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'Technology Week' for farmers begins in Madurai

*Exhibition displays effective farming tools*



**expertise:P. Murugesha Boopathi (second from right), Vice-Chancellor, Tamil Nadu Agricultural University, at an exhibition for farmers in Madurai on Friday.**

MADURAI: To make farmers understand the latest technology and concepts in agriculture, a 'Technology Week' is being organised at the Agricultural College and Research Institute (ACRI) here from March 5.

Hundreds of farmers attended the first day events, including an exhibition, which was inaugurated on Friday by P. Murugesha Boopathi, Vice-Chancellor, Tamil Nadu Agricultural University.

During the week-long programme, farmers would be exposed to concepts like precision farming, farm mechanisation, technology for improving pulses production, drip irrigation, bee-keeping, mushroom cultivation and market-led production.

The 'Technology Week' was being organised jointly by Krishi Vigyan Kendra and the Indian Council of Agricultural Research.

"Our objective is to disseminate information to farmers about the latest technology available for agriculture. Through this event, we can meet the farmers directly and create awareness among them," Dr. Murugesha Boopathi said at the inaugural.

He said that the exhibition to display effective farming tools was aimed at kindling interest among farmers on commercial-oriented agriculture because "seeing is believing and any technology developed for farmers must reach them properly."

The Vice-Chancellor said that Krishi Vigyan Kendras in every district were being involved in taking technology to farmers by demonstrating the latest tools.

Stalls on agriculture, horticulture, sericulture and animal husbandry were put up at the exhibition. K. P. T. Ganesan, Chairman, Tamil Nadu Agriculture Marketing Board, P. M. Mannan, Deputy Mayor of Madurai Corporation, and P. Kalaiselvan, Director of Extension Education, TNAU, were among those who spoke.

K. Vairavan, Dean, Agriculture College and Research Institute, in his address, said that the 'Technology Week' would help farmers in increasing the yield by learning new techniques from agriculture experts.

P. Banumathi, Dean, Home Science College and Research Institute, was among those who addressed the farmers.

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### **Mangrove habitat to be improved**

Tuticorin: Plantation for creating a mangrove habitat is in progress in the coastal hamlets of Pazhayakayal and Punnakayal in the district. The plantation will be expanded to the coastal areas along the Gulf of Mannar under a Centre-sponsored scheme, according to M. Sundarakumar, Wildlife Warden, Marine National Park.

A sum of Rs. 17 lakh had been allocated for the project, aimed at increase areas covered by mangroves and to save the existing ones. Speaking to The Hindu here on Thursday, he said that the plantation area would cover 100 hectares. It would be carried out under artificial canal bank planting technique by Forest Department officials to help maintain the eco-system.

Highlighting the importance of mangrove habitat, he said, "mangroves have been considered as 'bio-guards' for coastal settlements. They are a very dense vegetation type that grow along the shore where saltwater and freshwater meet. More importantly, mangroves lessen the impact of natural calamity such as tsunami. It also serves as an important nursery for various species of fish and increases its productivity. The coral reefs, sea grasses and mangroves are considered sensitive habitats. Mangrove forests, which used to serve as a buffer

between the rising tide, big waves and storms should be conserved and protected at all cost for sustainable utilization," he said.

Without understanding the significance of mangroves, some people along the coastal districts had been felling the trees. Measures must be taken to create an awareness of the ecological role of mangroves. "There are only 23 sq. km of mangrove habitat in Tamil Nadu whereas in the Sunderbans, located in the delta of the Ganges and Brahmaputra rivers, it is about one lakh hectares," he said.

A team of officials led by him inspected the plantation site here on March 1.

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### **Supermarket lights keep veggies fresh**

REUTERS, Mar 5, 2010, 11.50pm IST

WASHINGTON: Supermarket lights help keep spinach fresh and producing new vitamins, US government researchers reported.

The surprising findings should apply to other fresh vegetables and may offer insights into how to keep produce fresher longer, the researchers reported on Wednesday in the Journal of Agricultural and Food Chemistry.

They may also suggest ways to boost nutrients in fresh foods, said Gene Lester of the US Department of Agriculture's Agricultural Research Service. He said the idea for the experiment came to him when he was shopping. Supermarkets often display fresh spinach in clear plastic containers at around 4°C under fluorescent light 24 hours a day. Lester wondered if this was good or bad for the leaves.

"It is about time we asked some of these questions and do some of the science," Lester said in a telephone interview.

His team kept fresh spinach leaves under continuous light or darkness for three to nine days.

Spinach kept under lights for as little as three days had significantly higher levels of vitamins C, K, E and folate, as well as more the colorful and healthful carotenoids lutein and zeaxanthin, they reported.

Leaves stored in the dark lost nutrients, Lester said. On reflection, he said, the findings should not be

surprising.

