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# THE HINDU

## **Butterfly conservatory thrown open to visitors**

*Chief Minister inaugurated it*



A view of butterfly conservatory in Tiruchi on Sunday.

The lush green tropical butterfly conservatory established at Srirangam by the Forest Department has been thrown open to visitors. Chief Minister Jayalalithaa inaugurated the butterfly conservatory through video conference in Chennai on Friday.

Set up on a sprawling area of 25 acres in the reserve forest area in Upper Anicut, the butterfly conservatory housing multiple species of butterflies is sand-witched between the Cauvery and the Coleroon river.

Established at a cost of Rs. 8.5 crore, the conservatory aims to foster conservation of butterfly species and educate public regarding the role of butterflies in maintaining ecological balance. It will house 40 species of butterflies including crimson rose, common mormon, lime butterfly, pansy, blue tiger, common jezebel and striped tiger. Forest Department authorities here said the conservatory will be open to visitors from 9 a.m. to 6 p.m. The conservatory would remain closed on Tuesdays for maintenance.

It contains an outdoor conservatory with floral patches, indoor conservatory, a breeding lab, interpretation centre, active and passive humidifiers besides children's play corner.

*It aims at conservation of butterfly species and educate public regarding the role of butterflies in maintaining ecological balance*

## **Organic farming gaining ground in Alappuzha**

*Snehakkootam conducts exhibition on organic products*

Several areas in the district have already earned a name in the annals of organic farming in Kerala. Many farmers have taken to the healthy farming method on seeing the success of organic farming in Mararikkulam and other places.

Organic farming is assuming new proportions with more people and organisations entering the field. An exhibition conducted by Snehakkootam, a voluntary organisation, is one of the latest developments in spreading awareness on organic farming.

The Snehakkootam exhibition held at Mullakkal featured a variety of organic agricultural products. The exhibition also showcased books that could be relied upon for taking up the healthier model of farming.

The activists behind the show are aiming at the larger goal of developing a society based on healthy food habits. An 'Onasadya' using organic farm products was organised during the last Onam festival here. The organisation is also engaged in humanitarian work. Over 500 camps on healthy living through consumption of harmless foods have been conducted by the organisation since 2010, according to the organisers.

## **Award for farmers**

The Sarojini Damodaran Foundation, another organisation, is offering an award worth Rs.55,555 for the best organic farmer in the State. The best organic farmer in districts will be given Rs.11,111 each.

## **Contest**

The contest is open to farmers in the districts of Alappuzha, Ernakulam, Kottayam, Thrissur, Palakkad, Malappuram, Kozhikkode, Kannur, Kasaragod, Wayanad and Idukki.

## **Applications**

Farmers should send applications before December 20 to Dayal, Award Committee Convenor, Sreekovil, Muhamma P.O., Alappuzha 688525 (Phone:9447114526), according to the organisers.

## **National meet on organic farming**

Kerala will host a national summit on organic agriculture in Kochi on January 8 and 9 ahead of the State being declared fully organic in 2016.

A senior official of the department of agriculture claimed that it would be the first-of-its-kind summit in the country and would form a platform for knowledge sharing for farmers and stakeholders from different parts of the country. Union minister for agriculture Radha Mohan Singh will inaugurate the summit. The summit will be an occasion for Kerala to highlight its organic farming initiatives. It will also be the first occasion for farmers, scientists, bureaucrats and voluntary organisations to discuss good agricultural practices, he added. He said Kerala would not be declared a fully organic agricultural State during the summit though the government was moving ahead with preparations.

## UNEP lauds pesticide-free farming in Kerala

*Kuruvai village in Palakkad credited with replacing pesticides with agroecology*



: The success of a group of farmers in Kuruvai village in Palakkad district's Vadakkencherry panchayat in cultivating paddy without chemical pesticides has come in for praise from United Nations Environment Programme. It finds a prominent place in a book on replacing highly hazardous pesticides with agroecology brought out by Pesticide Action Network International.

The book was released at the fourth session of UNEP's International Conference on Chemicals Management in Geneva early October.

Examples similar to the Kuruvai success from Andhra Pradesh and Tamil Nadu; from China and the Philippines too find their place in the publication, which described them as "some of the many excellent projects and programmes underway across Asia" underlining how agroecological practices help to improve yields.

The presentation on the Kuruvai model at the UNEP session, 'Agroecology in Action: Safe Food Movement in Kerala', called it "the success of community-mobilised implementation of safe food campaign'. Meriel Watts

of PAN Asia-Pacific, in an e-mail to Vadakkencherry agricultural officer M.V. Resmi, thanked her for the inputs and described them as being useful in getting agro-ecology into the text of a draft resolution at the Geneva session.

N. Chenthamarakshan, secretary of the 18-hectare Kuruvai Padasekharam, said on Sunday that farmers were pleasantly surprised by the results. The paddy collective in great distress was adopted by State Agricultural Technology Management Agency in the second crop season (Mundakan) in October 2015 to change over to agroecological methods using the concept of farmer field schools.

Using friendly pests to fight enemy pests and with zero chemical pesticide, the result was resounding success, said a government official.

The average yield during the season went up by 30 per cent, bringing the farmers a profit of over Rs. 74,000 per hectare plus the government subsidy of Rs. 11,500.

The following first season (Virippu, 2015-16) was a success too. The third season of pesticide-free cultivation is underway. The farm has achieved natural biological control of enemy pests. The farmers can now manage on their own and have even started producing bio-controls.

### **CADA to release Bhadra waters into canals for 79 days from Jan. 1**

*Schedule of release has been worked out at a recent meeting of officials*

Owing to scanty rainfall this year, the water-level at Bhadra reservoir is very low.

Water will be released into the canals from Bhadra reservoir from January 1, 2016 for 79 days to feed water to standing crops in the command area during summer.

The schedule for the release of water was worked out at a recent meeting of the Irrigation Consultative Committee of Bhadra Command Area Development Authority (CADA). In the wake of low storage in Bhadra reservoir this year owing to scanty rainfall in catchment area, it had been decided to release water on an on-and-off basis.



According to the schedule, water would be released for a period of 79 days during summer. The water would be released into the right bank canal, left bank canal, and along Anaveri, Malebennur, Davangere and Harihar sub-canals from January 1 to 18; from February 10 to 27; from March 19 to April 5; and from April 26 to May 20.

At present, the water-level in the reservoir is about 162 ft against the maximum level of 186 ft. The current water storage in the reservoir stands at 45 tmc. Of this, 14 tmc. would be reserved for supplying drinking water to human habitats along the bank of the river and 7 tmc. is dead storage. The remaining 21 tmc water would be used for agricultural purpose. It had been planned to release 2,100 cusecs of water into the right bank canal and 230 cusecs into the left bank canal during summer.

B.N. Phaniraj, Superintending Engineer of Bhadra CADA, told *The Hindu* that in view of the fact that storage in the reservoir was very low this

year, water would be provided only for standing crops, including plantation crops and sugarcane. Barring the command area along the left bank canal, farmers in other parts of the command area have been asked not to take up fresh cultivation of any agricultural crops, including paddy and other foodgrains, he said.

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· *At present, water-level in Bhadra dam stands at 162 ft against full level of 186 ft*

· *Farmers have been advised not to take up fresh cultivation during this summer*

### **EEDISSIA seeks Agro Food Park**

The Erode District Small Industries' Association (EEDISSIA) strongly believes that the status of agriculture sector could be parallelly pushed up through start of Agro Food Park.

In a representation to the Union Commerce Ministry, the Association has said that the scope for transforming farmers into entrepreneurs by equipping them with processing and packaging expertise must be fully utilised.

An Agro Food Park, according to P. Thirumoorthy, secretary, will ensure better price for farm produce conforming to safety and quality parameters, alongside preserving excess produce. Erode and neighbouring districts are known for the quantum of production and productivity of turmeric, fruit and vegetable crops, he said, adding that farmers require guidance right from seed selection to analysis of the properties of harvested produce to be in a state of readiness to export them. The Integrated Food Park must feature grading platform for agricultural outputs, cold storages, safe transportation, and tools for modern farming. The agricultural wastes could be converted into fuel, cattle feed and paper.

Erode, according to EEDISSIA, qualifies for a full-fledged centre of CFTRI for processing perishable fruits and vegetables, value addition without loss of nutrition and aroma, and training facilities for manufacture of the value-added products to world standards.

