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## THE HINDU

### TNAU's pivotal role in food grain production



Minister for Housing, Urban Development and Agriculture R. Vaithilingam (right) handing over a degree certificate to a candidate at the 36th convocation of Tamil Nadu Agricultural University in Coimbatore on Monday. Vice-Chancellor of the university K. Ramasamy (centre) is in the picture—Photo: M. Periasamy

Professor of Department of Plant Breeding and Genetics, Cornell University, United States of America, Susan R. McCouch said that access to healthy food and clean water is key to global health and prosperity. Delivering the convocation address at the Graduation Day of Tamil Nadu Agricultural University (TNAU) here on Monday, she also said that education requires participation and sharing by teachers and students for empowering all concerned.

Vice Chancellor of the University K. Ramasamy said that TNAU played a pivotal role in helping the State scale to new heights in food grain production in the last three years.

When 30 districts in Tamil Nadu were declared drought hit about three years ago, TNAU had stepped in to help out with interventions and technology suggestions.

Ms. McCouch and Minister for Agriculture and Pro-Chancellor of the university R. Vaithilingam distributed degree certificates to graduates.

Doctoral degrees were given away to 111 candidates of the university. Degree certificates were given to 199 post graduates and 827 under graduates.

Earlier that day, the Minister presided over the graduation ceremony and conferred degree of doctor of science (Honoris Causa) to Ms. McCouch, former Assistant Secretary General of United Nations and former Director of World Food Program Pedro Medrano Rojas and Chairman and Managing Director of J.G. Information Systems Pvt. Ltd. Ashok Bakthavathsalam.

### **Nabard sanctions Rs. 1,950 crore for Tamil Nadu**

The National Bank for Agriculture and Rural Development (Nabard) has sanctioned Rs. 1,950 crore to implement infrastructure development works in the rural areas in the State in the current fiscal.

The amount has been earmarked from the Rural Infrastructure Development Fund (RIDF) of the bank, according to K. Venkateshwara Rao, its Chief General Manager.

He said that funds will be earmarked for the particular projects planned this year after the receipt of project reports and request from the State government. The Nabard has already started receiving the estimate reports for various projects such as construction of school blocks and other government buildings, laying of roads and for the creation of other infrastructure facilities in the rural areas.

The Nabard has allotted funds under RIDF for two major bridge construction works in Namakkal, Karur and Erode. The Highways Department is implementing the project of construction of a bridge across Cauvery connecting the villages of Mohanur (Namakkal district) and Vangal (Karur district).

### **Latest farm technology to be introduced**

The Agriculture Department will introduce latest farm technology to help 'samba' farmers achieve higher productivity. An awareness programme on various technology right from sowing the seeds to harvesting the crops will be organised in all villages for a fortnight till August 29, said K. A. Jayabal, Minister for Fisheries.

Speaking after inaugurating the seed drill sowing of samba seeds at Thethi near here on Sunday, Mr. Jayabal said this latest technology would

facilitate farmers resolve various challenges particularly huge investment on labour.

He said the programme would be popularised among farmers. It had been planned to bring 3.47 acres in the 'samba' and 'thaladi' seasons of which 1.25 lakh acres would be covered under direct sowing of paddy.

A sum of Rs. 12.50 crore would be spent for which all the blocks have been divided into three categories. The direct seed drill sowing programme would be implemented on 8,000 hectares at an expenditure of Rs. 4 crore in five blocks of Nagapattinam, Keezhvelur, Keezhaiyur, Vedaranyam and Thalaignayiru. Demonstration plots would be set up on 750 hectares in Tirumarugal block at an expenditure of Rs. 37.50 lakhs.

In the third category, back-end subsidy based programme would be implemented in five blocks of Mayiladuthurai, Kuththalam, Sembanarkovil, Sirkali and Kollidam at an expenditure of Rs. 8.13 crore. He gave away micro nutrients to farmers.

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· ***Rs. 12.50 crore to be spent: Minister***

· ***For the benefit of 'samba' farmers***

### **TNAU to get integrated lab to test farm produce**

By the end of this academic year, the Tamil Nadu Agricultural University will have a state-of-the-art laboratory to test fruits, vegetables and even end products made out of farm produce.

The products will be tested for quality, toxicity, microbial contaminants and nutritional value apart from testing pesticide residue.

The laboratory is being established at a total cost of Rs. 23.8 crore on 32,000 sq.ft. and construction has started. Funds have been allotted for procuring equipments for Rs. 18 crore.

“The problem we are facing is concerning tests for pesticide residues as per the Food Safety and Standards Act norms. The upcoming laboratory is established with futuristic plans to conduct tests to be carried out as per international standards, for export and for domestic consumption,” Vice-Chancellor of the university K. Ramasamy told *The Hindu* .

The facility will have two sets of equipment. The first set will be to render services to farmers and those who want to get agricultural produce

and products tested. “The parallel laboratory will be established for giving hands-on training to students to ensure that the required manpower is made available,” he said. Students will be trained to collect samples, process them and analyse the value with international permissible limits. This will help the students become entrepreneurs to set up laboratories, when more certification laboratories would be required for certifying and labelling food products for export. The laboratory will also identify items that are not matching the food safety standards.

*Products will be tested for toxicity, microbial contaminants and nutritional value*

### **Small farmer does it big**



At a time when a substantial number of small and marginal farmers are turning bankrupt owing to crop loss, non-remunerative prices for their produce, and inability to cope with the increasing cost of living, among reasons, a young progressive farmer has shown the way towards economic empowerment.

