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THE HINDU

Workshop on meliponiculture



The Krishi Vigyan Kendra of the Central Plantation Crops Research Institute here and the State Horticultural Mission have jointly organised a two-day workshop on meliponiculture (rearing of common stingless bees) with an objective to set up one stingless beehive in every homestead in the district.

Farmers to benefit

Leading the session, S. Devaneshan, Head, All-India Coordinated Research Project on Honeybees, College of Agriculture, Vellayani, highlighted the potential of apiculture and meliponiculture as an income-generating enterprise for farmers.

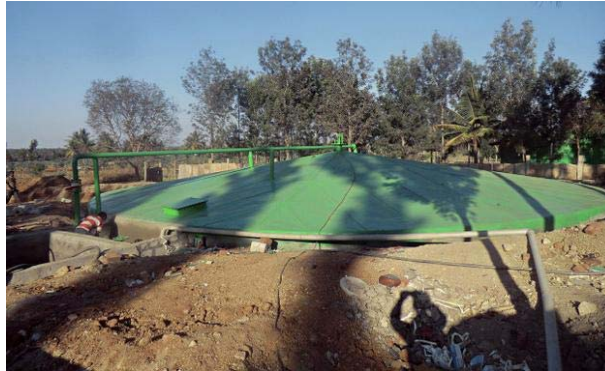
A district like Kasaragod with 58,088 hectares of coconut and 25,374 hectares of rubber cultivations had the potential of rearing 2,53,740 honeybee colonies.

But, no initiatives had been taken so far to tap even 10 per cent of the potential, he said.

The programme, inaugurated by Ravi Bhat, Director-in-charge, CPCRI, was presided over by Thirumaleshwara Bhat, Deputy Director of Agriculture, Kasaragod.

Sajan Jose of St. Joseph's College, Moolamattam, also handled the classes. Sixty-five farmers from the district attended the programme, which concluded on Thursday.

Green solution for city's bio-waste



Away from the public gaze, South India's first plant producing CNG (Compressed Natural Gas) from waste from hotels and poultry farms has completed its first year of operations. The plant is supplying 600 kg. of CNG to the city's restaurants every day.

Tucked in Huskur village, 14 km west of Doddaballapur, the plant named Maltose Agri Products Private Limited (MAPPL), not merely takes away some amount of city's waste, but also turns it into energy and averts release of hazardous methane into the atmosphere. Currently operating with three waste digesters, it will have ten of them on completion of its expansion plans.

The innovative plant was envisioned and set up by T. Ananda, an agriculturist, two years ago even while the city was in the throes of agitation at Mandur against landfills. It is currently taking 25 to 30 tonnes of waste. The waste from poultry farms, which abound in the area, is either piped to the plant in the form of slurry or arrives by tractors. The waste from a hundred and odd hotels and restaurants, mainly around Hebbal and R.T. Nagar, is carted to the plant by BBMP lorries in drums, while the cattle dung is picked by workers from mainly Cantonment area and brought in lorries.

Paying for poultry waste

Three BBMP lorries bring 10 tonnes of hotel waste a day. Twenty five tonnes of dung is collected by another four lorries and 5 to 7 tonnes of poultry waste also comes in. The poultry farms are paid for the poultry waste at 30 paise a kg.

The process

Upon arrival, the dry waste is first crushed. Non-organic waste such as plastics or silica is removed and sent to a collector tank where slurry is prepared. It is then pumped into large sized digester chambers. Anaerobic digestion takes 21 days for production of methane at the start of the process. Daily feeding of waste ensures continuous generation. The chambers have churners inside that isolate sediments, which are separated mechanically and left to dry in pits for the purpose of manure, a byproduct.

The methane is then brought to balloon rooms where it is stored under large-sized rubber domes. At this stage it has merely 60% methane while the rest of it contains carbon dioxide, hydrogen sulphide gas and vapour. It then undergoes a purification process and carbon dioxide, sulphur dioxide and vapour are removed. At this stage, it is 92% methane which is passed through compressor to be filled at high pressure as Compressed Natural Gas (CNG) into cylinders of 5 kg, 10 kg and 12 kg for supply to the restaurants. The company is however running its supply trucks on the same CNG and has fitted them with 38 kg cylinders.