## **Standing committee on agriculture invites suggestions**

With a view to elicit information on comprehensive agriculture research based on geographical conditions and impact of climatic changes to ensure food security in the country, the standing committee on agriculture has invited memoranda containing views and suggestion of experts, individuals, institutions, organisations and other stakeholders, according to a PIB release. The suggestions have been sought on issues such as the need to evolve new varieties of crops, which can withstand climatic fluctuations; requirement to evolve improved methods of irrigation; need to popularise consumption of crops/fruits, which can provide better nutrition; need to develop indigenous varieties of cattle that can withstand extreme climatic stress; need to develop system for precision horticulture and protected cultivation; diversification of species of fish to enhance production from fisheries sector; need to strengthen agriculture extension system and focus on agriculture education and others.

Memorandum (two copies) can be sent to The Director (R&A), Lok Sabha Secretariat, Room No. 152, Parliament House Annexe, New Delhi-110001. e-mail: [agricom@sansad.nic.in](mailto:agricom@sansad.nic.in). P. Narasimhan

## **Dedication charts a success story**

*The farm generates employment, rather than merely being only a self employment centre*





Shyam Prasad and his wife Prasanna P Bhat at their tissue culture laboratory, Pethri, near Udupi, Karnataka

It is dedication and commitment, rather than academic and professional qualification, which can define success in self-employment entrepreneurship, even in a field as the intensive agriculture, which is driven by modern trends in biotechnology. The success story of the husband-wife team of the small town Puttur near Mangaluru is an exemplar of this common sense dictum.

Shyam Prasad and Prasanna P. Bhat left their home town Puttur, with only high school certificates, seeking new livelihood, and re-settled themselves in a small village, Pethri in Brahmavar near Udupi, Karnataka. There they started a small scale Annapurna Nursery in 1997 with a loan of Rs.2 lakh from Syndicate Bank. They produced and sold planting materials (seedlings) for arecanut, coconut, spice plants, and others for the next ten years.

During this period, they had first-hand experience of the issues such as loss due to diseases and other plant mortality problems, and as a result, they realised the problem of the scarcity of adequate planting materials. To solve these issues, they decided to launch a tissue culture nursery venture as a challenge. They underwent a month's training in tissue culture at Gandhi Krishi Vignana Kendra (GKVK), Bengaluru, followed by 15 days of refresher course at Rural Self Employment Training Institute, sponsored by Syndicate Bank and Canara Bank, Bengaluru.

In 2008, they launched their new tissue culture laboratory on the 10 acre land they had already purchased, with financial assistance of Rs.20 lakh loan from Syndicate Bank and Rs.20 lakh subsidy from National Horticulture Board. Now their tissue culture laboratory employs 40 persons — 15 skilled staff and 25 unskilled labourers — and is run on a professional scale. Plant tissues (ex-plants) were collected from selected high yielding banana varieties (mother plants) and their virus index tested at GKVK Bengaluru. These ex-plants were cultured in nutrient medium under sterile conditions — each ex-plant can be induced to divide and develop into complete plants, to produce large number of seedlings.

The culture produces 250 to 300 micro plants from a single ex-plant in about 8 months through an 8 cycle process, one cycle being four weeks duration.

Within 8 months, the plants are ready for sale, after a month each of primary hardening and secondary hardening in poly bags.

Their tissue culture farm now has four green houses (poly houses or shade houses), which ensure production of high quality planting materials of uniform grade, in all seasons through the year.

The total capacity is said to be of 20 lakh in the laboratory and 30 lakh in the green houses. They produce many varieties of banana, (G9, rajapuri, nendran, red banana and others) — the selling price is Rs.8/Rs.10 for small net pot, and Rs.15/Rs.25 for poly bag plant, the price varies from variety to variety.

The farm generates employment, rather than merely being only a self employment centre. This is the major part of the success story. Moreover, they are now ready to venture to become a training centre for aspiring farmers in tissue culture — Shyam Prasad is already a visiting faculty at many Farmers' training centres in Karnataka. He is also actively advocating the benefits of timely repayment of bank loans.

“Prasad's success story has become a role model for financially viable self employment schemes and small scale employment ventures, providing farm activities for all who are ready to invest in dedication and commitment more than anything else,” says, P. Selvaraj, Deputy General Manager and faculty member in Bankers Institute of Rural Development (BIRD), the training establishment of Nabard, Mangaluru.

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### **Using coco peat to grow food**

Coco peat is an eco-friendly alternative to soil.

Udumalpet is rain starved. You wouldn't think so as you take in all that green and the bounty of vegetables growing in front of you. Row upon row upon row of tomatoes, green chillies, bell peppers and brinjal grow on a 10-cent land. But these vegetables are growing out of what looks like coir foot mats inside grow bags.

“That is coco peat,” explains R.K Raghunandan of Green Terra that promotes coco peat as an alternative growing medium to soil.



Mr. Raghunandan pioneered the use of coco peat in the country and in 1991 exported to Australia and the UK.

In 1992, he won the Commerce Ministry Award for pioneering work.

He supplied coco peat to Sicilian farmers too to grow the famed Mediterranean veggies.

“But they usually grow them in green houses. This is the first time I am trying it out in the open air,” he says.

So far, the experiment has been successful. The tomato is blushing, the capsicum is shining, the brinjal is a beautiful purple and the green chillies look sharp.

“They are growing well and all the harvests have been successful. For the 480 bags of vegetables, we water them once in a week for 10 minutes” explains Mr. Raghunandan who says only when he is fully convinced the coco peat method of growing vegetables outdoors works will he persuade the farmers around him to try it.

In fact, vegetable farmers from the area are helping him look after these plants.

They have seen for themselves how low maintenance and successful it is and are convinced that this method will work back in their own farms, he says. Mr. Raghunandan feels coco peat method of agriculture is ideal for small farmers who work with just an acre or so. “Weeding takes up a big chunk of expenses in conventional agriculture. Coco-peat is weed-free. And it is low maintenance.

And the yield is enormous. One can have 4,000 grow bags in each bag. And each bag can have three plants, which means 12,000 saplings. The minimum yield is 24 tonnes of produce per crop cycle. The same thing when grown on soil will be approximately eight tonnes per crop cycle.”

He says he dreams of promoting a mini green-revolution in drought prone and dry regions besides encouraging organic vegetable cultivation in every home so that there is easy availability of fresh and toxin-free vegetables.

*From a serious farmer to a home gardener, anyone wishing to grow organic vegetables in a sustainable and eco-friendly manner should try coco peat as the growing medium, says R.K. Raghunandan*

### **Workshop, two-day exhibition on millets**

Tamil Nadu Agricultural University Information and Training Centre is conducting a workshop on preparation of millets-based products on November 18.



For registration and other details, call 044 -2626 3484.

S. Vijayalakshmi will be organising an exhibition-cum-sale of products prepared from millets on November 16 and 20. For venue details, call 97907 72370 / 2371 1835.

### **Farmers benefit from government schemes**

Farmer T. Kathiresan of Devarayapuram, near here, is confident of a good harvest this season.

The reason behind his confidence is improved irrigation.

This was possible because of the subsidy the Agriculture Engineering Department gave him to purchase a solar-powered motor.

A release from the department says that it gave him Rs. 3.84 lakh and he chipped in with Rs. 1.17 lakh to buy the motor costing around Rs. 5 lakh.

### **Subsidy**

The scheme to subsidise solar-powered motors goes along with the scheme to micro-irrigate the field. This way he was able to save water as well.

The department's subsidy helps farmers buy solar panels, a five horsepower motor, the release says and adds that thus far 50 farmers in Coimbatore have benefited under the scheme. The money spent amounted to Rs. 178.16 lakh.

The department has also spent on schemes on efficient water management.

### **Rain water**

To save rain water in watershed areas, it has spent Rs. 42.43 lakh to establish 14 rainwater storage structures and another Rs. 9.43 lakh to construct 19 farm ponds.

The latter was to tap rainwater from farm ponds to be used later for irrigation.

The department is implementing the schemes with the objective of fulfilling the State Government's mission of doubling the production and tripling the farmers' income.

### **‘Create new water sources to increase farm yield’**

Farmers in the district are asked to create new water sources through minor irrigation under the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) programme of the Union Government.

The objective of the programme is to increase the area under cultivation by creating new water sources, repair, restoration and renovation of water bodies, strengthening and carrying capacity of traditional water sources, strengthening and creation of distribution network from source to the farm and improving the water management and distribution system.

The target for the Department of Horticulture is to cover 2,620.59 hectares while the target for the Department of Agriculture is 599.74 hectares. Farmers who own the land or carrying out cultivation on others land on lease basis for 10 years, women, differently abled farmers, ex-servicemen will be given priority for receiving subsidy under the scheme. Small farmers will be given subsidy of 100 per cent for a maximum of two acre while medium farmers will be given subsidy of 75 per cent for maximum of five acre.

