.02% Chlorpyrifos (20 EC) for 10 minutes to control sweet potato weevil. To ensure good vegetative growth 5 kg urea in two split doses at 15 and 30 days after planting is recommended. Irrigation needs to be provided daily for the first five days, alternate days for next one week and thereafter, once in three days. The vines get ready for planting in the main field at about 40-45 days after planting. Vine cuttings of 20-30 cm length from top and middle portions may be collected and stored under shade in bundles with intact leaves before planting in the main field.



## Protocols



Ridges raised in nursery



Planting of tubers on ridges



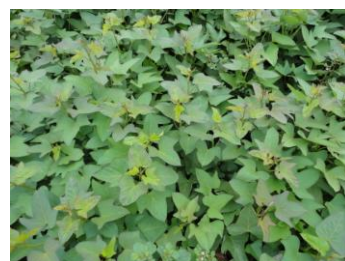
Covering the tubers with soil



Vine cuttings planted on ridges



Treatment with insecticide



Vine growth in primary nursery



Vine growth in secondary nursery



Vine cuttings ready for planting



## Advantages

- Cost effective
- Large scale multiplication of new varieties
- Production of uniform and healthy planting materials