

## Bountiful harvest:Tissue culture banana cultivation



### Farmer in his banana field

Banana cultivation has always taken a back seat in crop preference in Tamil Nadu as only a few farmers are bold enough to grow the crop in large areas. Though there are many reasons such as strong winds (the plant falls down during strong winds), heavy rainfall or monsoon failure attributed to this, absence of proper marketing channels appears to be the main reason for many farmers to move away from banana crops. But farmers of Theni, Chinnamanur, and Uthamapalayam regions of Tamil Nadu have a different story to tell. They grow the crop in a minimum of 2-3 acres and are fully satisfied with the returns. These farmers mainly grow tissue cultured (TC) Grand Naine banana variety.

Grand Naine is popular because it has a relatively good shelf life, is an attractive golden yellow in colour at maturity and is internationally acceptable, both as a fresh fruit and in processed form, according to Mr. S. Narayanan, Vice President, Marketing, Jain Irrigation Systems Ltd, Coimbatore .With an initial investment of Rs. 80,000-85,000 per acre these farmers get a yield of 38-40 tonnes per acre which amounts to Rs. 1,50,000-1,60,000 per acre as gross income and a net income of Rs.70,000 -75,000 per acre annually.

Farmers are advised to go in for two ratoons, which gives them a net income of about Rs. 1 lakh each, per acre. Thus in about 27-30 months, with intensive cultivation, farmers can get a net income of Rs. 2.25 to 2.50 lakhs per acre, according to Mr. Narayanan. "The TC planting material costs Rs. 12 per plant from us and we make sure that it is delivered at the farmer's site anywhere within Tamil Nadu. The cost of establishing drip irrigation system in an acre comes to Rs. 20,000 -25,000 which can be recovered in the first crop itself," said Narayanan.

### Planting distance

The field must be ploughed well and furrows formed six feet apart, and planting should be done at a distance of 5-6 feet apart in each furrow. Planting is done at a depth of six inches in the furrows. Required quantities of organic manure, 5 gms of phorate and 200 gm neem cake are applied in each pit. Watering immediately and thereafter is done through drip irrigation. Fertigation starts from 10th day onwards and a detailed fertigation schedule is provided to each farmer, he said. The plants are earthed up twice till up to the 75th day up to a height of 1.5 to 2 feet from the ground level. All these farmers have adapted well to the use of in-line system of drip irrigation, which provides a kind of strip wetting all along the plant row directing the root growth along the wet area. With the tendency of banana roots to grow as long as 1.00 metre and more, quite early, strip wetting helps in feeding the roots better, which in turn gets converted into active plant growth and performance, explained Narayanan.

**Ratoon management**

Keeping the field and neighborhood free of weeds generally is advised to avoid spread of infestations. Though the TC plants, which are supplied are generally healthy and virus free, field contamination can be avoided only by keeping the field free of weeds. Ratoon management is important for sustained income. In a place like Theni, three ratoons have been done in 24-25 months. Once the flowers emerge and all the fruits have fully opened, the bunches are covered using a "skirting bag" which prevents the tender fruits from insect attack, besides maintaining uniform temperature inside. "This is important for colour and fruit development," he said.

**Value addition**

The farmers have also standardized the harvesting and packing methods locally, according to Mr. Narayanan. This value addition has a ready market in metros like Chennai and Kochi besides Coimbatore, Madurai, and other markets in Kerala. The price realization is quite high (at present the fruits are sold for about Rs. 10 - 11 per kg at Koyambedu market in Chennai). The farmers have already sent consignments to Mumbai and Kolkata.

**Word of caution**

But Mr. Narayanan has a word of caution for those interested in growing this variety, suggesting visit the farmers' fields at Theni, Chinnamanur, Uthamapalayam to get first hand information. With Indian agriculture, particularly, horticulture, set for a take off, and with retail chains showing interest, the future looks bright especially for grand naine banana cultivators.

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