

TRAY SEEDLING PRODUCTION IN FCV TOBACCO

Complete Details of Technology:

Mother trays : In tray seedling production unlike in conventional method, seedlings are raised on composted coir pith medium (coir pith alone or coir pith + FYM (3:1)) in mother trays (cement bins/trays/brick beds) for about 25-30 days under protected condition. Coir pith medium is to be fortified with single super phosphate @ 300 g of single superphosphate, 250 g ammonium sulphate, 150g potassium sulphate/100kg. Spraying of blitox @ 2g/l on the medium is to be done as a precautionary measure to avoid soil born diseases. In these Mother trays sand is added at the bottom and only top 4' is to be filled with the coir pith medium. Before sowing lines are to be made with broomstick on the media and the seed is sown @ 0.4 -0.6 g/sqmt. Water application is to be done in the initial stage with sprayer two times a day.

Excess watering is to be avoided. Seeds start germinating from 5th day onwards and the germination will be completed by 7-8 days. Fertiliser spray with 10g each of Ammonium sulphate/CAN and potassium sulphate/10 litre is to be given two times @ 10 days interval after sowing. Seedlings will be ready for transplanting the trays by 20-25 days. Resetting in trays: Fortified coir pith is to be filled tightly in the cells by periodical pressing in trays of 70/98 cells. Before filling coirpith is to be moistened by applying required quantity of water so that filling is easy. After filling, the trays seedlings of 20-25 days are planted in the trays by making a suitable hole using a nail or small stick. After planting the media around the seedling is to be pressed.

After resetting, the trays are to be kept in shade for 3-4 days. After that the trays are shifted to the raised beds in shade net (50%). Fertilisers are to be given three times at 5,20 and 25-30 days @ 100 ml,200ml and 300 ml of N and K (50g of CAN + 50 g of Sulphate of potash in one litre) in 10 litres rosecan/ 40 trays. Washing of the seedlings is to be done after fertilizer application. Three days after third dose of fertilizer application seedlings are to be kept outside shade for about 7 days for hardening. Thus healthy seedlings will be ready after 60-65 days. At this stage when it is pulled seedlings will come easily from the tray because the coir pith is covered by the root mass. Clipping can be done if the field conditions are not ready for planting. Three to four days before transplanting ridomil @ 2.5 ml/10 litre and Flue bendamide @ 20g/10 litre is to be sprayed to avoid subsequent mortality in the main field due to the incidence of leaf blight and stem borer.

Brief Description of Technology Including Salient Features:

A tray nursery technique has been developed and standardized to produce healthy tobacco seedlings to overcome disease problems and to preclude transplantation shock. The technique is simple and entails sowing tiny tobacco seeds on coconut coir pith compost and transferring the young seedlings of about

20-25 days to poly-trays for raising them on the growth media with standard nutrient and watering schedules.

The tray nursery seedlings take about 60-65 days from sowing to transplanting. Tray nursery seedlings offer the unique advantage of ensuring crop uniformity with minimum gap fills and consequently increased cured leaf yield and quality as against the seedlings grown under conventional raised soil-bed nursery.

Extent of Adoption: Front line demonstrations and training programmes were conducted to farmers and stake holders at different locations in collaboration with tobacco board, sensitization programmes were conducted through Field Friends programme. More than 80% farmers in Northern Light soils of Andhra Pradesh and 90% farmers in Karnataka light soils adopted the technology.

Benefits/Utility

Advantages of tray nursery :

- 100% establishment, improves the yield by 10-25%
- Uniform crop growth due to less gap fillings (<1%), no transplantation shock, Uniform field operations viz., topping and harvesting.
- No Weed problem in tray nursery
- Water and fertilizer use efficiency will be more. Hence, seedlings can be raised even under water scarcity.
- Pests and diseases incidence very less.
- Farmer friendly technology: Can be performed in back yards unlike conventional nursery
- Tray seedlings improves moisture and nutrient holding capacity and the soil health
- Higher net returns and cost benefit ratio.
- Total man days for seedling production less
- Crop duration will be reduced by 10 days
- Reduces the pest and disease incidence in main field
- Total cost of cultivation reduced