Currently, the Maltose plant is producing 600 kg of CNG a day and supplies them to six large hotels and restaurants in the city in collaboration with the marketing company Carbon Masters. While the LPG cylinder gas comes at a rate of Rs. 60 per kg, Maltose's CNG is being supplied at Rs. 40 a kg.

Ananda, who has studied up to Plus Two and himself maintains a poultry farm with 50,000 birds, says that against the initial investment of Rs. 2 crore by him, the Ministry of Renewable Energy extended a sum of Rs. 68 lakh by way of assistance. His plea to exempt the product from Sales Tax is under consideration by the State Government.

Ananda expects the plant to generate 4,000 to 5,000 kg of CNG by taking 250 tonnes of waste once all the ten digesters begin to operate around the middle of 2016. By then his investment would go up to Rs. 20 crore. Besides, he has set aside five acres of his land for putting up the plant.

The plant has come as a boon for the poultry farmers in the area as the waste is immediately collected by the Maltose plant. Says K.S. Ashok Kumar, who owns several poultry farms and a dairy in the area (he is M.Sc in Agriculture), Ananda must be encouraged for his innovativeness and enterprise. Ashok says poultry and animals waste is a major pollutant which if not collected and treated, leads to not merely atmospheric

pollution but also leads to clogging of drainage in the city. He says, the impact of non-treatment can be gauged by the fact that a ton of methane released in the atmosphere leads to production of 24 tonnes of carbon dioxide.

Ashok says a huge amount of biomass is consumed by cattle in the city as well as suburbs. Unless their waste is systematically treated, it either remains on the scene or flows into the gutters, resulting in blockages in the flow. He says plants like Maltose play a healing role by restoring the energy cycle which gets ruptured due to production of and diffusion of methane into the environment. According to Nadeem Fairoz, professor at the Department of Livestock Product Technology, Bengaluru has 1.6 lakh heads of cattle and three lakh other animals (mainly pet dogs, cats, cage birds, horses and donkeys). Due to inefficient collection, a considerable quantity of waste they generate flows into either the sewerage system or the drains.

Dr. Fairoz says biomethanation is the most productive treatment of the waste. He says a ton of putrescible waste consists of 77% water and 23% of solids. The anaerobic digestion can convert approximately 75% of those solids into biogas which can be sufficient to produce 100 cubic metres of gas. The plant can be run with merely 20% of the energy it ultimately produces.

Win-win situation

Plants like Maltose have several benefits. They can be a replacement for landfills. With low content of carbon in emission from them, the environmental dividends are huge. The residues from them can be used instead of organic fertilizers and the CNG is available at cheaper rates.

The photos show several units of the Maltose plant such as purification, compression, CNG tank fitted to the lorry, and digester tank (painted green) sunken in the earth.

Migration fears haunt labourers in capital region



For years, farmers in this village reaped rich harvest from the vast swathes of corn fields. When those with large land holdings moved to cities for greener pastures, it was the corn fields that gave them a ray of hope.

With fertile lands in river-front villages offering work throughout the year, labourers found it rewarding to work in fields.

Palam Rambabu is one such labourer working in the corn fields of his brother Jujola Chalapathi Rao. Rambabu is paid Rs. 300 a day, which is just enough to feed his family. His brother has helped him pay off his daughter's tuition fee.

“I reap 50 quintals of corn in an acre, and each quintal fetches Rs. 12,000. I work from dawn to dusk in the fields spread over 2.5 acres, and I do not know any work other than the farm related one. But now, the land owner has given the consent letter for giving away the land as part of land pooling for the new capital. I have no other choice but to migrate to other districts in search of employment,” Rambabu says.

Similar is the plight of most farm labourers in the capital notified region. A sense of fear and anxiety has gripped their families, as, they say, the thought of displacement is disorienting. With most landowners giving consent letters, the fate of labourers hangs in balance.