Rajiv Malleshappa Rachannavar (34) of Inchal village in Saudatti taluk gave up education after SSLC. He joined his father in running a restaurant. Meanwhile, he started making paper bags as an alternative to plastic bags.

After his father’s death five years ago, Mr. Rachannavar took to agriculture and started cultivating with other farmers in the village. As his interest developed in farming, he learnt about modern mechanisation

techniques such as polyhouse farming, which helped reduce the dependency on rain and lead to the optimum utilisation of land and water resources to generate a regular income.

His father had left 3 acres and 12 guntas of agricultural land behind him to be shared by two sons.

While his elder brother is a contractor, Mr. Rachannavar is taking care of the farm.

He gave up traditional crops and erected a polyhouse five years ago, cultivated gerbera flowers on 10 guntas and earned between Rs. 2 lakh and Rs. 2.5 lakh a year for five years. Simultaneously, Mr. Rachannavar took up contracts for wedding stage decoration and other functions and made additional income. Now, he has planted capsicum plants on 23 guntas under polyhouse method.

Sharing his experience, Mr. Rachannavar said he heard of the Krushi Bhagya scheme and took Rs. 20 lakh from KVG Bank with 50 per cent of the amount coming as subsidy in February to take up capsicum plantation.

He planted 7,000 saplings which would yield five-and-half kg to six kg a plant.

He is expecting a total yield of nearly 25 tonnes soon and earn anywhere between Rs.15 lakh and Rs. 20 lakh.

The present price for capsicum in the market is Rs.75,000 a tonne and it was expected to be between Rs. 2 lakh and Rs. 2.5 lakh a tonne by Deepavali in November.

This would be sufficient to clear the bank loan of Rs. 10 lakh with interest within six months, he said, adding that he underwent a 10-day training at Horticulture University college at Arabhavi of Gokak taluk on polyhouse farming, which proved to be of great advantage.

Mr. Rachannavar says the government should create awareness on modern farm technologies and the Krushi Bhagya scheme which would go a long way in improving the financial condition of small and marginal farmers and preventing farmers from attempting suicide. Recognising this progressive farmer, the district administration felicitated him on the occasion of Independence Day celebrations on Saturday.

*The district administration honoured him during Independence Day celebrations*

### **Agri fair to steal the show this festive season**

One does not leave the venue of the South Indian Agri Fest being held here under the aegis of the agricultural department without gaining knowledge about agricultural activities and agencies within the State and outside.

The 10-day fair inaugurated on August 16 showcased nearly everything that has some connection with agriculture. If the number of people visiting the fair the day after its formal inauguration is a trend, then it will be a major attraction here during the festive season. Agricultural produces and products, implements, machines, innovations of farmers and planting materials are on display at the exhibition.

The fair has stalls of institutions and agencies such as Farm Information Bureau, State Horticultural Mission, Kerala Pineapple Mission, Kerala Veterinary and Animal Sciences University, Kerala State Seed Development Authority, Horticultural Mission, Plantation Corporation, Fish Farmers' Development Agency, Sugarcane Breeding Institute, Krishi Vigyan Kendra-Kannur and the Pepper Research Station at Panniyur.

One of the attractions at the fair is the collection of antique agricultural implements displayed by K.V. Bhaskaran of Cherukunnu. They included old weighing stones, measuring pots, earthen pots and traditional baskets.

“I have a collection of nearly 480 traditional items that I have collected over the past 25 years,” he said.

The exhibits displayed at the venue, include devices used for brooding chicken, traditional rice seeds that are no longer in vogue among cultivators, the cage developed for vertical farming, including rearing of chicken, goat and rabbit. A stall displays detailed information of different cat and dog breeds.

An array of aquariums is on display featuring different species of ornamental fish. Ajayan Thalassery, an innovative farmer, displays his device to remove the husk of arecanut.

## Tomato prices crash, other vegetables too sell for an all-time low

*Huge arrivals and large production led to a glut, say officials*



Tomatoes are available in plenty in ‘uzhavar sandhais’ as the prices have crashed. While consumers are happy, farmers are not.

From Rs. 48 per kg (in March), it had fallen to Rs. 6 per kg now. It is not just tomatoes. A few other vegetables are also selling at an all-time low for the year (so far), according to K. Arumugam, Agriculture Officer at BB Kulam Uzhavar Sandhai.

Though there may be many factors, huge arrivals and large production had led to a glut in the market.

Probably, the situation (for farmers) may improve by the end of this month, as ‘muhurthams’ are starting from August 27.

Meanwhile, farmers at the ‘uzhavar sandhais’ said that big onions, which were selling at Rs. 24 per kg four months ago, sold at Rs. 48 now. On the contrary, small onions are available at Rs. 24 (sold at as high as Rs. 75 in March).

The prices of brinjal too is swinging between Rs. 18 and Rs. 21 in the ‘uzhavar sandhais,’ while high quality brinjal was earlier sold at Rs. 40 per kg.

A farmer, Muthulakshmi from Vadipatti, said that ladies’ finger was selling at just Rs. 8 per kg, which was not enough even to cover the cost of plucking, she noted.

## **Southern districts**

Apart from huge arrivals, widespread rainfall had helped farmers in some pockets of southern districts in getting reasonable returns.

In Kodaikanal, fresh vegetables had been selling at ‘fancy’ prices for the last three days as there was delay in arrivals from fields to market due to heavy rain.

To meet the rush, hoteliers took vegetables at higher prices.

In Oddanchatram, the biggest market in southern districts, the arrivals were simply huge that almost every produce was available for ‘rock bottom’ price.