The Department of Horticulture has authorised 34 private companies for implementing drip irrigation projects in farm lands in the State and farmers can select any of the companies and approach the department with computerised topography, land map, copy of family card and certificate from tahsildar recommending for the scheme. District Collector V. Dakshinamoorthy has asked farmers to use the opportunity and bring more of their lands under cultivation.

Officials said that the aim is to expand cultivable area and to reduce wastage of water and use more water saving technologies.

### **Tapioca cultivation in full swing**

*Tribal farmers confident of registering higher yield this season*



A view of tapioca cultivation on the Pachamalai hills in Uppliyapuram block in Tiruchi district.

Even as the Forest Department and NABARD are trying to promote alternative cropping in Pachamalai, tapioca cultivation is on full swing in the hills and tribal farmers, encouraged by the copious rain from the north east monsoon, are confident of registering higher yield this season.

Tapioca is one of the major horticultural crops which ensure sustained livelihood to a large number of tribal farmers. About 3,000 acres has been brought under the crop in Tiruchi district, a major area being on the Pachamalai, although villages such as Shobanapuram in Uppliyapuram block, on the foot of the hills, account for about five percent of the tapioca area.

Most farmers have resorted to raising ‘rose tapioca’ and ‘H-165’ varieties which are starch-rich plants so that they can register higher returns from the cluster of private starch industries located in Salem, Athur down the hills in the Salem district.

According to farmers, the duration of the crop is about seven to eight months but farmers await for a couple of months beyond its maturity for ensuring more attractive price. A major advantage of the crop is that it can withstand drought-prone conditions, although periodical watering or irrigation would strengthen its quality and weight. The average yield per acre is five tonnes that fetches revenue of Rs. 20, 000 on an average.

Farmer's investment per acre is about Rs.10,000. The only problem has been the price of the produce. Farmers said they do not get attractive price from the industries.

Farmers complain that middlemen were the largest beneficiaries of tapioca cultivation.

Sago units, all of them owned by private sector industrialists, fix the price according to their demand and based on starch content.

Often farmers are given a lower price on the ground that starch content was low in their produce.

The NABARD had been implementing a tribal development project on the hills. Development of orchards, raising of silver oak trees and cashew trees was one among them.

According to S. Suresh Kumar, District Development Manager, National Bank for Agricultural and Rural Development, efforts are being taken to diversify the cropping pattern. He said the alternative horticultural activity would not only fetch higher returns but also help avoid soil erosion.

According to representatives of Hand in Hand India, a voluntary organisation implementing the tribal development programme WADI, manual harvesting of tapioca during June or July, particularly after the summer showers, leads to soil erosion in Pachamalai. The red laterite soil on Pachamalai is so fine that it is easily eroded due to showers after harvest.



The tribal development project aims at checking soil erosion on Pachamalai.

### **Bright prospects for cashew cultivation**



Cashew saplings being planted in Pudukottai.

The north-east monsoon has been active enough to raise horticultural crops in general and cash crops in particular in the district. Farmers should raise cashew saplings before November, said R. P. Gnanamalar, Professor and Head of Krishi Vigyan Kendra, Vamban.

Speaking after inaugurating a massive planting programme to promote cashew cultivation in the district on Friday, she said that ‘VRI-3’, developed by Tamil Nadu Agriculture University, was most suited for the soil condition of the district.

She pointed out that the scope for expanding the area under cashew cultivation in the district was wide and about 10,500 hectares had been brought under the crop so far, with Alangudi, Gandarvakottai and Maramadakki.

She advised the farmers to go in for VRI- 3 and VRI (CH) 1 varieties so as to realise higher yield and returns.

K. Dhanalakshmi, a faculty member, said that the kernel and cashew nut were of high quality in these varieties. The Krishi Vigyan Kendra would ensure a close follow-up on the cultivation techniques. An interaction with

farmers would be held periodically so as to exchange their views and experience.

### **Farmers producers' company earns profit**



The Tiruchi District Farmers Producers Company has taken up new business activities in Thuraiyur. Picture shows a farmer purchasing a sprayer at the shop in Thuraiyur.— Photo: B.Velankanni Raj

The Tiruchi District Farmers' Producers Company, which was inaugurated about four months ago, has started earning profit. It has been gaining popularity among the farmers by attracting a larger number of shareholders and also diversifying its business activities in the district.

The company, which took off in July this year, with just 248 members, has enrolled an additional 514 members registering its tally to 762 now. "Each member contributes a share of Rs.5,000 and it indicates that the faith they have imposed on the company," says R. Selvaraj, Deputy General Manager, Indian Bank, which took the initiative in floating the joint liability groups by sanctioning loans running to a few crores of rupees

Primarily, the good performance of the joint liability groups led the National Bank for Agriculture and Rural Development to float a company by advancing special funds of Rs.10 lakh, says S. Felix Edward, Senior Manager, Indian Bank, Thuraiyur, which released the loans.

## **Diversification of trade**

Diversification of trade has been the major success of the company earning a profit right from its inception, says A. Thangaraj, president of the company. He said that the sale of cattle feed attracted a large number of members, as the members are milk producers.

The diversification of trade has been benefiting both the company and its members, as the cattle feed was sold at a fair price. “We place bulk orders to the companies and ensure direct delivery at our sales units,” says R. Arunachalam, Director of the company.

## **Sprayer sale**

The latest venture by marketing agricultural sprayers has gone down well with the farmers. “We have marketed so far 100 sprayers,” says R. Kiruba, Joint Director of the company. Direct delivery from the manufacturing industry at our marketing office has gone a long way in reducing a number of expenditure. “Thereby the cost of the sprayer has come down to just Rs. 2,000 from the market rate of Rs.4,500,” she adds. The endeavour has proved that the company had made the farmers to be self-reliant without awaiting any subsidy.

## **Loans distributed**

K. K. Marimuthu, Managing Trustee of Shalom Foundation, a non-governmental organisation which has been coordinating the activities of the company, said that the company had started extending loans for the members. “The credit should be utilised only for farm-related activities and the members have been adhering to the norms,” he adds.

Although the NABARD had sanctioned Rs.10 lakh for meeting administrative expenses, the company has availed just Rs. 50,000 so far, indicating the fair utilisation of funds.

The company has a series of plans to expand in future, says Mr. Thangaraj.

*“Direct delivery from the manufacturing industry at our marketing office has gone a long way in reducing a number of expenditure”*

### **A relook at cross breeding of cattle**

K.M.L. Pathak (right), Deputy Director General (Animal Science), ICAR, with Manoj Parida, Chief Secretary, and S. Velmurugan (left), Chairman of Pondicherry Veterinary College Society at the Vijaya Bank Endowment Lecture in Puducherry.—Photo: S.S. Kumar

*Centre is keen to conserve indigenous breeds in the country and upgrade them genetically*

: The Centre is planning to revisit its policy of cross breeding of cattle for conservation and genetic upgradation of indigenous breeds in the country. This would increase milk production with A2 protein (beta-casein protein) present in the milk of indigenous cows when compared with the A1 protein present in the milk of exotic breeds which is not good for health said K.M.L. Pathak, Deputy Director General (Animal Sciences), Indian Council of Agricultural Research (ICAR).

India has the largest population of livestock in the world and is bestowed with the best indigenous and native breeds in any livestock. Though the indigenous breeds are better suited to climatic conditions the per capita animal productivity is very low. “The Government is now planning to revisit the cross breeding policy. Though this is a state subject the centre has been advising the State Governments on the need to revisit the breeding policies for conservation and genetic upgradation of our indigenous cattle,” Mr. Pathak told *The Hindu* on the sidelines of a lecture at the Rajiv Gandhi Institute of Veterinary Education and Research (RIVER) on Friday.

The Centre has started the National Gokul Mission with the objective of conserving our own indigenous cattle. India has 32 breeds of cattle which have been characterised as milk breeds and draught breeds.

To start with the Government has decided conservation and genetic upgradation of five indigenous breeds – Tharparkar from Rajasthan, Gir from Gujarat, Red Sindhi, Sahiwal and Kankrej.

### **Rs.500 crore project**

Mr. Pathak said the total funding of Rs.500 crore for the project will be met by the Union Government. Initially, two bull centres will be established in Andhra Pradesh and Madhya Pradesh for native breeds.

The centre in Andhra Pradesh will take care of all native breeds from the Southern region while the one in Madhya Pradesh will take care of breeds from all over the Northern region.

### **Priority to farmers**

He said that ICAR had been according topmost priority to farmers and conducted research

Catering to their priority and requirements. The ICAR has been conducting frequent workshops at the 18 Agro Climatic Zones across the country inviting farmers.

The contribution of livestock to the Gross Domestic Product (GDP) is increasing when compared to agriculture Mr. Pathak said, adding that the issue of farmers' suicide can be solved if farmers go for livestock keeping.

