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Bid to learn Indian culture, agriculture

Kavin Sundaram

Photo: M. Periasamy

Quality check: **Cornell University students doing the International Agriculture and Rural Development course visiting the Uzhavar Sandhai at R.S. Puram, Coimbatore, on Wednesday as part of 13-day field visit to India. Vice-Chancellor of Tamil Nadu Agricultural University P. Murugesa Boopathy (second right) is in the picture. —**

Coimbatore: “We’re here as agriculture students; but we learn about the whole culture.”

This was the opinion of some of the 34 students from Cornell University, USA, and 10 faculty members who visited the R.S. Puram Uzhavar Sandhai here on Wednesday as part of their visit to India.

The students spent five days in Coimbatore and the Tamil Nadu Agricultural University (TNAU).

The visitors include 13 Indian students enrolled in a dual degree programme and master’s programme, held at Cornell in the US and TNAU in India.

Murugesa Boopathy, Vice-Chancellor of TNAU, greeted the students upon their arrival at the Uzhavar Sandhai. The R.S. Puram Uzhavar Sandhai accommodates 200 farmers every day and sells 70 tonnes of vegetables, he said.

The State Government has organised the sites like the one at R.S. Puram for the

benefit of farmers which would help eliminate middlemen, he said.

K.V. Raman, a professor at Cornell University, encouraged the students to interact with the farmers and ask them about their produce.

Students spread out in the shandy and looked at the different crops.

Indian markets have more variety and the crops are less seasonal, said Daniel Joseph, an undergraduate student from Cornell.

Katherine Shea, a Master's student at Cornell, asked a stall owner questions about his produce with Prof. Raman as an intermediary. They looked through various selections, and discussed prices. As Shea left, the stall owner presented her with spinach. And while Shea tried to pay, the owner insisted she take it as a gift.

Ms. Shea said she came on the trip to learn more about agriculture due to its vital role in society.

Discussing topics with dual enrolled Cornell/TNAU students has provided her with practical insight regarding theoretical topics discussed in class. "I think the exchange between the students (US and Indian) had been one of the most valuable parts of the course."

Visha Kumari Venagopalan, a Cornell/ TNAU dual degree student, said she enjoyed interacting with the students from the US. She said they ask a lot of questions about India, and it makes for a good interactive session. She felt that the US had smaller markets compared to those in India, like the Uzhavar Sandhai.

Other students noticed differences between the two systems as well.

The markets have different objectives in the two countries, said Bohar Rajguru, a Cornell/ TNAU dual degree student from Trichur.

Ms. Shea added that in the US, farmers' markets advertise organic food and sell for higher prices. In India, markets like the Uzhavar Sandhai benefit farmers, who don't have to work through middlemen, and also consumers, who tend to pay lower prices. "Over here, better are prices for consumers and it benefits farmers as well."

In addition to agriculture students, some students who came on the visit studied topics other than agriculture.

Olivia Diamond, an undergraduate and prospective medical student, said she had an interest in coming to India to serve with Doctor Without Borders, a charitable organisation, in the future.

As the visit to the market drew to an end, students had the chance to drink juice from tender coconuts and taste fresh fruits like grapes, papayas and bananas.

Prof. Tim Setter of Cornell University said it was valuable for the students to visit the market and see how a different system operated and why people made their

decisions. More broadly, the visit allowed students to learn about India.

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FARMER'S NOTEBOOK

Groundnut variety that requires less irrigation

M.J. PRABU

Oil content is 42-45 per cent and yields, 3,200-3,500 kgs from a hectare

— Photo: Special Arrangement

Better yield: **The farmer, Dhirajlal Thummar, in Gujarat with his crop ready for harvest.**

A MAJORITY of farmers, when their crops fail successively due to some pest attack, invariably go in either for a change in their cropping pattern, or in some cases, even stop farming. But it is only a few determined farmer who try to find the root cause of the problem and overcome it.

Mr. Dhirajlal Virjibhai Thummar, a groundnut farmer in Gujarat, is credited with developing a new groundnut variety named "Dhiraj 101," which is resistant to stem rot.

The crop matures in 95-105 days and bears 35-40 pods per plant. About 90-100 kg of seeds are required for an hectare.

“Groundnut cultivation is a major source of income for many farmers like me in this region. With five wells and a borewell, our fields are well irrigated. Apart from groundnut

“I also grow cotton (BT and Shankar varieties), sorghum, wheat and vegetables. Sorghum is grown primarily for the cattle and vegetables for our own consumption,” says the farmer.

Complete failure

In the year 2004 he sowed GG-20 groundnut variety and the whole crop got infested

with the stem rot disease resulting in wilting and almost complete failure of the crop.