In Theni and Sivaganga districts too, the markets witnessed huge arrivals of locally grown vegetables and tomatoes were available at Rs. 8 and Rs. 10 per kg.

In Tirunelveli and Tuticorin, the local Sunday markets had steady arrivals and Adi Amavasai festival ensured that the prices too did not fall. Tomatoes and onions were selling at normal prices and farmers were happy about the return on their investment, according to agriculture marketing department officials.

## **CFTRI plans outreach programme for women farmers**

*Demonstrations of various food processing technologies have been arranged*





CSIR-CFTRI is imparting food processing skills to women farmers from South India for their empowerment and ensuring food and nutrition security. —PHOTO: M.A.SRIRAM

Women farmers from south India will gather in Mysuru on Wednesday to get to know the food processing technologies developed at the CSIR-Central Food Technological Research Institute (CFTRI) here.

An all-women outreach program addressing empowerment of farmers to develop food processing skills organised by the CSIR-CFTRI will be held.

“The programme is designed to be comprehensive in providing necessary skill sets for food processing, teaching participants how to set up a business enterprise and to sensitise them about potential market linkages,” said Renu Agarwal, chief scientist, Food Microbiology, CSIR-CFTRI, Mysuru.

Demonstrations of various food processing technologies — sugarcane juice preservation, making papads, jam preparation and packaging of various cereals — have been arranged during the event, said Dr. Agarwal, who is also the coordinator of CSIR-800 programmes.

Farmers are the primary entrepreneurs of the world. Our mission is to support a transformative process addressing improved food and nutrition security by empowering women farmers with knowledge on food processing, according to CSIR-CFTRI. Developing food industries at farm gate levels is a key solution to foster sustainability and to help achieve inclusive and equitable growth optimizing agriculture and reducing post-harvest wastes, it stated.

There will be an interactive session with various government and semi-government agencies rendering specific information on finance, regulatory aspects etc, a release said.

The program had been planned for participants from south India and already 140 participants from across the region had confirmed their participation, the scientist said.

The program caters to the growing aspiration of urbanisation to promote all food processing facilities and support systems available at industrial hubs at the farm gate level, the premier institute said.

In the evening, there will be an interactive session on Marketing and Micro Financing of Agri Products with experts from government and banking institutions. Director of CSIR-CFTRI, Ram Rajasekharan will preside over the function and it will be coordinated by Dr. Agrawal, Rural Development Coordinator.

### Sweet news from the farm world

*20 families of Badal Ankalgi village have dual income — from making 'khoya' and crop cultivation*



Yellavva Ramappa Shivappa preparing khoya.

The 'kunda' is synonymous with Belagavi, and both residents and visitors to this border city just can't do without this milk-based sweet. But, not many know that *khoya* (also called *khova*), its most important ingredient, comes from Badal Ankalgi, a village about 20 km from here, where 20 families are engaged in making *khoya*. This small industry is well worth emulating given the additional income it generates for small and marginal farmers.

Pay a visit to the village, and you will find at least one member of each family simmering milk in a huge iron vessel, stirring it occasionally till it reduces to a light brown texture to form the *khoya*.

Usually, five litres of full-fat milk reduces to one kg of *khoya*, says Suresh Basappa Gugri, whose family has been *khoya* makers for more than two decades. Yellavva Ramappa Shivappa another enthusiast, who after attending his chores, settles down to prepare *khoya* daily.

The *khoya* makers get milk from local farmers at Rs. 23 a litre. Factoring in the cost of fuel (wood) and transportation, the profit margin is Rs.10 a kg. Since it can be made in a corner of their homes, without extra labour costs, it helps in generating additional income for the family, Mr. Suresh said. Around 400 kg of *khoya* is produced by the 20 families in this village, and sold to sweet shops in Belagavi for Rs.150 a kg. There are some families producing 30 to 40 kg a day, earning them Rs. 300 to Rs. 400 for their hard work.

***20 families of Badal Ankalgi village have dual income — from making ‘khoya’ and crop cultivation***

**‘Thandu keerai’ keeps its date with ‘Aadi’**



A vendor selling gigantic greens called 'Thandu Keerai' at Triplicane market in Chennai. Photo: B. Jothi Ramalingam

Bunches of ‘*keerai*’ with luscious green and red stems are bundled on mobile carts and pavement shops in the city markets. They are not the regular ‘*keerai*’ – spinach that arrive in the city markets throughout the year, but only during this time of the year.

‘*Thandu keerai*’ – Foxtail Amaranth – is in great demand during the Tamil month of Aadi (mid-July to mid-August), which just concluded on Monday.

Most *keerai* (greens) farmers around the city including from Pakkam, Ramapuram, Karunakaracheri and Venkatapuram are just harvesting *Thandu keerai* now.

“Many people serve this as a side dish for the *keozhu* (gruel) that is made in Amman temples and also in homes and served to all on Fridays and Saturdays during *Aadi* .

Hence this crop is timed during this month and will be available till about Deepavali,” says G. Sambandhan, a farmer of Karunakaracheri in Tiruvallur district.

He sells his *thandu keerai* for Rs. 3 to Rs. 5 per bunch and they are sold in markets between Rs. 10 and Rs. 25.

It has fibre and is high in calorific content. Ecologist Sultan Ismail Ahmed explains that there are several variations of *thandu keerai* and the crop is allowed to grow for six months and harvested just before the seeds develop.

“There is a three-month-long crop and a six month one. Indian customs and traditions have ensured that good things are declared as religious so that youngsters do not say no to them. Farmers must ensure that clean water is used to grow such plants,” he adds.