According to a survey done by the Dalit Bahujan Front, there are 2.40 lakh Dalit labourers in the capital notified region, out of which 15,000 SC/ST families are landless. These families may have to migrate to other districts.

“There are more than 15,000 tenant farmers and agricultural labourers in the capital region. The government has considered only landowners in providing packages including developed land. Landless labourers have

been promised Rs. 2,500 as monthly wages, but that is abysmally low. We fear large-scale displacement unless the government provides direct employment during the construction of new capital. We also demand that the government issue ID cards to all landless labourers,” said Rythu Sangham secretary Radha Krishna.

Cultivation of chillies in full swing in Marungapuri block



Chillies cultivation had been brisk in Marungapuri block in the district for a couple of weeks and farmers are hopeful of registering higher yield, thanks to availability of irrigation water in their percolation ponds.

The district accounts for 1,160 hectares of land under chillies cultivation and Marungapuri block alone accounts for a lion’s share of 343 hectares. The red soil in this block is ideally suited for the growth of chillies, according to Agriculture Department sources. There are two varieties in chillies — ‘samba’ or long variety and ball-shaped variety. Ball-shaped variety, also known as ‘mundu milagai’, is not grown in this district, sources say. The average yield was one tonne a hectare.

A cross-section of farmers in Marungapuri said they anticipated a good yield this season. They got the hybrid seeds from Ottanchathiram.

A. Mani, a farmer of Marudhampatti village, said he had cultivated chillies on two acres of land by investing about Rs. 6 lakh. “The more the investment is, the more the profit,” he says, explaining the expenditure involved in crop protection technique.

Only water-dissolved fertilizer should be applied periodically — a tough exercise as no direct application of fertilizer should be taken up for this crop. The life of the plant is 10 months and the yield starts from the third month.

He said the price for the chillies was fixed by the wholesale dealers in Kerala. “We market the chillies in accordance with the rates fixed in Kerala,” he said.

R. Chandrasekaran, Deputy Director of Agro Marketing Intelligence and Business Promotion Centre, said the price per kg of ‘samba’ chillies would range between Rs. 55 and Rs. 60. April and May would be the peak period for the crop and he had advised farmers to market the produce immediately after harvest as the market rates were likely to register downward trend in course of time.

Harvest rainwater, farmers told

Farmers should harvest the rainwater for sustained development in agriculture, said S. Ganesh, District Collector.

Inaugurating the day-long seminar on “Irrigation management for sustained development in agriculture” organised by the River Conservation Division of Public Works Department here on Friday, Mr. Ganesh referred to various schemes such as drip irrigation technique, and setting up of farm ponds for achieving maximum productivity through minimum use of irrigation water. He hoped the seminar would not only throw light on various problems in managing and maintaining the existing irrigation systems but also in arriving at a feasible solution, as geological experts would offer suggestions. Dhanasekaran, Executive Engineer, River Water Conservation, Vellar Sub-Basin, spoke on the efficacy of water-saving schemes.

e-governance kiosks evoke good response

The e-governance kiosks launched in the eight taluks of the district has come as a boon to the people of the district. Ten days after the launch of the scheme by the Fisheries Minister, K.A.Jayapal, in Nagapattinam, as many as 20,250 people have registered for obtaining various certificates from the revenue and social welfare departments.

The scheme has evoked good response from the people, particularly in rural areas, as they don’t have to travel a long distance to government offices for these certificates anymore. Instead, they could now approach these kiosks to get revenue and social welfare department certificates by paying Rs.50 and Rs.100 respectively, and save a lot of time and money, said Collector S.Palanisamy.

Apart from the eight taluk offices in the district, the kiosks have also been established in 122 Primary Agriculture Co-operative Societies and 62

Pudhu Vazhvu Project Offices in the district to cover remote villages, the Collector said. Since the process of getting certificates through the e-governance kiosks does not require filing of separate applications, many people have started approaching these kiosks for community, nativity, widow, income, and first-generation graduate certificates. According to the revenue officials, the district administration will soon provide other essential services such as payment of electricity bills, telephone bills, renewal of vehicle insurance, and PAN card registration through the kiosks. The Tamil Nadu Arasu Cable TV Corporation had established e-governance kiosks in Nagapattinam, Keelvelur, Thirukuvalai, Vedarnayam, Tharangampadi, Mayiladuthurai, Kuttalam and Sirkazhi taluks. Staffs at the kiosk have been asked to ensure transparency, accountability, and speedy issuance of certificates, said Mr.Palanisamy.