### **'Excel in academics'**

Chief Secretary Manoj Parida said that though Puducherry was a small State, students should take the advantages because the opportunity to excel in academics was tremendous. The Government has given full infrastructure and the academic institution should grow making use of the natural advantages of Puducherry.

Mr. Parida said that around 10 percent of his IAS batch mates in 1986 happened to be veterinary science graduates. Students should not be confined to limited domains of knowledge and should utilize the opportunities irrespective of the region, caste and creed, he said.

R. Mihir Vardhan, Secretary (Animal Husbandry), B. Ramesh Kumar, Dean, RIVER and S. Ramkumar, Professor and Head (Department of Animal Husbandry Extension), RIVER, and others participated.

### **Rabi crops sowing**



As per preliminary reports, sowing of Rabi crops has started in various parts of the country. The total area sown under Rabi crops as on November 13 is 123.28 lakh hectares.

Wheat has been sown/transplanted in 18.65 lakh hectares, pulses in 38.91 lakh hectares, coarse cereals in 34.53 lakh hectares, oilseeds in 31.02 lakh hectares and rice in 0.17 lakh hectares.

### **NGOs, officials join hands to check migration**

A number of intellectuals, government officials and NGOs came under one roof to deliberate upon ways to check migration of people from hilly regions of Uttarakhand at a seminar organised by a Rishikesh-based NGO here.

Speaking on the occasion over the week-end, Chairman of the organising NGO, Jagdamba Samiti, Lakshmi Prasad said, “We aim to organise such events in future to seek suggestions from government officials and intellectuals to deal with the migration issue.”

According to Chamoli-based NGO Uttaranchal Yuva and Gramin Vikash Kendra the rate of migration in the region has gone up post-2013 flood.

As many 50 families from Narayan Bagad area in Chamoli district have migrated to other places following the natural calamity that ravaged the state two years ago, it said.

Chairman of Dehradun—based NGO, which initiated ‘Save Village Movement’, Padmashree Anil Joshi, said that the government should focus on utilising resources available in the state to overcome the migration problem.

The government has also decided to give minimum support price and bonus point for such crops.

### **Vegetable prices skyrocket**

Incessant rain lashing the city from last week has not only dipped mercury levels, but also dipped the supply of vegetables to the city, thus leading to a rise in their prices.

Tomato seems to be the most hit. Kolar recorded severe crop damage owing to the rain last week. This, coupled with dwindling harvest has resulted in the tomato price shooting up to Rs. 60 a kg.

Carrot, capsicum and onion supplies have also been hit due to the unseasonal rain, leading to rise in prices.

It may be at least two weeks before the supply picks up and the prices return to normalcy, say Hopcoms officials.

## Idukki banana farmers on a sticky wicket



Sudden fall in the prices of Nenthran variety of banana has hit the farmers in the high range area of Idukki where it is cultivated on a largescale.

The sudden fall in the prices of banana (Nenthran) has hit the farmers in the high range area where it has been largely cultivated.

Earlier, its price ranged between Rs.25 and Rs.40 per kilogram which now fell down to Rs.18.

Though the farmers expected a high price during the Onam season, they got only a maximum price of Rs.30. Farmers say that it is profitable only when they get a price above Rs.30 per kilogram.

Though the usual harvesting season is between June and September, it is being harvested throughout the year. Farmers cultivate plantain in low lying fields where irrigation facilities and water sources are available.

“Banana is a major crop cultivated by the joint groups and the self-help groups under the Kudumbasree Mission,” says Binoj Varghese, a farmer at Thonithadi.

He has two acres under banana cultivation.



He says that there is virtually no demand for it in the private market. Farmers sell the crop through the Swayasraya Karshaka Vipani under the Vegetables and Fruit Promotion Council Keralam. Most of the farmers cultivate plantain on land taken on lease. There have not been many fluctuations in the prices, which were remaining at a low for over a year, says an office-bearer at Erattayar Swayasraya Vipani.

An important factor said to be the reason behind the price fall is the large-scale arrival of banana from Cumbom valley. The cost of production there is much lower, says Mr. Varghese adding that the banana produced in the high range is considered to be of better quality.

### **Salt producers happy over increase in price**

Salt manufacturers are happy over the increase in market price of salt. This healthy situation cropped up owing to contraction in production this year resulting in shrinking stock of salt. Though salt fetches a desirable price in the market, its stock will not be adequate to meet the demands of buyers until January next.

The market trend had already indicated that some traders here were also relying on Gujarat, the largest salt producer in India, according to G. Grahadurai, president, Tuticorin Small Scale Salt Manufacturers' Association.

But, unseasonal rains caused havoc in salt production this year. Normally, production would commence in February and go on till middle of October, but this year it began on May 20 and lasted just for four months due to interruption of rain.

A.R.A.S. Dhanabalan, secretary of the association, told The Hindu here on Sunday that the salt production was down 45 per cent this year, whereas it was up to 90 per cent in 2014, when market trends were not enterprising.

Last year, one tonne of salt was priced at range of Rs.700 to Rs.800, but its price had gone up to Rs.1,000 to Rs.1,800 per tonne now. The price would increase further if the stock became scarce in January.

M.S.A. Peter Jebaraj, president, Gandhi-Irwin Salt Manufacturers' Association, said demands for procuring salt were not as high as of now. Saltpan workers were jobless since the production came to halt.

Around 20000 salt workers comprising eight unions had been relying on this traditional industry directly to earn their livelihoods.

He said salt workers should also be treated on a par with fishermen, who are getting monetary assistance during lean and fishing-ban period every year from government.

### **Inflow raises hopes of bumper crop**

The northeast monsoon brought copious rain to Tirunelveli and Tuticorin districts on Friday night, raising the hopes of a bumper pisanam crop for the second consecutive year. Heavy rain inundated several residential areas and brought an improved flow into dams. Four dams of Tirunelveli district overflowed to cause flooding in the Tamirabharani. However, Saturday received only intermittent drizzles.

Eight villages in Tuticorin taluk were flooded, displacing 1,374 people. They were evacuated to safer places and accommodated in relief camps. The district administration declared holiday for schools and colleges for the second consecutive day.

Collector M. Ravikumar said that 5,500 cusecs of surplus water was released from Korampallam reservoir. The highest rainfall of 74 mm in the region was recorded in Ottapidaram. The Collector said 300 cusecs of surplus water was flowing into the sea from Srivaikuntam dam. Fire and Rescue Services personnel reached the stranded people in flood-hit areas in Tuticorin district and evacuated them with the aid of a rubber boat.

The water level in Papanasam dam in Tirunelveli district, the prime source of drinking water for three southern districts, crossed the 100-foot mark (full level 143 feet). The flow into the dam was 1,546 cusecs, following 38 mm rainfall in catchment areas and the level touched 100.55 feet.

With the weathermen predicting more rain in the days to come, Papanasam, Servalar and Manimuthar dams may be overflowing this year too. The catchment areas had some rainfall on Saturday and the Gadana, Ramanadhi, Karuppanadhi and Gundar dams were overflowing to cause flooding in the Tamirabharani.

In neighbouring Kanyakumari district, overnight rain affected traffic, especially in Nagercoil where roads had been dug up for laying sewage lines. Heavy flow was reported in the Kothaiyar, Kuzhithuraiyar, Valliyar and Paraliyar, following release of excess water from major dams.

Elsewhere in the region, the sky remained overcast with intermittent showers in the evening. In Dindigul and Theni districts, traffic in the ghat section was unaffected.

*Eight villages in Tuticorin taluk were flooded, displacing 1, 374 people. A holiday was declared for schools and colleges in many parts of the State for the second consecutive day.*

### **An app to conserve Kangeyam cattle**



BJP national secretary H. Raja launches the mobile app 'Konga Madu' at an event organised by Konga Gosalai and Sri Shakthi Institute of Engineering and Technology in Coimbatore.

In an effort to protect native breeds of cattle, especially the Kangeyam cattle known to be an asset of the *Chera* dynasty, a mobile application, *Konga Madu*, was launched in the city on Saturday.

Konga Gosalai and Shri Sakthi Institute of Engineering and Technology have come up with this app, aimed at providing the required information to farmers possessing Kangeyam bulls and cows. The app was launched by H. Raja, national secretary of the Bharatiya Janata Party, at a function held at the college.

According to the organisers, *Konga Desam* or *Chera* kingdom has been producing the best breeds of Indian Zebu cattle (*bos indicus*) and is well documented in Tamil Sangam literature. The recent archaeological excavations at Porunthai and numismatic evidence from Amaravathi river in Karur corroborate the Sangam texts in confirming the cattle propagation during the time of the *Chera* kingdom. After the advent of exotic breeds such as Jersey to augment milk production, native breeds have lost its charm and are on the verge of extinction.