*Thandu keerai* tastes good in *kozhambu* , as *poriyal* and *masiyal* (mashed).

The long stem is cut and fibres on the outside removed and chopped to the required size and added to the gravy (*sambar* ). *The leaves are cooked as poriyal (sautéed with coconut).*

*“I grow thandu keerai in a small patch at home. I don’t wait till it is six months but prefer to cook it as and when I want. To preserve its calorific content and minerals, less oil should be used while cooking,” suggests Adyar resident R. Nayanthara.*

*So the next time you go vegetable shopping, make sure to add a couple of bunches of thandu keerais.*

***There are several variations of thandu keerai and the crop is allowed to grow for six months and harvested just before the seeds develop, says ecologist***

### **‘Cage cultivation in sweet water unviable’**

*Ex-director of CMFRI expresses doubts over sufficient water being available*



Floating cage set up at Nagayalanka in Krishna district. —Photo: T. Appala Naidu

Experts and progressive farmers are warning the State government to withdraw the plan to try the cage cultivation in reservoirs across the State, citing unviable economic conditions and lack of research and development on the method.

The State government has all set to intensify the cage cultivation through low-cost floating High-density Polyethylene cages in sweet water sources instead of brackish water and seawater.

“There is no scientific research and development on cage cultivation in sweet water in India till date. The State government is yet to have clarity over the species to be promoted and cultivated in the sweet water, quantity of production and input cost and generation of income,” former Central Marine Fisheries Research Institute (CMFRI) Director G. Saida Rao told *The Hindu*. Mr. Saida Rao was one of the experts from the CMFRI who introduced and tested the cage cultivation in India earlier.

“There is no guarantee of availability of sufficient water level and necessary natural flow of water round the year in the reservoirs. But the cage cultivation is always viable on all the fronts in both brackish and sea water,” said Mr. Saida Rao.

The government was reportedly preparing to cultivate *Pangasius* through the cage cultivation despite it has a less market value, leading to mismatch of input cost and income per cage. A few experts have stressed that the State government’s plan should be adoptable by the farmers after the experiments were done for the sustainability of the method.

**A great success**

“The method of floating-cage has been a great success in the brackish water with the help of the CMFRI in Nagayalanka. The potential of coastline and brackish water sources is yet to be fully tapped despite the State that has vast coastline,” said T. Raghu Sekhar, a progressive aqua farmer.

### **Case study**

Mr. Sekhar’s experiment on cage cultivation in brackish water in Nagayalanka remains a case study to measure success of the method. According to the Fisheries Department officials, each floating-cage would be set up in the reservoirs including one near the Prakasam Barrage as a part of the plan to be executed soon.

*There is no scientific research and development on cage cultivation in sweet water in India till date. The State government is yet to have clarity over the species to be promoted and cultivated in the sweet water, quantity of production and input cost and generation of income*

**G. Saida Rao**

*Former Director, Central Marine Fisheries Research Institute*

### **Farm fresh outlet’s sale crosses Rs. 5-crore mark**



People thronging ‘Pannai Pasumai Nugarvor Kadai’ in Tuticorinon Monday.

Within a year after its launch, the State-owned Farm Fresh outlet (Pannai Pasumai Nugarvor Kadai) here recorded sale to the tune of over Rs. 5 crore – an all-time high for any such outlet in the State.

The overwhelming response from consumers enabled the outlet, which was inaugurated on August 23, 2014, to achieve this feat in 357 days. Until Sunday, 17,91,465 kg of vegetables had been sold by this outlet.

Among the farm fresh outlets opened across the State, the one here was at the forefront, Collector M. Ravikumar said here on Monday.

This outlet, which procured vegetables directly from farmers in the district, achieved sales of vegetables, fruits and other products to the tune of Rs. 1 crore in 79 days, Rs. 3 crore in 220 days and Rs. 4 crore in 288 days. Managed by the Cooperation Department, this outlet remains open from 7 a.m. to 9 p.m. every day.

Sources said 13 to 15 vegetable varieties were procured directly from farmers in Tuticorin district. Apart from vegetables, fruits, turmeric powder from Erode, milk kova from Srivilliputhur, Muthalur honey, Aavin milk and palm products were sold here, sources said.

“The daily average sale of vegetable is 5,018 kg and the average revenue Rs. 1,40,289. A bulk of vegetables were purchased from Vilangudi vegetable market in Madurai. A total of 57 items, including vegetables and fruits, are being sold here,” sources added.

### **Kadanad panchayat shows the way in waste management**



Students of Government School, Chinna Coonoor, going around a plastic recycling plant. —Photo: M. Sathyamoorthy

Kadanad Panchayat in Ooty Panchayat Union in the Nilgiris district has become a trendsetter of sorts in waste management. The panchayat administration with support from the District Rural Development Agency had launched a set of initiatives in segregated waste collection and local processing of waste that are now bearing fruit.

The panchayat president R. Sivakumar said that village panchayat administration has in the past two years extended the scheme to more than 20 of its 40 habitations, where the residents do not dump waste in the open.

The residents handed over degradable and non-degradable waste to conservancy workers, called 'Pasumai Kavalargal', who collected the same in separate bins.

The workers took the degradable waste to the local waste pit, if it was available, or both the waste to bins kept outside the habitations, on the main road.

The panchayat administration used the lorries to transport the waste to the nearest waste pit and non-degradable waste processing hub.

There, the administration converts the degradable waste to compost to be sold to farmers, and further segregates the non-degradable waste.