Showcasing technology, farming developments

Hi-tech agriculture and organic agriculture are the buzz words at the 29th edition of the 'Flower and Farm Fiesta 2015' organised by the Department of Agriculture, which opened at the AFT Grounds on Friday.

“Hi-tech agriculture refers to need-based pesticide control and precise methods of farming,” said A. Ramamourti, director, Department of Agriculture. While the area of agricultural land in Puducherry has reduced over the years, yield potential has been maximised through hi-tech agriculture, said Mr. Ramamourti.

It is also for the first time that the departments other than agriculture are involved in the fiesta.

The Department of Tourism is co-sponsoring the event, and stalls have been put up by the Forests and Wildlife Department, the Department of Fisheries, Animal Husbandry and the Animal Welfare Department, the Department of Social Welfare and the Department of Women and Child Development. Several agriculture institutions and organisations are also participating.

Chief Minister N. Rangasamy inaugurated the fiesta. Tourism Minister P. Rajavelu and Lok Sabha MP R. Radhakrishnan were present. Stalls showcased tools, machinery such as paddy transplanters and harvestors, a wide variety of plants, flowers, fruits and vegetables. Organic fertilizers and products are also the highlights of the show.

The fiesta has a mobile food testing van at the venue, a milk testing unit by PONLAIT. Competitions in food carving and flower rangoli are also being held.

India-Australia likely to ink free trade agreement before end of 2015



India and Australia are expected to sign a free-trade agreement by the end of this year and it will mutually benefit both the countries, Australian Consul General to South India Sean Kelly said here on Thursday.

He was here to participate at an event organised by the Rotary Club of Coimbatore, Indo-Australian Chamber of Commerce and the National Association of Software and Service Companies (Nasscom).

The Consul General said that India would be the fourth country — only next to Japan, Korea and China — to have a free-trade agreement with Australia.

Mr. Kelly said that Indian investments in Australia across various sectors increased from 600 million Australian Dollars in 2006 to 10 billion in 2013. He added that Australia was interested in doing business with India in the areas of agriculture, dairy, premium food and beverages and pulses. He also said Australia would explore possibilities to bring to India experts and best farm management practices in the dairy sector.

Earlier, Executive Director of the Indo-Australian Chamber of Commerce C. Sarath Chandran gave an overview on business prospects in Australia. President of the Rotary Club G. Karthikeyan also spoke.

Now, free meals for farmers visiting APMCs

Minister for Horticulture and district in-charge Shamanur Shivashankarappa has said that the State government is planning to provide free meals to farmers who visit Agricultural Produce Marketing Committees (APMC) to sell their produce.

Speaking after inaugurating the 86th Basava Sangama organised by the Davangere Municipal Corporation Employees Association and the Sri Jagadguru Basavajaya Mrutyunjay Mahaswamiji Kayaka Dasoha Mantap here on Friday, he said that the government was also planning to provide safe drinking water, toilets and bathrooms at APMCs. “Steps have been taken to construct concrete roads on the premises of the APMC for the smooth movement of vehicles,” the Minister said.

The government had extended facilities to farmers including drip irrigation and farm equipment, under different schemes.

The officers should create awareness among farmers in rural areas for the success of these schemes, he added.

Suresh Padmukhi bags five gold medals

It was a dream come true situation for Suresh Padmukhi, hailing from a family of marginal farmers fighting to make both ends meet, when he went up to the dais to receive five gold medals for his excellent performance in the final year B.Sc in Agriculture from the Governor Vajubhai R. Vala, during the annual convocation of the University at Raichur on Wednesday.