Erstwhile Pattagar of Palaykottai, Shree Uthamakaminda Rao Bahadur Nallathambi Sarkarai Mandradiar sustained and brought the Kangeyam under international limelight by the end of the colonial era. The present Pattagar Rajkumar Mandradiar had recently formed the Palayakottai Pattagar Cattle Farm and Research Centre to help conserve the Kangeyam breed. The Konga Gosalai has been rescuing Kangeyam cattle from being sold at local shandies and giving them to farmers for rearing. In the last two years, more than 800 cows have been rescued. With a wider view to produce pure progeny, Konga Gosalai along with faculty members Selvakumar, Arun Stalin of Shri Sakthi Institute of Engineering and Technology and a team of Katpas Technologies Coimbatore developed this app. Using the app, the farmers having Kangeyam bulls could look for Kangeyam cows or those with cows could look for bulls and locate the nearest veterinary care centre.

The app is designed to make information available on hand to ensure the health of Kangeyam cattle.

The farmer will be able to buy or sell a Kangeyam cow to another farmer with the help of this app.

The app also helps in getting expert advice from doctors on ailments affecting the cattle. The app, *Konga Madu*, is available in Android mobile play stores as a free download.

### **Women farmers showcase organic products**

In a desperate bid to save organic foods from getting extinct, over 500 women farmers and entrepreneurs from across the country have come together here to display and market their organic products including tribal and ethnic foods, millets, pickles, rice, pulses, spices and vegetables and fruits, fabrics, dyes and dresses, cosmetics and household products, in an exhibition, 'Women and Organic Products.'

Organic agriculture is to get a boost with additional funding by the Ministry of Agriculture, Union Minister Radha Mohan Singh said after inaugurating the exhibition which is said to be the first of its kind on Friday. "Women farmers have been approached directly to participate here" he added.

The Minister said that the government has enhanced allocation for organic farming from Rs.15 crore earlier to Rs. 300 crore.

Indeed some of the products on display are so ethnic and rural that city-bred visitors were seen asking the women exhibitors how to use them. A jaggery made out of palm from West Bengal has to be soaked in warm water before being kneaded into the dough (atta).

Then there is a range of traditional garlic and aola chutneys Seloo in Maharashtra. Those selling forest honey have diversified into jamun-honey and eucalyptus honey.

Another unique feature of the exhibition will be ‘Forgotten Foods’ like millets such as jhongora, ragi, kuttu, bajra, amaranth, etc which were earlier regarded as healthy foods eaten by all but have lost their popularity over time, said activist Vandana Shiva.

Obviously pleased by the effort, Minister for Women and Child Development Menaka Gandhi said more than 300 groups from Ladakh to Kanyakumari were participating in this unique fair. “There are 200 varieties of rajmah, 1,000 varieties of rice, spices from north-east and pickles of herbs. We want people to come and see how rich India is in its biodiversity.”

The exhibition has been set up with the involvement of Navdanya , P R Grid and Organic Farming Association of India (OFAI) who have tried to ensure full participation of organic women farmers and organic producers from places as diverse and far as Ladakh, Assam and Odisha.

***More than 300 groups from Ladakh to Kanyakumari are participating in this unique fair***

### **‘Announce support price for paddy’**

The Raitha Sanghagala Vakkuta has warned that a district-wide agitation would be launched if the State government fails to announce support price of Rs. 2,000 per quintal of paddy and open procurement centres, wherever necessary as early as possible. Speaking to reporters here on Saturday, farmer leader B.M. Satish said, the State government has not taken any steps to open procurement centres. “The State government should come to the rescue of farmers by announcing the support price,” he said.

***Leaders warn of agitation if govt. fails to announce support price***

## **Farmers await water release**

*For PTR and Thanthai Periyar Channels' ayacut*

With steady increase in the storage level in Periyar and Vaigai dams, farmers having lands in PTR and Thanthai Periyar Channels' ayacut hoped that the government would release water for irrigation soon.

Water could be released in these channels only when the combined credit in Vaigai and Periyar dam reached 6,000 mcft.

But the present credit was only around 5,150 mcft. Public Works Department officials hoped that predicted rain in the coming week would improve the credit.

Sources said that the PWD briefed the government about the present status and possible release of water through the channels.

Commencement of desilting of PTR Channel was a welcome sign as it was a long-time appeal by farmers.

Water release in PTR Channel that started at Vaikalpatti and ended at Koduvilarpatti will irrigate 5,146 acres.

The three-member Supreme Court Panel could visit and inspect Periyar dam only when the dam level crossed 132-foot mark.

## **Milk producers bank on private dairy plants**

A large number of milk producers in the district has been relying on private dairy plants for marketing their milk in the absence of a milk route by 'Aavin'.

The most affected are the milk producers of Thuraiyur and Uppliyapuram who supply their produce to private dealers.

According to farmers of Shobanapuram on the foot of Pachamalai, though they used to supply milk to Aavin, the arrival of vehicles was erratic. They had immediately shifted supply to private dairy unit. Hundreds of suppliers of Shobanapuram and neighbouring villages supplied milk to the private unit because of prompt payment.

R. Kiruba, Joint Director of the Tiruchi District Farmers Producers Club, which runs about 20 milk societies in and around Thuraiyur, points out that the entire production was being despatched to a private unit.

Their repeated plea with the Aavin authorities to procure the milk had fallen on deaf ears. She said that farmers of Nagalapuram, Krishnapuram, Ottampatti, Keezhakunnupatti, Konapathai, Naduvalur, Kalangamudaiyanpatti, Senappanallur, Chellipalayam, Chikathambur and Sorathur were supplying milk to the private unit. In fact, the company has been earning profit out of its daily milk production of 8,000 litres. According to official sources, the Aavin needs to establish its milk routes in several parts of the district in general and in Thuraiyur and Uppliyapuram blocks in particular. While this was the problem was private milk producers, the cooperative producers had their own tale of woe. They complain that that Aavin needed to take extra initiative for marketing the dairy products.

A discussion in this regard was taken up at the monthly farmers' grievances day meeting here held recently when N. Ganesan, State secretary of the Tamil Nadu Milk Producers and Workers Welfare Association, voiced a serious concern over the poor marketing avenues for milk and dairy products.

He specifically appealed to the district administration to popularise the sale of dairy products by starting milk booths at the Central and Chathiram bus stand and railway stations in the district.

## **Welcome to the world of high-quality flowers**

*Nearly 2 lakh cut flowers are auctioned every day in Bengaluru*





The auctions started off as an unorganised activity before evolving into International Flower Auction Bangalore Limited (IFAB), a joint venture company, in 2002.

Have you wondered how Bengaluru is able to host the Lalbagh and Cubbon Park flower exhibitions with lakhs of fresh flowers being made accessible effortlessly?

The city is the base for an auction of nearly 2 lakh cut flowers every day amounting to an average turnover of Rs. 8 lakh.

The figure could be four times higher during special occasions such as Valentine's Day.

The auctions started off as an unorganised activity involving a few growers and buyers before evolving into International Flower Auction Bangalore Limited (IFAB), a joint venture company, in 2002. IFAB created a platform for growers and buyers while eliminating middlemen and auctions high quality cut flowers daily.

The flowers were introduced by traditional floriculture practitioners who were growing 'mallige', 'shavantige', tuberose, 'sugandaraja', 'kanakambara' and 'kanigle' in small pieces of land. The business was proving unprofitable owing to its seasonal nature and labour shortage.

### **‘Protected cultivation’**

“Hence, traditional growers were trained to adopt commercial floriculture practices, nurseries and green house technologies called ‘protected cultivation’ that brought in vegetables and flowers that sold by the single stick,” says C.G. Nagaraju, MD, IFAB, and Joint Director, Horticulture, Bengaluru Rural.

### **‘Silent flower revolution’**

“One could grow capsicum and European cucumber alongside Gerberas, roses and Carnations. This is what brought in a silent flower revolution in Bengaluru, which is blessed with the right weather for floriculture to flourish.

Nearly 300 hectares of floriculture products and 300 hectares of vegetables are grown in Doddaballapura, Devanahalli, Anekal, Hoskote and Nelamangala.”

### **Exports**

About 80 per cent of the pastoral hubs of floriculture in and around Bengaluru today grows Dutch roses. The rest grow Carnations, Gerberas, Anthuriums, Bird of Paradise, Heliconia, tuberose, Gladioli, orchids, Lilioms, filler material and Fairy Slipper that reach all parts of India and are exported to Japan, Holland, England and Australia.

The IFAB, assisted by APEDA, is now considered the floriculture hub in India. It has deployed the ‘Dutch auction’ system since the last three years.