It shreds the plastics to be sold to road contractors and other waste to recyclers and industries that use them as raw materials.

Mr. Sivakumar said that the challenge in the whole exercise was not mobilising resources or money but changing the mindset of the people. He visited every habitation, talked to the community leaders and convinced them to not only ask the residents to segregate waste but also pay Rs. 30 a month to meet recurring expenditure. And, they agreed.

Assistant Project Officer, Housing and Sanitation, District Rural Development Agency, R. Kasinathan said that under instructions from Project Director S. Kavitha, the department had given Kadanad and 10 other panchayats money to buy bins, lorries, shredders and also pay workers.

It had also given money to buy gloves and other gear for the workers. Kadanad was a trendsetter in this regard, he added.

### **Jamunapari goats attract second looks at cattle fair**

*Milk of the goats fetch as much as Rs. 150 to Rs. 200 per litre*





**CAPTIVATING:**Jamunapari goat breed is a centre of attraction at the Anthiyur Cattle Fair in Erode district.

The robust looking Jamunapari goats exhibited at the Anthiyur Cattle Fair attracted hundreds of curious visitors.

Originally coming from Uttar Pradesh, these goats are now being reared by many farmers in the district. According to them, the goats can weigh up to 65 kilograms, and appear almost as big as a calf.

According to a caretaker of Dheeran Goat Farm based in Kallimadaipudur near Kodumudi in the district, the milk of the Jamunapari goats could fetch as much as Rs. 150 to Rs. 200 per litre. The price of well-grown Jamunapari goats themselves range between Rs. 30,000 and Rs. 40,000.

However, officials of Animal Husbandry Department say, the breed may not bring in returns to farmers. “Most of those who rear this goat with its strongly arched Roman nose and long pendulous ears own them as pets.” The ears can grow to about 12 inches on adults.

There is not much difference either in the nutritive properties or taste of the meat. At the most, the meat could be sold for Rs. 500 per kilogram. Farmers usually do not opt for this breed because it gives birth to only one kid per cycle. Ultimately, it is the meat value that counts for livestock breeders, a senior official said, explaining the reason for the goats not gaining popularity in the district.

**Grama Jyothi launched across Telangana**

## *Flagship scheme for comprehensive development of rural areas*



Telangana Chief Minister K. Chandrasekhar Rao and Deputy Chief Minister Kadiam Srihari at the launch of Grama Jyothi programme at Gangadevipalli in Warangal district on Monday.— Photo: M. Murali

Chief Minister K. Chandrasekhar Rao on Monday launched another flagship programme of his government, Grama Jyothi, at Gangadevipalli in the district. The scheme is aimed at comprehensive development of rural areas allowing planning and execution of works by villages themselves.

The programme had a parallel launch in other districts by Ministers K.T. Rama Rao and P. Mahender Reddy in Ranga Reddy, Etala Rajender in Karimnagar, T. Harish Rao in Medak, G. Jagadish Reddy in Nalgonda, Dr. C. Laxma Reddy in Mahabubnagar and Jogu Ramanna in Adilabad.

### **Key role**

With the village development committees playing the key role, the focus of the scheme would be at improving the Human Development Index (HDI) by addressing core issues such as roads, drains and sanitation, nutrition and health, drinking water, streetlights, wage employment and green cover.

Speaking after the launch, the Chief Minister asked people to make villages “self-ruled and self-sufficient” in all aspects for which the State Government would ensure money and material support. He showered praise on the people of Gangadevipalli for their relentless effort for over three decades to transform the village into a model habitation. “Your unity and commitment to develop your village has brought me here today. I wish people in other villages emulate you,” Mr. Rao said. He

suggested that the people of Gangadevipalli visit Ankapur village in Nizamabad district to learn more about new farming practices.

The Chief Minister asked people in villages to stand united all the time, irrespective of political affiliations and strive to develop as a group. He wanted the villagers to adopt drip irrigation and other modern techniques. Showering sops on them, he sanctioned 2-BHK houses to all the deserving, Rs.10 crore for infrastructure development, two check dams and others.

Stating that statehood to Telangana was a result of hard struggle, he said everything could be achieved, if people had commitment. After achieving statehood it was the turn to develop the State into a role model for the country, he told the people.

At Aziznagar in Ranga Reddy district, Mr. Rama Rao said Grama Jyothi programme would be a game-changer to inclusive and holistic development of backward villages. The government would incentivise villages that achieve 100 per cent targets in the areas of sanitation, immunisation, nutrition, literacy and green cover, he announced.

### **Wholesale price of egg drops by 20 paise**

The wholesale price of egg that remained at Rs. 3.42 for the past 19 days dropped by 20 paise and was fixed at Rs. 3.22 here on Monday.

Officials of National Egg Coordination Committee (NECC), Namakkal Zone said that Shravan month has begun across the country that led to drop in egg consumption.

They added that wholesale price of eggs across the country have dropped over the past one week and the situation is expected to continue for the next two weeks.

### **Sale to go up**

However, they said that the end of Aadi month on Monday is expected to improve the local sales in the coming days.

On July 30, the price of egg was fixed at Rs. 3.42 and the same was maintained till August 17 due to demand.

Wholesale price of eggs in other centres include Bengaluru Rs. 3.50, Hyderabad Rs. 3.05, Mumbai Rs. 3.45, Vijayawada Rs. 3, Barwalla Rs. 2.90, Delhi Rs. 3.15 and Ahmadabad Rs. 3.20.

Officials said that next rate fixation advisory committee would be held on August 20 to fix the wholesale price of egg.

Statistics reveal that the average wholesale price of egg remained low in August in the past years.