“The support from my parents despite their economic hardships and my hard work made it possible, ” Mr. Padmukhi, hailing from Rukmapur village in Surpur taluk, said. He is now pursuing his post graduation in Genetics and Plant Breeding at the Gandhi Krishi Vignyan Kendra at Bengaluru.

Mr. Padmukhi completed his graduation from the Agriculture College at Bheemarayanagudi in Shahapur taluk. He received five gold medals for scoring the highest marks in Agriculture Entomology, Agriculture Microbiology, Horticulture, Agriculture Economics and for his overall performance in the UAS, Raichur.

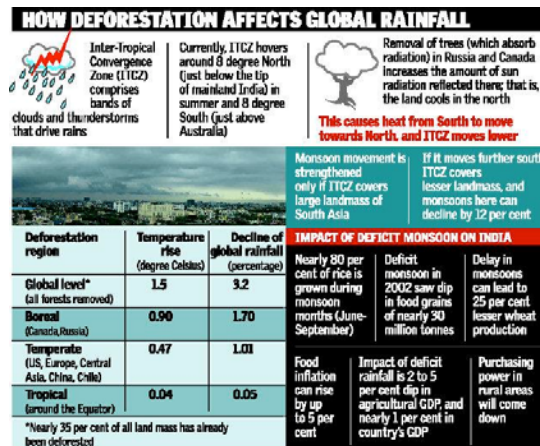
He said that he wanted to dedicate the five gold medals and all the honour and praise he received from his teachers and well-wishers to his parents Ashok Padmukhi and Basamma Padmukhi, who were primarily responsible for shaping his academic career.

Coconut village project to be launched

The Agriculture Department will launch its ‘Kera Gramam’ (coconut village) project at Arikkulam on Saturday. Minister for Agriculture K.P. Mohanan will formally inaugurate the project, which aims at promoting

coconut farming in around 400 hectares of land spread across four grama panchayats in the Perambra and the Elathur Assembly constituencies. — Staff Reporter

‘Trees in Russia impact monsoon in India’



In the near future, it may just be metaphorical dark clouds that hover over the country, rather than rain-bringing ones.

A study has shown that deforestation in high latitudes and the boreal regions — comprising grasslands and forests of Canada, Russia and Alaska in the U.S. — could affect the monsoon in South Asia. The effect of large-scale deforestation could lead to a 12 per cent decline in the monsoons, says a study by scientists of the Divecha Center for Climate Change at Indian Institute of Science (IISc).

Numerous studies have shown that declining monsoons auger badly for agriculture as well as the macro-economic climate in India.

The report — authored by Govindasamy Bala, N. Devaraju and Angshuman Modak from IISc. — was published in the Proceedings of National Academy of Sciences (PNAS). It shows that the Inter-Tropical Convergence Zone (ITCZ), which drives rain, moves southwards.

“The monsoon is dependent on landmass covered by the ITCZ. If it moves south, it covers more of the Indian Ocean, and less of India. This will weaken the monsoons,” said Prof. Bala.

On the other hand, monsoons will strengthen in the Southern Hemisphere, leading to immense impact on regional economies.

Unlike most studies that focus on emission on greenhouse gases, the IISc. study calculates the impact of surface characteristics (that is,

deforestation that modifies reflection of sunlight by the landscape and plant transpiration) on climate.

What the study says

The three-dimensional climate model used by the researchers simulated atmospheric circulation, land surface processes (photosynthesis and transpiration), surface-ocean warming and ice melt. The team experimented with wide deforestation in the tropical, temperate and high-latitude areas to point out effects on global temperatures and rainfall (*see graphic*) leading to the conclusion that deforestation in Russia and Canada is more catastrophic for India.

With the change in land use — from verdant forests to crop land — affecting climate in a “significant” way, Prof. Bala says there is need for an integrated approach to deal with deforestation.

“It isn’t just about carbon dioxide. Afforestation programmes must be in focus too,” he said.

‘Green chemistry vital for prevention of pollution’

S. Baskaran, Department of Chemistry, Indian Institute of Technology (IIT), Chennai, said that green chemistry was a fundamental and important tool in prevention of pollution.

