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High-density planting increases banana yield and brings hope



Almost 90 per cent of Israeli technologies are field-oriented

Compared to several western countries, India though endowed with a lot of natural resources, lags behind in agricultural production.

“The main reason for this is that developed technologies are not percolating to the farmers.

“They remain mere project theses on paper. The main reason for Israel doing so well in agriculture is that almost 90 per cent of their technologies are field-oriented and aimed at helping farmers earn more,” says Dr. Prabhukumar, Zonal Project Director, ICAR, New Delhi.

ABLE TO DELIVER

“We can claim to be farmer oriented only if we are able to transform the developments in labs to the open fields. Our recent research on high density banana planting on the farmers’ fields in Pathanamthitta district of Kerala proves that farmers readily accept new techniques if they are genuinely going to help them get a better yield and income,” he says.

Today apart from rubber, banana is the most popular crop grown by farmers in the region. According to latest statistics available, the crop is grown in an area of 4,642 hectares.

The steady demand for banana due to its varied uses and wide adaptability to different farming situations makes it the small farmer’s favourite crop. The dwindling farm holdings also make this a practical alternative to other crops.

Among several varieties, the Nendran variety occupies the first choice among Keralites as the fruit is in good demand in the State.

Compared to varieties as Grand Nain (golden yellow coloured) that can produce bunches weighing more than 45 kg, Nendran variety produces bunches with an average weight of 7-10 kg only, pushing down productivity and profits.

Since more than 70 per cent of banana cultivation is done on leased lands by resource-poor farmers, obtaining maximum income from a unit area under cultivation assumes utmost importance.

DIFFERENT TECHNOLOGIES

Several research institutes developed different technologies for pushing up productivity. High density planting developed by Kerala Agricultural University helps the farmer to earn better.

In 2007, the Christian agency for rural development, Krishi Vigyan Kendra, Pathanamthitta district, Kerala offered this trump card to farmers.

By organizing farmer participatory research trials, demonstrations, seminars, training, and field visits in the subsequent years, the

institute effectively perfected the technology for easy adoption by the farmers.

According to Mr. Rajan Nair Vavolil, Naranganam, the technology helped him obtain a yield of more than 27t/ha while his fellow farmers got only 8tonnes per hectare.

“From the small demonstration plots of 0.25 ha in 2007, the technology has spread rapidly and in 2012 occupies more than 150 hectares under cultivation involving more than 1,500 farmers in the Pathanamthitta district alone.

“By planting Nendran at a recommended spacing about 2,500 Nendran suckers can be planted in one hectare of land,” says Rincy K Abraham, Horticulturist working at the institute.

In high density planting, banana rows are made at a distance of 3mts and pits of 50 cm x 50cm x50cm size are taken at a spacing of 2mts in each row.

INCREASED SUCKERS

Then banana plants are planted in each pit at a spacing of 30-45 cm, perpendicular to the direction of rows. The modified plant spacing reduces pit numbers to 1,666 hectares but increases the total number of plants planted to 3,332 in a hectare of land.

Mr. Mohanan Pillai Varikolil, an award-winning farmer says, “double planting helps the plants to utilize water and fertilizer more efficiently through increased root density. It also helps the plants resist winds more effectively and cost for staking was considerably reduced.”

He was able to avoid stakes by tying two plants together or by using only one stake for both the plants.

UNIFORM GROWTH

Uniformly growing tissue cultured Nendran plants are the best planting material for doing high-density banana cultivation.

“However, sucker plantations can also be raised successfully if due care is given to planting equal weighing suckers in the same pits.

“Planting banana suckers of different sizes in the same pits lead to uneven growth and reduction in yield,” says Rincy.

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