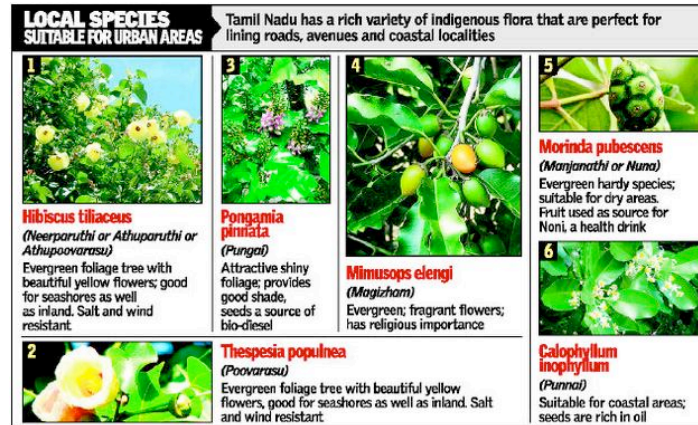
### **Sophisticated facilities for dealers**

“The minimum/base price is fixed by the grower/supplier while the maximum price is fixed by IFAB, considering the demand for flowers. Only registered sellers and buyers are allowed to participate in the auction, which

takes place at 8.30 a.m. on all 365 days,” says Mr. Nagaraju. “IFAB offers dealers sophisticated facilities for online trading.”

On normal days, a single flower stick can fetch Rs. 4. The amount goes up to Rs. 15 and more on special occasions.

### ‘Trees must suit the environment’



Hundreds of trees uprooted in the rains in Chennai have underscored the need for a rethinking in selection of tree species suitable for urban and coastal districts of Tamil Nadu. Careless planting methods and poor maintenance cause death of trees during monsoons, say naturalists.

“Can you identify a single Tamarind among the uprooted trees in the rain? We have this species thriving in *Neithal* [areas adjacent to sea]. Trees including Poovarasu, Punnai, Mahilam and Veppalai take deep root and are capable of withstanding gusty winds during rain,” said Professor D. Narasimhan of the Madras Christian College.

### 52 native species

He has identified 52 native species and four exotic species suitable for planting along avenues and for urban forestry.

Two of the trees that have borne the fury of the monsoon are *Peltophorum*, a native to Sri Lanka and Malaysia, and *Gulmohar*, introduced from Madagascar and known for their bright-coloured flowers.

Late naturalist Ma. Krishnan consistently campaigned against exotic species and advocated “cultivation of a narrow sort of patriotism in our floral preferences.”

Writer Ramachandra Guha in his introduction to Krishnan’s book *Nature’s Spokesperson* recalled an incident which clearly explained his take on exotic species.

“Disgraceful. You should uproot all those foreign,” he said when asked about spectacular yellow flowers of tabebuia, a Central American tree, planted at the Indian Institute of Science in Bangalore.

Describing the Gulmohar as a vermilion strumpet, Krishnan had said, “If you want to see truly impressive crown of red, you should see the flame-of-the-forest ( *Butea Monosperma* )”

Mr. Narasimhan said the canopy formed by *Peltophorum* and Gulmohar make them “headstrong” eventually leading to their fall.

### **Careless planting**

The careless planting of trees—shallow planting and denying them adequate space to breathe and take root—make them vulnerable during rains.

“Government agencies should not think their job is over after plating saplings. Regular pruning, especially in Tamil month of Aadi, is vital. It will help the tree sprouting new green shoots and prepare for a monsoon,” said Mr. Narasimhan, while agreeing that he could see a lot of local species getting planted.

“Aftercare is crucial. What is the point in planting a sapling and covering its trunk with concrete or vitrified tiles? Give it adequate space and allow it to spread its roots deeply,” he said.

*Careless planting methods and poor maintenance cause the death of trees during monsoons, say naturalists*

## **50 tonnes of vegetables go bad**

*On Friday, 50 tonnes of vegetables went bad and had to be dumped*

Friday's heavy rain took a toll on vegetable traders, with several tonnes being consigned to the dump yard. Prices also shot up. Nearly 50 tonnes of damaged vegetables worth over Rs.1 crore had to be thrown away as they had gone bad for want of buyers.

Only 30 per cent of the traders visited the market on Friday. On an average, the Koyambedu wholesale market, receives 5,000 tonnes of vegetables every day.

## **High price**

S. Chandran, president of Koyambedu Licensed Merchants Association, said the market was receiving vegetables of varying quality due to the heavy rains. Those of good quality are priced high. Green vegetables like beans, brinjals and cabbage got damaged quickly and had to be thrown away. However, the wastage was minimal on Saturday as sales picked up. Tomatoes were priced at Rs. 50 per kg in the wholesale market. Several other vegetables were expensive too.

Date: November 8, November 9, November 10, November 11, November 12, November 13, November 14

Removal of trees: 14, 20, 4, 1, 1, 4, 1, 43

Clearing water stagnation: 0, 2, 0, 0, 0, 11, 10, 23

Rescue by boats: 0, 25, 1, 0, 0, 54, 99, 179

Rescue of animals: 5, 1, 3, 2, 0, 1,1, 13

Date	Removal of trees	Clearing water stagnation	Rescue by boats	Rescue of animals
November 8	14	0	0	5
November 9	20	2	25	1
November 10	4	0	1	3
November 11	1	0	0	2
November 12	1	0	0	0
November 13	4	11	54	1
November 14	1	10	99	1
Total	45	23	179	13

Source: Tamil Nadu Fire and Rescue Services

### **Milk producers' union to apply for ISO: 22,000 certification**

Erode District Cooperative Milk Producers' Union will be the first in Tamil Nadu to apply for ISO: 22,000 certification, said Environment Minister Thoppu N.D. Venkatachalam here on Sunday.

The certification, depicting a safety standard accepted and trusted the world over, is developed by International Organisation for Standardisation (ISO).

It would enable the Union to project to customers the food safety management system in place, and gain their confidence.

The Food Safety Management System warranted clean environment, hazard analysis and critical control plan developed to identify, prevent and eliminate food safety hazards, official sources said.

The Union is made up of 499 milk producers' societies in Erode district and 202 in Tirupur district. Every day, 3.08 lakh litres was procured by the Union, they said.

### **Live demo of diabetes-friendly food**

The Indira Gandhi Medical College and Research Institute, Kathirkamam, is observing World Diabetes Day with a live demonstration of preparing 'diabetes-friendly' food for patients and caregivers at the hospital on Monday.

The live demo will take place from 10 a.m. to 1 p.m. at the hospital block and is part of programmes for the World Diabetes Day being observed by the Department of Community Medicine, IGMC&RI. The demo will be led by Dr. Chavada V.K. and interns. "It will enable people to understand which foods have high and low glycemic index. It will elaborate on what to take and what to avoid for breakfast, lunch, snacks and dinner through pictures and demonstration of raw materials of various food articles," said Dr. Chavada.

There will also be a Continuing Medical Education Programme on 'Non-Pharmacological Approach for Diabetes Mellitus' held from 2.30 p.m. on Monday, said organisers.

## World Diabetes Day observed



TNSTC employees at an exhibition held as part of the World Diabetes Day in Tuticorin on Saturday.— Photo: N. Rajesh

The World Diabetes Day was observed here on Saturday. Exhibition on diabetes was organised on the premises of Tamil Nadu Transport Corporation depot.

Arul Prakash, doctor, inaugurated the exhibition. The exhibits explained how to lead a diabetes-free life and stay healthy in lifetime. Bus drivers, conductors and other employees of the transport corporation took part in the programme.

Dr. Prakash said that 350 million people were at high risk of developing diabetes and it was predicted that by 2035, close to half a billion people would live with diabetes globally.

A. Sankar, Executive Director, Empower, a voluntary organisation, who presided over the programme, spoke on healthy lifestyle choices and said ‘Healthy living starts at breakfast’ was the theme for the World Diabetes Day this year.



Meera Shankar, Programme Director, said the organisation had recently started a project on work place intervention – diabetes education and prevention among organised and unorganised workers in Tuticorin.

The project would focus on health check-up such as blood pressure monitoring, random blood sugar, body mass index and other necessary ones to diagnose their diabetic and blood pressure status. Their status would be determined and they would be given health education and counselling accordingly. Those workers with diabetes and in pre-diabetic stage would be systematically followed up for support on medical management and healthy lifestyle, she said.

Divisional Manager of TNSSTC Jebaraj and Branch Manager Baskaran attended.

### **VIT students innovate devices for diabetic care**

Two innovations of VIT University students won prizes at Diabetes Innovation Hackathon held at Hyderabad recently. The Consortium for Affordable Medical Technologies (CAMTech) organised the event.