### **New species of scorpion identified**

A new species of scorpion has been identified from the surrounding areas of Chinnar Wildlife Sanctuary, part of the Western Ghats in Idukki district, by a group of scientists, including from the Western Ghat Regional Centre (Kozhikode) of the Zoological Survey of India (ZSI). The new species has been named *Buthoscorpio chinnarensis*, and the finding has been published in the August issue of *Taprobanica*, a science journal published by the University of Indonesia.

The species, mostly found in the Chunalippetty forest area neighbouring the Chinnar Wildlife Sanctuary, are black in colour and have a length of 3 to 4 cm.

Detailed examination of the specimens indicated that they showed close affinity with the Indian species *Buthoscorpio politus*, but also showed distinct characters that clearly suggested a new species, they said.

Scorpions in the *Buthoscorpio* genus are found very rarely in India.

They have been spotted earlier in parts of Madhya Pradesh, Karnataka and Tamil Nadu.

It's a major discovery after a team of scientists from the ZSI's Kozhikode and Pune centres identified a rare species of scorpion, *Rugosentus*, from the Malayattur forests in the State in 2005, said P.M. Sureshan, senior scientist of the ZSI Kozhikode Centre, one of the scientists in the team.

### **Fisheries officials to study hatcheries**

A team of officials who are undergoing training in cage culture of Improved Farm Tilapia (GIFT) fish at Rajiv Gandhi Centre for Aquaculture (RGCA), a research and development wing of Marine Products Export Development Authority (MPEDA) will visit fish ponds and hatcheries being raised by RGCA in Tamil Nadu and Puducherry.

RGCA is imparting training to the Fisheries Department authorities from Andhra Pradesh at its farm and hatchery at Manikonda and Kankipadu mandals. As part of the training, the team will visit mud crab and seabass hatcheries at Thoduvai, Chengalpattu and Kanyakumari areas in Tamil Nadu and Karaikal in Puducherry, which are being raised by the research wing of MPEDA.

“RGCA is doing research on raising Tilapia, Seabass and mud crab breeding. Field visits and theory classes will help Fisheries Department officials to explain to farmers the benefits of Tilapia farming,” said MPEDA Deputy Director S. Kandan on Monday.

RGCA Assistant Programme Managers B. Appala Naidu and D.V.S.N. Raju said the officers had been taught seed production and cage culture, which have good demand in the international market. MPEDA, in association with the State government, is conducting training for the Fisheries Development Officers (FDOs) and other officials, they said.

A.P. Fishermen Cooperative Societies Federation Limited General Manager K. Gurappa, who attended the training session, explained to participants the best practices to be followed to produce Tilapia seed and raise the fish variety using cage culture.

FDO Srinivas said the field trip would help to boost Tilapia production in the State.

### **Monsoon 10 p.c. below normal so far**

*IMD says a strengthening El Nino weather pattern has trimmed rainfall*

The India Meteorological Department on Monday said the monsoon was currently 10 per cent below normal, just 2 per cent better than its prediction at the beginning of the season. A deficit of more than 10 per cent for the entire June-September period is considered a drought. A strengthening El Nino weather pattern has trimmed rainfall, the IMD said. Private weather forecaster Skymet, however, has kept to its prediction of a normal monsoon. “Two weeks ago, we revised our prediction downwards to 98 per cent. The monsoon has been deficient by 9.75 per cent for a while now, and will continue to be like that for the next 2-3 days. After that, the deficit could reduce,” said G.P. Sharma, vice-president (meteorology) at Skymet.



“We are running our model and will come out with any revisions to our prediction, if needed, by the 20-23rd of this month. But for now we stand by our prediction,” Mr. Sharma added.

### **Consecutive droughts rare**

A drought this year as well will mark 2014 and 2015 as rare occasions when India has suffered two years of consecutive droughts. This happened only thrice before since 1900 — in 1904-05, 1965-66 and 1986-87.

“There could be a cause for worry... The effect on agriculture of deficient rainfall two years in a row is much more disastrous — the detrimental effect can be more than double the effect of a single year of deficient rainfall,” former Planning Commission member and economist Abhijit Sen told *The Hindu* in June when the IMD had first made its prediction of a 12 per cent deficiency in monsoon.

At that time, Finance Minister Arun Jaitley had sought to allay fears of higher inflation or grain shortage. “The IMD’s predictions appear to be suggesting that we will be somewhat closer to the normal in South, Central and North-East zones. The slight inadequacy, if at all, is in the North-West and a large part of North-West has substantial irrigation facility also. Assuming that the advance predictions are correct, on account of geographical distribution the impact on foodgrain production may not be very significant,” Mr. Jaitley had said.

## Cardamom hills hit a plateau

The project also had the potential to revive pepper cultivation in Kerala.



Hopes fade: The KSBB project aimed at promoting organic cultivation of cardamom at Idukki's CHR (in picture), which is blighted by the indiscriminate use of chemical pesticides.

Bureaucratic bungling and uncertainties in funding have forced the Kerala State Biodiversity Board (KSBB) to abandon a project to restore the ravaged ecology of the Cardamom Hill Reserve (CHR) in Idukki.

The highlight of the project was a campaign to promote organic cultivation of cardamom in the region blighted by the indiscriminate use of chemical pesticides. Kerala Agricultural University (KAU) had agreed to implement the pilot project on the campus of the Cardamom Research Station at Pambadumpara. Reviving the greenery by planting trees was another major activity proposed to be taken up.

