How this Israeli technique is giving a plug to Gujarat's vegetable growers

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Kalpesh Patel, a middle-aged vegetable farmer of Prantij, is a proud father as he was able to give his son Ridham an opportunity to pursue his dream of becoming a mechanical engineer.

For Patel, a graduate, farming has never been so exciting and rewarding than in the last 25 years. Thanks to Israeli farming technique, Patel and hundreds like him from Gujarat have spotted a financially viable vegetable farming opportunity.

"Unlike in the past, now we can have better quality and increased yield of cauliflower. This fetches better price for sure, but the early harvest by about 8-10 days is the key to success. The Israeli technique of precision farming under controlled environment is giving such encouraging results," says Patel, who has 16 *bighas* (8 acres) under cauliflower.

Patel requires 34,000 seedlings for each acre. The Israeli
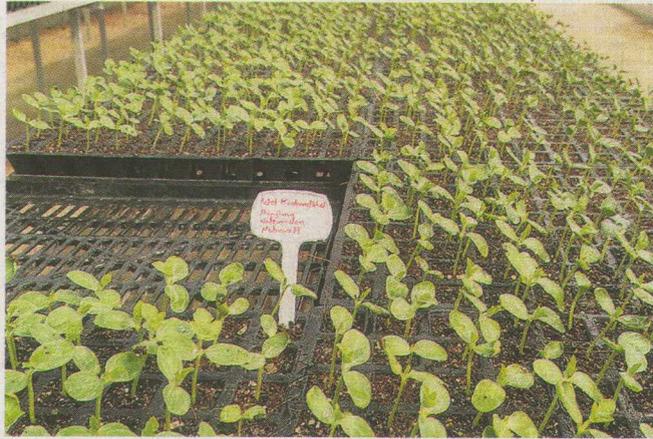
Sprouting a success story Seedlings under cultivation in plastic trays at the CoE in Vadrad, Gujarat. Once prepared, these seedlings will be given to the farmers to plant on their farms

technique that he has been relying on for two years has helped him double his annual farm income from ₹30 lakh in 2015 to ₹60 lakh in the coming year.

Indo-Israeli initiative

Set up under the Indo-Israel Agriculture Work Plan for exchange of advanced farming technology, the Centre of Excellence (CoE) for Protected Cultivation and Precision Farming on Vegetables at Vadrad village near Prantij in Sabarkantha district is providing the training and guidance in controlled farming techniques using net houses and seedlings developed in plug nurseries.

On January 17, Israeli Prime Minister Benjamin Netanyahu accompanied by the Prime Minister Narendra Modi is likely to visit the CoE at Vadrad to look the successful Plug Nursery farming.

How is it different

According to JK Patel, Deputy Director, Gujarat Horticulture Department, the CoE was launched in 2015 and has so far supplied about 60 lakh seedlings to about 9,000 farmers across the State and in neighbouring Rajasthan and Madhya Pradesh.

"We provide these seedlings at a token ₹1 per seedling. The purpose is to help farmers reduce the use of pesticides and fungicides by undertaking precision farming. This will also bring down the overall cost of farming. Also, timely sowing and early harvest make it commercially advantageous for them," Patel said adding that the seedlings developed at the plug nursery start to grow from the first day of planting, unlike conventional seedlings, which take 7-8 days to reach the growth stage.

The CoE also provides one-day training to farmers on best practices of net-house farming and guidance on infrastructure for developing plug nurseries.

Farmers' advantage

Till now, over 10,000 farmers have been trained at the CoE, while about 35,000 farmers have been given demonstrations.

The CoE has also helped develop three other such nurseries across Gujarat — located at Bardoli and Dediyapada in the southern part of the State and Himmatnagar in Sabarkantha. A typical plug nursery having an area of 500 sq m costs ₹25,000 with a capacity of 10 lakh seedlings per year.

Gujarat has about 400,000 hectares under vegetable cultivation.

Patel noted that with the help of plug nursery, the crop diversity can increase and farmers can also take-up exotic crops such as broccoli, cherry tomato, red cabbage and cucumber.

What is a Plug Nursery?

A plug nursery is an Israeli farming technique, wherein seedlings for different crops are nurtured under controlled environment in a net house.

The net house must have open space around it, and get six-eight hours of sunlight during the day.

The plug nursery predominantly uses media made from a mixture of coco peat, vermiculite, perlite and nutrients in a proportion of 8:1:1.

The seeds supplied by farmers will be sown in a tray of 10x10 pockets for seedlings. These seedlings are then supplied to farmers who use them in a net house.