According to a release from the VIT University, two teams from their institution presented different innovations at the event and won prizes each containing 1000 USD. They promise to bring down the cost of the diabetic tests.

‘E-stick’ a device developed by a team led by third year B.Tech.(EEE) student Vipul Arora, a non-invasive device for measurement of blood glucose of diabetes patients, is one of the innovations that won the prize. Akshat Aggarwal, Sakcham Baroliya, Rohit Madhavan and Sahil Sharma were other members of the team.

“E-stick’ will save the patients from the pain of having to go through the pain of pricking themselves every time. It will also help mass screening of diabetes,” the release says. The device which is to go for clinical trials soon would cost around Rs.12,000.

‘Sparsh’ is another device that won VIT the prize. The device can perform tests such as monofilament test, vibration threshold test, temperature threshold test and screen Diabetic Peripheral Neuropathy (DPN). “It has potential to reach patients of primary health centres, nursing homes in Tier-II towns and mobile medical units,” the release said.

The team included B.Tech. students Ajay Anmol Saxena and Abhra Dass (3rd year EEE) and Sweta Shubhra Dutta (3rd Biotech).

Quoting the students a release said that 19.1% of the diabetic population suffer from DPN in India, a leg is lost due to diabetes every three minutes in the country. Foot complications could be prevented if early screening of peripheral neuropathy was performed. Simple symptoms like loss of sensation, when followed by an injury, aggravate to ulcer, and improper care of ulcer leads to amputation. Lack of access to basic screening, high cost of screening and requirement of trained health workers were the roadblocks to early screening of DPN.

‘Sparsh’ attempts to solve all, the release added.

### ‘E-stick’ and ‘Sparsh’ win prizes at CAMTech event

## Unseasonal rain drives up vegetable price

### Unseasonal rain drives up vegetable prices

**Arrivals have dipped by 40 p.c.; situation expected to remain the same for at least two weeks**

The city might be heading closer towards breaking the 20-year record of highest rainfall in November, but the rains have also brought with it misery. While farmers have lost their crops, the price of vegetables has also doubled following a reduction in arrivals, causing stress on family's budget.

Domestic, India, Bhiloke and other areas that feed the city with their greens and vegetables have reported crop damage owing to rain and as a result, supply of vegetables to the city's market has dipped in the last week.

Hopcon sources said that in the last week, arrival of almost all vegetables dipped by around 40 per cent, leading to a steep hike in the price.

Tomato seems to be the most hit, with the price having crossed Rs. 60 a kg in the retail market, up from around Rs. 20 two weeks ago. Tomato growers in Kolar have suffered large-scale crop damage, the quantity of which is yet to be assessed. Similarly, low crop, offered some relief to farmers, as 15-kg boxes of tomatoes were fetching up to Rs. 800 each.

The supply of cumin to the city has also drastically fallen as even Chota Kottur for its cumin, has been recording increased rain from the last 30 days. Trade is also not up of the day and we hope for a main supplier of cumin to the city and heavy rain has hampered the supply.

"Even Chitrabanga has been hit by the season's rain. Though Nanki and other northern parts have not received rain, they were closed for Deepavali all through last week. Supply is expected to resume from Wednesday and we hope for a connection to onion price soon," said Ravi Ranjan, a leading onion merchant in Yelwaseppu. Onion price, which had dropped to Rs. 30 a kg, has shot up to Rs. 45 a kg.

Consumers may have to bear with high vegetable price for at least two or three weeks. It takes at least two weeks for the cost harvest to reach markets after the rain stops, sources said.



**'GROW YOUR OWN VEGGIES'**

**SONAGARU:** "Grow your own vegetables, do not just talk about their prices. The green that is worth it," says farmer expert B.N. Vishwanath Kadar, the man behind 'Vada' from your local markets. Rs. 200-kg. It space can help you get organic vegetables. Tomatoes grown at home will cost you only Rs. 15 a kg or an average. Growers use the easiest to grow, dense and all grounds yield in a matter of a few weeks, apart from tomatoes and chillies that can be earlier plants," he said. Dr. Kadar, whose gardening workshops cover composting and pest control methods, said that one can start with one pot in the balcony and add more gradually.

S.P. Samargala, scientist, Indian Institute of Horticultural Research, said that with an initial investment of Rs. 1,000 for pots, growing media and seeds, one can start off with kitchen gardening and grow mint, coriander, fenugreek and amaranth (dudhi) in just about three weeks. "Harmed manure and cow-pat can be used as media for growing tomatoes, chillies and brinjal." If one starts off the right way with the right pot and the right medium, one can reap the harvest abundantly for two years, Mr. Samargala said.

It was a heavy and rainy day in Bengaluru on Sunday.

**Bengaluru** required 2.6 mm rainfall till evening on Sunday.

**With this,** the city has received around 221 mm of rainfall this November.

**India's** Meteorological Department has forecast showers for at least two more days in and around the city.

Vegetable	Price in the last week of October (Rs./kg)	Price on Sunday (Rs./kg)
TOMATO	28	60
ONION	25	45
CARROT	30	62
BEANS	40	45
CAPSICUM	20	32
RADISH	15	28
POTATO	17	26

*Arrivals have dipped by 40 p.c.; situation expected to remain the same for at least two weeks*

The city might be inching closer towards breaking the 100-year record of highest rainfall in November, but the rain has also brought with it misery. While farmers have lost their crops, the price of vegetables has almost doubled following a reduction in arrivals, causing strain on family's budget.

Devanahalli, Kolar, Hoskote and other areas that feed the city with their greens and vegetables have reported crop damage owing to rain and as a result, supply of vegetables to the city's markets has dipped in the last week.

Hopcoms sources said that in the last week, arrival of almost all vegetables dipped by around 35 to 40 per cent, leading to a steep hike in the price.

Tomato seems to be the most hit, with its price hovering around Rs. 60 a kg in the retail market, up from around Rs. 28 two weeks ago. Tomato growers in Kolar have suffered large-scale crop damage, the quantum of which is yet to be assessed.

Sunday, however, offered some solace to farmers, as 15-kg boxes of tomato were fetching them up to Rs. 800 each.

The supply of carrot to the city has also drastically fallen as even Ooty, known for its carrots, has been receiving incessant rain from the last 10 days. Tamil Nadu is also one of the main suppliers of onion to the city and heavy rain has hampered the supply.

“Even Chitradurga has been hit by the unseasonal rain. Though Nasik and other northern markets have not received rain, they were closed for Deepavali all through last week. Supply is expected to resume from Wednesday and we hope for a correction in onion price soon,” said Ravi Kumar, a leading onion merchant in Yeshwantpur. Onion price, which had dropped to Rs. 10 a kg, has shot up to Rs. 45 a kg.

Consumers may have to bear with high vegetable price for at least two or three weeks. It takes at least two weeks for the next harvest to reach markets after the rain stops, sources said.



### **WhatsApp group helps farmers shun paddy straw burning**

The group was formed by Gurdaspur agriculture development officer Amrik Singh over a year ago to educate farmers about crop health and other issues.

IN PUNJAB, where a majority of farmers are setting their fields on fire after harvesting paddy crop to clear the fields for next crop without caring about the impact on the environment and soil, there is a WhatsApp group — ‘Young Innovative Farmers’ — which has been able to stop several farmers from burning the stubble in the field this year by disseminating information about the ill effects and alternative measures to manage the paddy straw.

“I have been burning paddy straw for a long while because every farmer here wanted to clear the fields as soon as possible after paddy harvesting for the next crop and set the fields on fire without knowing its ill effects,” said farmer Manjinder Singh of Nangal Jhaur. He, however, said he was “shocked to know about the bad effects of environment when he received several SMSes and photos through WhatsApp from experts and fellow farmers containing the adverse effect of burning straw. “I have decided then and there that I will not burn paddy stubble. I also urged 15-20 farmers of

my village to not to burn it and they also did the same.” “We saved around 150 acres of our villages from burning this year, he added.

Farmer Mandreep Singh, of Kaneth village in Ludhiana, who is a member of the WhatsApp group, has also not burnt paddy straw this on his six-acre plot. Manjit of Bhagowal, Manjit of Bhattiwal villages in Gurdaspur, also did not set their fields on fire this season after harvesting.

The group was formed by Gurdaspur agriculture development officer Amrik Singh over a year ago to educate farmers about crop health and other issues. The members get immediate advice via WhatsApp on any issue pertaining to farming.

“We have a shortage of staff in our department. If we visit a few villages daily, we can only meet a few dozen farmers. But on WhatsApp we can interact with several farmers daily,” said Amrik.