Scientists associated with the project said the proposal had shuttled from one table to another in the Secretariat for months. "It had to be revised several times after officials at different levels raised queries and proposed different sources of funding," said K.P. Kuriakose, former Head, Cardamom Research Station.

Initially, it was suggested that the KSBB would provide the funds but officials later proposed that the money be mobilised by the Agriculture Department. The project proposal was again revised with NABARD as the funding agency. Yet another proposal recommending the project for

funding under the Idukki package had also emerged. In the meantime, officials came up with the idea of splitting the project into three components to be implemented separately.

KSBB member secretary K.P. Laladhas said the resistance to the demarcation of Ecologically Sensitive Areas proposed by the Kasturirangan committee could also have played a role in scuttling the project. “Villagers in the high ranges probably saw the restoration project as a covert attempt to implement the recommendations of the committee. A participatory project is bound to fail in such a hostile environment.”

Confirming that the project had been given up, KSBB Chairman Oommen V. Oommen said there was little scope of reviving any of the components.

“CHR was selected for the project because of its status as a protected area where chances of external interference were remote. The fact that pesticide application is heaviest for cardamom was another factor,” says Prof. Kuriakose.

“The project also had the potential to revive pepper cultivation in Kerala,” he said. Heavy use of pesticides had affected Kerala’s pre-eminence as a pepper producer. “The switch to organic methods of cultivation would have helped Kerala recapture a major share of the market from Karnataka and Tamil Nadu.”

*The project also had the potential to revive pepper cultivation in Kerala.*

### **Prisoners to grow their own fruits, vegetables**

On a small plot of land inside the Coimbatore Central Prison (CCP) grounds, there will soon be fruits and vegetables growing.

All this thanks to Swarga Foundation that donated 1,000 seed packets of 10 different fruits and vegetables such as bottle gourd, bitter gourd and so on, in kits, along with coco piths and manure on Saturday.

This was part of the ‘Grow Your Food’ project.

The inmates of the prison will tend to the horticulture activities.

The Prison Superintendent D. Pazhani said that “At the moment, agriculture is in full swing only in the open jail, at Singanallur and now it will be there at CCP too.”



Swarga foundation also conducted a puppet show to teach inmates the importance of organic farming and methods to plant and raise the seeds that were distributed to them.

### **The desertification of Tamil Nadu**



*How private wells and paddy are drying up the southern State.*

Tamil Nadu is water deficit. A structural deficit and not a seasonal one. The total assessed water resources in the State amount to 1,587 TMC (thousand million cubic feet) while the State government's demand estimate is 1,894 TMC (*Fig.1*). Demand exceeds supply by 19.3 per cent; this happens when rainfall is "normal".

*(Fig.1)*

Consider what gets reported as normal: the aggregate data from across the State that Indian Meteorological Department (IMD) releases. That often does not reflect what went on in the districts. Each district has a different estimate of normal as well, complicating the meaning of a single final figure further. Tamil Nadu's water conservation and reservoir systems are not integrated to the degree that we can take this aggregate number in isolation.

For instance, last season's rainfall for Tamil Nadu was 12 per cent below the estimated normal. The IMD classifies that deviation as normal rainfall. The threshold at which it gets classified as deficit is 20 per cent below estimated normal. Of Tamil Nadu's 34 Meteorological subdivisions, 24 had rainfall below the estimated normal (*Fig.2*). And of

these, 17 had more than 20 per cent deficit. That is, half the State was classified deficit by the IMD measure. Only 4 subdivisions had excess rainfall.

*(Fig.2)*

But they seem to have had a disproportionate influence on the aggregate. Tamil Nadu's catchment areas aren't concentrated like it happens in most other geographies. Trichy having a 54-per-cent-deficient rainfall isn't made up by Theni having excess rainfall of 138 per cent. At least not fully and not even if these two districts made up the entire State but retained their relative positions on a map.

Even a marginally deficient rainfall, given the 19.3 per cent of shortage to begin with, is a significant challenge. This challenge is local; making the probability of more than one region being deficient every year very high. In the past five years, the average drop in ground water across Tamil Nadu has been 0.34 metres/year (*Fig.3*). That is shocking and ranks among one of the most rapid drops in the world.

*(Fig.3)*

But what is worse is where these drops have occurred; the average hides the fact some regions/districts have depleted far more than others. The Tamil Nadu PWD maintains observatory wells in 30 districts. 27 of these have shown an increase in depth over a five-year period (*Fig.4* and *Fig.5*). The absolute drops in some cases are 4 meters in five years. What is even more alarming is the rate of relative decline across the State. Even those districts with relatively low depth are showing accelerating trends of depletion.

*(Fig.4)*

Districts in the Cauvery Delta region - those that do not come to mind readily as dry regions -- are among those that show the highest relative decline in ground water. Cuddalore, Pudukkottai, Salem, Sivagangai, Thanjavur, Thiruvarur and Thoothukudi have registered drop in depth that exceeds 40 per cent in just five years. In terms of absolute depth, districts in central and western Tamil Nadu dropped their depth well into double digits when measured in metres.

Most of these districts under such stress also happen to have large areas under farmland. It is quite likely that the reason for such an accelerating

rate of ground water depletion is agricultural practice. The only piece of data we need to look at to come to that conclusion is the demand estimate of various sectors. Domestic water use, often decried as wasteful, forms three per cent of the total demand. Irrigation takes 93 per cent. Therefore, any attempt to understand Tamil Nadu's water resources should start with agriculture.