“It utilises raw materials and eliminates wastes,” he said addressing a two-day national seminar on “Frontier Areas in Chemical Technologies – 2015, organised by the Department of Industrial Chemistry, Alagappa University here, on Friday.

E-factor was defined by the mass ratio of waste to desired product and this has to be adopted for cleaner technology advancements, he said.

Wastes posed problems either at short term or long term, he said and called for newer clean technologies such as catalysts, green solvents and renewable feed stocks for sustainable development.

Prof. V. Manickavasagam, Registrar, Alagappa University, emphasised the uses of solar energy, reusable water bottles and other green technology measures at an affordable price with easy availability.

“It is the duty of researchers to allay the fears of the society with regard to the pollution control measures adopted in various industries and ensure

that the fertility of soil and quality of water is maintained for ultimate use of common man,” he said.

‘Challenge globalisation of indifference’

Calling upon people to ‘challenge the globalisation of indifference’ towards suffering, Cardinal Cleemis, president, Catholic Bishops’ Conference of India, released the research paper, ‘Weaving Hopes After Disaster: Linking Relief, Rehab and Development,’ at the Tsunami Decennial Remembrance event organised by Caritas India here. The two-day event concluded on Friday.

The study was undertaken by the Indian Social Institute, Delhi, to assess the satisfaction levels among beneficiaries of the tsunami rehabilitation project by Caritas India (a social wing of the Catholic Church in India).

Chief Minister N. Rangasamy, who was present at the event, lauded the efforts of NGOs such as Caritas India in the aftermath of the tsunami, and spoke on the need to sustain such efforts. He called upon the people to join rescue measures during natural disasters.

Two other books were also released at the event: ‘Building Resilient Communities’ and ‘Illuminating Lives’ by Chennai Archbishop George Anthonysamy and Thanjavur Diocese Bishop Devadass Ambrose.

Workshop on nutrition and dietetics held

In the present day Indian context, there is a need to develop and document a standardised nutrition care process to provide safe and effective nutrition care, said C. Swaminathan, Vice-Chancellor, Periyar University.

The nutrition care provided by qualified professionals should always reflect both the state of the science and the state of the art of dietetics practice to meet the individualised needs of each patient, client and group, Dr. Swaminathan said while delivering his inaugural address at the two-day workshop on ‘Nutritional and dietetic care model: India vs. Malaysia’, brought up by the Department of Food Science and Nutrition of the University here on Thursday. He said due to changes in food habits of most of the urban population, role of nutritionists and dieticians is becoming more important to suggest corrective food habits and thereby improving their quality of life. There is a growing demand for nutritional counselling in nursing homes, schools, prisons, community health programmes, and home health care agencies.

The resource persons were Mary Easaw, Chief Dietician and Senior Manager of Dietetics and Food Services, National Heart Institute, Kuala Lumpur, Malaysia, and Shanthy Dhandapani, Assistant Professor, School of Health Sciences, International Medical University, Kuala Lumpur, Malaysia.

Water level at Mettur

The water level at the Mettur Dam stood at 74.87 feet on Friday against its full level of 120 feet. The inflow was 384 cusecs and the discharge 2,000 cusecs.

Rain lashes Coonoor, NMR services hit



Heavy rain lashed Coonoor and surrounding areas on Thursday night. The rain, which started late at night and lasted a few hours, was unusual this time of the year. During the 24-hour period ending 8.30 a.m. on Friday, Coonoor recorded 116 mm of rainfall. Though the rainfall was heavy, no major damages were reported from any part of the town and its surroundings.

However, railway sources said that services had been hit on both the Mettupalayam-Coonoor and Coonoor-Ooty sectors of NMR on Friday.

Since a boulder had fallen on the track near Kallar, the departure of the Mettupalayam-Coonoor train was delayed by about 45 minutes. Following a landslide on the track near Runneymede, the train was stopped at the Runneymede station and hauled back. Three buses were arranged by the railway authorities to bring the passengers to Ooty.