"These vitamins are basically in the plant for photosynthesis and we humans, being the biggest predator of plants, have evolved over time to utilize them as opposed to we having to manufacture them," he said.

Even when picked, leafy greens continue to photosynthesize, Lester said. "As long as there is moisture in the leaves and as long as there is gas exchange and light, it is good to go whether they are picked or not," he said.

His team chose fresh spinach as it is "arguably one of the most nutritionally complete vegetables commonly consumed".

A serving of spinach provides 20% or more of the recommended dietary intake of vitamins C, A, B9, K and E.

Spinach is particularly high in chlorophyll, as are most leafy greens including kale, collards, and romaine lettuce.

Other green vegetables would also likely benefit from lighted storage conditions, such as broccoli, bell peppers, asparagus, Brussels sprouts, and green beans. The researchers noted that one of the carotenoids in spinach did not increase during the study – betacarotene – so orange fruits and vegetables may not receive the same benefits from light.

### **8m-tonne-a-yr methane leak in Arctic stirs warming fears**

OSLO: Large amounts of a powerful greenhouse gas are bubbling up from a long-frozen seabed north of Siberia, raising fears of far bigger leaks that could stoke global warming, scientists said.

It was unclear, however, if the Arctic emissions of methane gas were new or had been going on unnoticed for centuries. The study said about 8 million tonnes of methane a year, equivalent to the annual total previously estimated from all of the world's oceans, were seeping from vast stores long trapped under permafrost below the seabed north of Russia.

"Subsea permafrost is losing its ability to be an impermeable cap," Natalia Shakhova, a scientist at the University of Fairbanks, Alaska, who co-led the study, said.

The experts measured levels of methane, a gas that can be released by rotting vegetation, in water and air at 5,000 sites on the East Siberian Arctic Shelf from 2003-08. In some places, methane was bubbling up from the seabed.

Previously, the sea floor had been considered an impermeable barrier sealing methane, Shakhova said.

## Bt cotton flunks pest resistance test in Gujarat

New Delhi, March 05, 2010

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This cotton variety was genetically modified only to enable it to protect itself against pests, and it failed. The stunning disclosure has swerved the spotlight back on the debate over the efficacy and sustainability of GM crops.

No doubt, there were four different varieties of pests that Bt cotton was expected to resist — and has so far failed the test in only one.

Bt cotton is the only GM crop approved for commercial cultivation in India and 522 varieties, including those developed by state-owned institutions, are being farmed.

“During field monitoring of the 2009 cotton crop in Gujarat, Monsanto<sup>1</sup> and Mahyco scientists detected unusual survival of pink bollworm to first-generation single-protein Bollgard cotton. Testing was conducted to assess for resistance to Cry1Ac, the Bt protein in Bollgard cotton, and pink bollworm resistance to Cry1Ac was confirmed,” the company said on Friday.

Monsanto said further studies were being conducted on why the crops lost their pest-fighting ability.

Responding to an e-mail question, the company said use of unapproved Bt cotton seeds, planted prior to approval, which may have had lower potency, and not following farming norms might have contributed to pink bollworm resistance. This has been reported to India’s biotech regulator, Genetic Engineering Approval Committee.

Does this put under cloud Bt technology itself? G T Gujar, who heads the insect science division of the Indian Agricultural Research Institute, said: “This is just a preliminary report and shouldn’t be viewed as failure of the technology. It’s a chance to understand it better.”

Gujar said some resistance was natural and therefore, farming Bt cotton according to government norms was essential.

Anti-GM groups said Monsanto's disclosure proved the inefficacy of BT technology. "The shortcoming of any pest management technology that tries to kill an insect rather than control or manage it is apparent as has been predicted. This is true with Bt technology as well as with chemical pesticides," said Kavitha Kuruganti of Faridkot-based Kheti Virasat Mission.



## Tea exports jump 41% in Jan

**Agencies** Posted online: Friday , Mar 05, 2010 at 1800 hrs

**New Delhi** : Tea exports have jumped by over 41 per cent to 17 million kg in January this year, the Tea Board said.

The country had exported 12 million kg of tea in the same month last year, the data released by the Tea Board showed.

In value terms, exports stood at Rs 212 crore in January against Rs 146.6 crore in the same month last year. The average price of Indian tea in export markets increased to Rs 124.69 a kg in the month from Rs 121.38 a kg in January 2009.

Tea production rose by 25.5 per cent to 27 million kg in January compared to 21.5 million kg output in January 2009.

Tea exports rose to 170 million kg in April-January, 2010 period as compared to 164 million kg in the corresponding period a year-ago.

While both south India and north India improved their contribution towards exports during the month, production was higher at 18.3 million kg in southern parts compared to 11.4 million kg in the same month last year. In northern parts tea production fell 8.7 million kg in the month from 10.1 million kg in January 2009.