“However, I identified a few plants, which are not affected by this disease. Believing that these may contain some inherent property that makes them stem rot-resistant, I harvested and kept the seeds of these plants separately.”

The farmer sowed the seeds separately in the next season and continued the screening and selection for three consecutive years. Finally he obtained plants, which were free from stem rot and wilt.

Higher oil content

At 3,200-3,500 kg per hectare, the yield is higher than locally cultivated varieties (GG 20 & GG 2). The oil content is also higher at around 42-45 per cent according to him. This variety performs well in average monsoon as well as in less irrigation conditions.

To promote good crop growth, Mr. Thummar used only herbal pesticide such as neem, kidamari (Dutchman’s Pipe), tulsi (Holy Basil) and akda (swallow-wort) for controlling insect pests and diseases. He also distributed seeds to some farmers in Amreli, Rajkot and Bhavnagar districts of Saurashtra regions. Encouraging feedback was received mentioning that the variety is free from wilt and rust diseases, also giving higher production than the GG20 variety.

They added that it had relatively stronger pods, which remain at a lesser depth than the GG20 variety in the soil.

“Soil conservation and crops that requires less water are urgent needs for farmers to keep agriculture sustainable in changing climatic conditions,” says Mr. Thummar.

Urgent need

Professor Anil Gupta, vice-chairperson, National Innovation Foundation says, “Many technical innovations have been centred on groundnut crop in our country. There is an urgent need to invent and popularise crop varieties, which require less water and have more productivity and at the same time are affordable to farmers.”

NIF facilitated the field trial of ‘Dhiraj101’ at the Oil Seed Research Station, Junagarh.

More yield

The report mentions that it is resistant to stem rot also and its production is 1.5 times more than the variety ‘GG-20’. Also, it performs well even in average monsoon conditions and requires less irrigation.

This variety matures eight to ten days earlier than the GG-20, and also has more average oil content.

For more information readers can contact Prof Anil Gupta through email at anilgb@gmail.com and Mr. Dhirajlal Virjibhai Thummar, Via Mota Akadiya, PO Pipal lag, Taluka Pipal lag, Amreli 365455, Gujarat, mobile: 02792-286093, 9825513469.

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Muscardine: a menace to silkworm in winter

Silkworms are prone to infection by several pathogens like virus, bacteria, fungi etc which needs necessary prophylactic measures to prevent the mortality due to diseases. Muscardine is a silkworm disease caused by a fungus called *Beauveria bassiana*.

The disease prevails mainly in winter season and often causes massive loss in silkworm resulting in poor cocoon yield.

Hence, monitoring and control are essential to avoid economic loss to silkworm rearers.

Infection takes place mainly through the integument (skin). The spores (conidia) are airborne and germinate on contact with silkworm's integument.

The hyphae then penetrate into the body cavity, grow by sucking the body fluid, invade the tissues and kill the larvae. Low temperature and high humidity in rearing environment favour the infection by this fungus.

Symptoms

Infected larvae lose appetite, become sluggish and die within three to five days of infection.

The dead larvae initially appear flabby but harden later due to complete intrusion of the fungus. Finally, the fungus grows over the body surface to produce infectious conidia for further spread.

Management

Rearing shed and appliances should be disinfected thoroughly to destroy the fungal spores.

Silkworms should be reared with adequate spacing, proper ventilation and hygienic conditions. Infected larvae must be collected and burnt before the appearance of conidia to avoid further spread.

Manipulation of temperature and humidity in the rearing shed by electric heater and by dusting dry slaked lime powder in the rearing bed are easy methods to prevent the infection.

Application of rearing bed cum silkworm body disinfectants like Vijetha and Vijetha supplement etc at 3-5gram/sq. ft. as per the schedule control the disease effectively.

J.Ravikumar

N.Sakthivel

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FARM QUERIES

Cotton stripper machine

Can you kindly guide me on information regarding cotton stripper machines?

K. Patel

Maharashtra

You can contact Mr. Mansukhbhai Patel , Chetak Industries, 113, GIDC Industrial Estate, Hansalpur, Viramgam, Ahmedabad, Gujarat, Mobile: 9824089035, Ph: 02715-235108 for details.

Gel extractor

Is there any low cost machinery for extracting gel from Aloe Vera?

Harjit Singh

Bubhaneshwar

Contact Mr. Dharamveer, Vill Damla, via. Jagadhari, Yamunanagar, Haryana, mobile: 09896054925 for information on gel extraction from aloe vera.

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Mettur level

The water level in the Mettur dam stood at 88.61 feet on Wednesday against its full level of 120 feet. The inflow was 2,503 cusecs and the discharge, 12,000 cusecs.