### **Rise in basmati prices brings some relief to farmers**

Bringing some relief to farmers, prices of basmati have increased by around Rs 350 to Rs 400 per quintal after Diwali. Earlier, the fine variety of basmati PUSA 1121 was selling at around Rs 1,700 per quintal, but now its prices have gone up to Rs 2,086 in Faridkot.

However, it is not a matter of happiness for most farmers as they have already sold their produce at the rate of Rs 1,700 per quintal. The growers of another basmati variety 1509 were the worst-affected as it matures early and sold from Rs 1,200 to Rs 1,450 per quintal last month.

In spite of an unprecedented plunge in the rates of basmati, the government had decided to procure Basmati 1509 at the minimum support price of paddy i.e. Rs 1,450 per quintal.

“Prices of basmati have increased by Rs 4,00 per quintal, which is a relief to many, but some have already sold the produce at much less rates this year. As compared to last year’s rate of Rs 3,000 per quintal, the price of basmati is still too low. We want the government to fix a minimum support price for basmati as well. Basmati is a very good option before the farmers to replace paddy and it must stay for long-term benefit of the state,” said Ashok Kumar Goyal, general secretary of the Aarhtia Association, Kotkapura.

While commission agents say that nearly 50% farmers have already sold the produce, Mandi Board officials say that only 30% produce has arrived in the market so far.

“Basmati is not selling at Rs 2,086 per quintal in grain markets of the district against the earlier rate of Rs 1,700. About 70% produce is yet to arrive in the market. As prices have now shown some increase, the arrival may pick up in days to come. Now traders have also started showing interest in buying the produce,” said Kulbir Singh Matta, district mandi officer, Faridkot.

“Basmati has left many farmers in the lurch this year as its prices remained too low compared to those during the last year. Rather, most of the crop had fallen flat in fields and farmers had to spend extra on its harvesting. Some of the small farmers had got land on annual lease, but are now unable to pay it. The government must fix some MSP for basmati too like paddy,” said Jaswinder Singh, a farmer from Ghania village in the district.

“The crop fell flat at many places this year due to bad weather and farmers had to pay double or three-fold charges for its harvesting while rates had been much lower. Still, if its rate crosses Rs 2,500 per quintal, it may save many farmers from loss,” Jagga Singh, another farmer from Behbal Khurad village.

## THE HINDU **BusinessLine**

### **Rice prices may shoot up, says Assocham study**

Rice prices may surge in the coming months as stocks are depleting fast on the back of deficient rains and fall in output, a study by industry chamber Assocham said, urging the government to closely monitor prices and stocks as the domestic demand for rice is huge.

“Though the government estimates kharif rice production at 90.61 MMT (million metric tonnes), this is unlikely to be achieved due to severe deficit rains in Punjab, Haryana, Uttar Pradesh, Bihar, Maharashtra and Karnataka and the best that could be achieved is 89 MMT,” according to a paper on ‘Impact of weak/deficient monsoon on agricultural production and prices’ by the Associated Chambers of Commerce of India.

## **Output estimates**

The actual production may be around 103 MMT during 2015-16. Moreover, rice stocks have been steadily declining in the past three years, the study added.

“Increasing export outgo on account of the public distribution system and other welfare schemes will continue to weigh on availability in the open market. Unless the government is able to handle the situation prudently, depleting stocks will soon reflect on the open market prices,” Assocham said.

The industry body suggested that direct seeded rice (DSR) should be encouraged to conserve water. At present, less than 10 per cent of paddy production is under DSR due to limitations in the availability of suitable equipment for DSR in clay soils.

## **Depression in Bay may hit Sri Lanka coast first**

The depression-in-the making has sailed into South-West Bay of Bengal, which is the basin lying closest to Sri Lanka and Tamil Nadu coasts, by the (Saturday) evening.

It means that it has moved laterally from the South-East Bay of Bengal, 700 km East of Sri Lanka, where it was located earlier in the morning.



## **LIKELY INTENSIFICATION**

The day's lateral movement towards the coast has seen it undergo intensification one round to being 'well-marked.'

India Met Department has already said that it would intensify another round to become a depression by tomorrow (Sunday).

But latest indications suggested that the weather system would rebound off the Sri Lankan coast before impacting the South-East Tamil Nadu coast. India Met wind field projections indicated exactly this, supported more or less by the European Centre for Medium-Range Weather Forecasts.

## **HIGH WIND ALERT**

According to India Met, after landfall over the South-East coast (Tuticorin-Ramanathapuram belt instead of Cuddalore-Puducherry earlier), it will plough into the immediate hinterland in adjoining South Kerala.

But the European Centre is of the view that the system would climb up along the coast and reach Cuddalore-Puducherry as a weakened low-pressure area. In any case, India Met has put out a high-wind alert for fishermen along the Tamil Nadu-Puducherry and South Andhra Pradesh coast for tomorrow (Sunday).

The heavy to very heavy to extremely heavy rain warning is valid for these coasts, Rayalaseema, South Interior Karnataka and Kerala variously during the next few days.

### **Tea prices lower at Kochi auctions**

Despite good arrivals and demand, the Kochi tea auctions witnessed lower prices this week, especially for dust varieties.

The market for CTC grades was lower by Rs. 3-Rs 7 and more as the sale progressed. However, the decline in prices was less for a few select good liquoring teas.

In sale no 46, the quantity on offer in dust grades was 10,22,500 kg. Plainer teas also sold around last levels. Blenders continued to be active on good liquoring varieties, while some of them very selective, the auctioneers Forbes, Ewart & Figgis said.

In orthodox varieties, the market for primaries remained steady to firm, while secondary varieties were easier. The quantity on offer was 11,000 kg. Exporters absorbed a small quantity sold.

In Cochin CTC dust quotation, good varieties fetched Rs105-143, mediums quoted Rs71-104 and plain grades stood at Rs. 55-67.

The leaf sales also witnessed a good demand with the market for well made good liquoring Nilgiri all varieties were dearer. The quantity on offer in

orthodox grades was 216,000 kg. CIS and traditional exporters were active.

In CTC leaf, the market for Fannings were firm to dearer, while others were lower by Rs3 to Rs5 and sometimes more.

It also witnessed heavy withdrawals. Exporters and upcountry buyers absorbed bulk of the quantity sold.

In dust category, Monica SFD quoted the best prices of Rs. 144, while Chamraj FOP-Sup green tea came to the top in leaf varieties, quoting Rs. 333.

### **New Bt variety to end woes of cotton farmers**

A simple intervention by a Central government research institute could end the woes of cotton farmers in Vidarbha and Telangana who are under severe financial stress.

**The solution** The Nagpur-based Central Institute for Cotton Research (CICR) has inserted Bt 1 (Cry1AC Mon531) into a desi variety to solve the two important problems that the farmers face – reduce the duration of the crop and avoid hybrids that guzzle scarce moisture in rain-fed areas. As they cut short the duration, the lanky plants also let farmers go for high-density planting. As hybrids spread horizontally, Indian farmers are able to plant only 10,000 plants a hectare against 1.10 lakh plants a hectare.

India is among the few countries that use the input-intensive hybrid cotton, while majority of the countries use varieties as they embraced genetically modified crop.

**Lanky desi variety** While hybrids work well in the resource rich areas, it can cause havoc in areas that are poor in water and nutrients. CICR has done an experiment with about 500 farmers to address the challenges – reduce the crop duration and increase the plant density, using a lanky desi cotton variety in place of the bulky hybrid plants, to outwit pests and insects. This will help the plant save all the scanty moisture in rain-fed areas for flowering and boll formation stages.

The hybrid crop sucks life out of the soil by August-September, leaving hardly any for the crucial flowering stage.

There, however, is a trade off. The number of bolls per plant would come down to about 10 from 100 in the hybrid crops.

“But then, you are going to be compensated by the increased density of plants. By using a desi variety, we can reduce the crop duration and significantly increase the number of plants per hectare,” CICR Director Keshav Raj Kranthi told *Business Line*. The CICR has developed a Bt variety that brings down crop duration to 150 days from the 200 days that is in vogue at present. The present practice of spacious planting is way below the global average.

**Sustainable model** “The high density, short-duration crop model is a sustainable model for India. The present day practices are not sustainable. Farmers need not go for insecticide sprays. About 16 legumes have been identified that can be used in the fields to help the soil fix nitrogen. This will help avoid use of urea,” he said.

Moreover, desi cotton gives more returns to farmers. “As this is used in surgical products, they get about ₹700 more than the ₹4,300 a quintal they are getting now,” he said.

The CICR has kept 21 varieties ready with Bt1 (Cry1Ac Mon531) for States to use from next kharif season. “We can give the varieties to Maharashtra and Telangana governments from the next kharif season itself. They can try them in half acre or so to zero in on the best variety to suit their requirements,” Kranti said.