The departure of the Mettupalayam-bound train from Ooty was delayed by 40 minutes since the landslide could be cleared only around 2 p.m.

Similarly, the Coonoor-Ooty train was delayed by about half an hour in the morning owing to a tree falling across the track between Aruvankadu and Wellington.

Sources said that precautionary measures have been stepped up.

On the positive side, the rain benefited drinking water sources, including the main Raliah Dam, and did a world of good to tea gardens. The Sim's Park, which is getting ready for the summer tourist season, also benefited. Some other parts of the district also experienced good rain on Thursday night. Kotagiri recorded 88.30 mm, Kundah Bridge 65 mm, Ketti 26 mm, Kinnakorai 20 mm and Geddhai 16 mm.

On Friday also some parts of the district, including Ketti and Ooty, received pre-summer showers.



THE TIMES OF INDIA

Manik opens Tripura's first Kisan Call Centre

Agartala: Tripura chief minister Manik Sarkar on Friday opened the state's first Kisan Call Centre and a portal to facilitate real-time advisory for farmers.

The state-financed call centre will be run by a private enterprise with agriculture, horticulture, fisheries and animal husbandry experts taking calls from 6am to 10pm everyday. Farmers from any part of the world can seek advice by calling the toll-free number.

Sarkar said his government has been trying to set up a dedicated advisory service centre since 2004. Earlier, the Union government had started the service in all states, but it failed to cater to needs of farmers. Later, another call centre was set up in Guwahati with state-specific desks for the northeastern states. But the centre has been facing language hurdles. Over the last one year, more than 29,000 calls of farmers from Tripura have remained unattended at the centre.

"Farmers can consult experts regarding any related issue like seed procurement and marketing of their produce. They would be given free advice within 48 hours," Sarkar said.

Government to give subsidy to traders to export potatoes

KOLKATA: The state government will buy potatoes directly from farmers and also extend subsidy to traders selling the vegetable outside the state.

This was decided at a recent meeting of the task force on vegetable prices presided by chief minister Mamata Banerjee at Nabanna. "We have decided that the government will buy 50,000 MT of potato from farmers. We are also extending a Rs 10 crore subsidy to traders to help them shoulder the cost of transporting potatoes on rail wagons outside the state," the chief minister said. The government aims to facilitate sending 2 lakh MT of potato outside the state immediately.

Officials said more than 95% space in cold storages has been reserved for farmers to store potatoes. The government has nominally increased the price of storing potatoes in cold storages by 14 paisa and 16 paisa respectively in South and North Bengal. Thus, the price of storing a kilogram of potatoes in cold storages will be Rs 1.34 in South Bengal and Rs 1.36 in North Bengal.

Till about August last year, the government had banned the export of potatoes outside the state as there was a crisis and potato prices had shot up. The chief minister had asked the task force to intensify vigil to check potato prices and the state government had stuck to Rs 14 per kg sale price of potatoes. Later, the government relaxed the export ban and traders started sending potatoes to neighbouring states like Jharkhand, Assam and Odisha.

THE HINDU **BusinessLine**

Nayudamma award for two women scientists

Tessy Thomas, Geeta Varadan honoured

Tenali, a town in Andhra Pradesh known as the centre for art, culture and literature, played host to a unique event early this week. Three distinguished women held centre stage at a marriage hall-turned public event venue marking the annual Y Nayudamma Memorial Award lecture.

‘Agniputrika’ award

India’s ‘Agniputrika’ or missile woman Tessy Thomas from the Defence sector and less known but equally distinguished scientist Geeta Varadan from Space sector, were decorated with the coveted award, given for the 24th year in succession.

The award was presented by Shantha Sinha, a Ramon Magsaysayawardee and former chairperson of the National Commission on Women and Child Welfare. Nearly one thousand people attended the function, organised by the Y Nayudamma Memorial Trust.

In her remarks, Shantha Sinha said, “It’s a remarkable achievement for the two scientists to overcome several challenges in both professional and personal lives and contribute significantly to the advancement of science and its application to the benefit of the common man.”

The new-look Tenali

Geeta Varadan, Outstanding Scientist & Director, Advanced Data Processing Research Institute, Indian Space Research Organisation, showed images of Tenali town to illustrate how image processing techniques developed over the year had improved clarity, accuracy and precision of satellite images. In 50 years from extensively imaging the earth and utilising data for resource mapping we have reached outer space exploration also, she said.

The ISRO now has a constellation of 11 satellites in orbit sending data to various earth stations. Products developed from these imageries are used in Ministry of Agriculture, Environment & Forests, Water Resources, Urban and Rural development, etc. An extensive information system is in place in 400 districts of 17 States, she said in her presentation.

Speaking on ‘Make in India — Defence Initiatives’, Tessy Thomas, Director of Advanced Systems Laboratory, Hyderabad, illustrated Agni as an example. Technology denials have helped us build a near-total indigenous missile system.

While Agni-1, 2& 3 are in production and induction stage in the Army, the long-distance Agni-4 & 5 have achieved significant successes. By 2025, India can have technology leadership in missile technology, she felt.

Creating capacities

The industry has to establish facilities for raw material, component and sub-system manufacture.

She felt that since nano technology is the future, the industry has to quickly create capacities, expertise and facilities to compete with the best.

The Managing Trustee P Vishnumurthy explained this was the first time in 24 years that two winners were selected for the award and both happened to be women scientists. The only other woman to have won the award is V Shantha, the noted cancer specialist.

Y Nayudamma was a well-known leather technologist and scientific adviser to former Prime Minister Indira Gandhi and hailed from a village Yelavarru near Tenali.

‘Sting-less bee rearing offers good potential’

A training programme on rearing sting-less bees (melliponiculture) at the Kasaragod-based Central Plantation Crops Research Institute (CPCRI) highlighted its potential as an income generating enterprise.

S Devaneshan, Head of AICRP (All-India Coordinated Research Project) on Honeybees, College of Agriculture, Vellayani, who handled the training programme, said that rearing honeybees in homesteads can boost agricultural production as they are very effective pollinators.

Giving the example of Kasaragod district of northern Kerala, he said the district has 58,088 hectares of coconut and 25,374 hectares of rubber plantations. This provides a potential of rearing 2.53 lakh honeybee colonies. However, not even 10 per cent of it is materialised, he said.

The programme was jointly organised by Krishi Vijnana Kendra of Kasaragod and the Kerala State Horticultural Mission at CPCRI in Kasaragod on March 4 and 5.

Ravi Bhat, Director in charge of CPCRI, inaugurated the programme. Thirumaleshwara Bhat, Deputy Director of Agriculture, Kasaragod, presided.

‘Precision farming’ is sweet news for bitter gourd



Nutrient-rich bitter gourd is an integral component of Keralites’ diet, as its high medicinal values prevents several lifestyle diseases.

However, this particular crop is susceptible to diseases and pests which resulted in indiscriminate use of pesticides especially in commercial farming.

To avoid the situation, Krishi Vigyan Kendra (KVK) here has developed a precision farming module for bitter gourd cultivation, with the idea to lower pesticide contamination and to ensure more availability of this vegetable.

KVK, under CMFRI, has adopted a farming module called ‘precision farming’ in which the water soluble nutrients and organic compounds are supplied exactly to the root zone through drip irrigation.

The fertiliser and organic compounds are applied to the plants along with irrigation water in a one-step process called ‘fertigation’ using a device called ‘ventury’. Plastic mulching is used to cover the planting beds, which, in turn, help in conserving the moisture and controlling the weeds.

This method, in addition to saving nutrient loss, also reduces labour required for weed management and fertiliser application to individual plants.

Water soluble nutrients are supplied through drip irrigation tubes in every three days interval in 30-35 split doses, whereas in traditional farming it is applied in 3-4 split doses. Shinoj Subramanian, Project Coordinator, said that nutrient-use efficiency is very high in this method.

Pheromone traps are used for pest control against fruit fly and yellow sticky traps are used against white flies.

Apart from this, neem oil spray is also used as an organic pest repellent.