*(Fig.4)*

Of Tamil Nadu's total land area, 38.3 per cent is sown. That, to those of us who are not familiar with the data, sounds like a staggeringly high proportion of land under cultivation. With the exception of Chennai, every district has a significant portion of its land sown. For some of the districts, like those in the Cauvery Delta, it's more than 50 per cent of their total surface area (*Fig.6*). As a point of comparison, one of the world's largest and most productive agricultural States, California, has 27 per cent of its surface area as cropland. And that State is now contemplating reducing that to conserve water.

*(Fig.6)*

Tamil Nadu's problem is that in such a water scarce situation, its primary crop is rice -- a hydrophilic plant that requires standing water. Of all land that is sown in the State, 32.3 per cent is sown with rice (*Fig.7*). Other food and non-food crops do not come close to this dominance. Simple arithmetic tells us 12.16 per cent of the State's total surface area, therefore, is just rice crop. That is over 1.9 million hectares requiring standing water for a significant period of time in hot conditions. With a 19.3 per cent water scarcity to start with under such rapidly depleting ground water resources, is this feasible?

*(Fig.7)*

That the rice crop is the reason behind depletion of ground water is a reasonable hypothesis. It is borne out in the distribution of rice crop across districts.

The delta districts have rice in over 60 per cent of their sown land. There are other districts which also reach over 60 per cent. But, as the earlier data revealed, the delta districts also have the maximum total area under cultivation. For example, Kancheepuram and Sivagangai -- two districts that aren't in the delta -- have about 20 to 30 per cent of their overall land area sown. And 70 per cent of that is rice. This computes to about 14 to

21 per cent of their total land area coming under rice (*Fig.8*). Whereas the delta districts of Thanjavur, Thiruvarur and Nagapattinam have 60 to 70 per cent of their total land area sown; and of this, again have 60 to 70 per cent as rice. That is 40 to 50 per cent of their total surface area being occupied by water guzzling crops!

(*Fig.8*)

The data above shows regions that grow rice in over 40 per cent of their sown area have either already depleted ground water significantly or are getting there at an accelerated pace. To understand how this happens, it is useful to see what kinds of irrigation methods are used. In Tamil Nadu, surface water irrigation maxed out its capacity in the 1960s. As a result, recent growth in source of irrigation has almost exclusively been open wells, tube wells and bore wells. These kinds of ground water extracting methods now account for 54 per cent of all irrigation.

To understand the spread of such methods further, consider a district-wise mapping of the different kinds of wells that are privately owned (*Fig.9*). Thanjavur, which has about half of its surface area cropped with rice has the maximum number of bore-wells that suck water out far more effectively. Districts with absolute ground water levels that are not as bad as others seem to have more private wells and bore-wells - which is understandable because they have water at reachable depths and also alarming given it accelerates their depletion further. The regions in western parts of the state that have ground water already at double digit depths (in meters) have far lower levels of rice cultivation.

(*Fig.9*)

The government classifies ground water blocks in various categories. Only 145 of the 385 such blocks are classified safe. The others are in various stages of depletion: over-exploited, critical and semi-critical. About 2 per cent of the blocks are already saline.

Tamil Nadu has two immediate questions staring at its face:

- a) Can it afford to have 38.3 per cent of its surface area sown?
- b) Can it afford to have 32.3 per cent of the sown area be rice?

The answer to both questions seems to be 'no'. The political and policy implications of this are far too complex for anyone to suggest this happen

immediately. But a delay in that decision-making only makes the State dry up faster and impact soil fertility negatively.

Desalination, of the type that Israel has mastered, is another option. But productivity of the Tamil farmer does not justify the cost of desalination for irrigation. One hopes the next generation of innovators work to make desalination cheap. And meanwhile, the only reasonable thing is to encourage migration to cities and not decry it. We need less and not more farmland.

*(Nilakantan R.S. works as a Data Scientist for a tech startup.)*



### **TNAU may receive Rs 750 crore boost in funding: VC**

The Tamil Nadu Agricultural University (TNAU) is most likely to receive Rs750 crore in funds for focused research, said TNAU vice-chancellor K Ramasamy, during the university's 36th convocation on Monday here. The funding may be sanctioned in the next financial budget, indicated Ramasamy.

The university's funding for research has increased from Rs210 crore to Rs480 crore in the last four years, Ramasamy said. "As of today, 52% of the research funding comes from external agencies," he said in his annual report. Also, the university's performance in research has improved its ranking from category 'D' to 'A', based on the h-index. "TNAU is the best among all state agricultural universities in India," Ramasamy added.

Minister for housing, urban development and agriculture and the pro-chancellor of the university, R Vaithilingam presided over the graduation day ceremony. He also conferred honorary doctorate degree in science to Susan R McCouch, professor, department of plant breeding and genetics, Cornell University, USA, Pedro Medrano Rojas, former UN assistant secretary general and Ashok Bakthavathsalam, chairman and managing director, K G Information System Pvt Ltd, Coimbatore.

Susan R McCouch was also the chief guest on the occasion and delivered the graduation day address. "I congratulate all the graduates for receiving

their degrees. My association with TNAU is more than two decades old, and many of my co-researchers and students have been from this university," said Susan

Her contribution towards research in rice includes the first molecular mapping of the rice genome that led to further studies in understanding traits like disease resistance, drought resistance, maturity and yield in rice. On the other hand, Pedro Medrano Rojas has been associated with United Nations since 1983, and was the programme officer of the UN's world food program (WFP) in 1989. Ashok Bakthavathsalam's contribution towards the development of IT sector in the city made the TNAU's academic council and board of management decide to confer the honorary doctorate in science to him.

A total of 1,170 candidates received their degrees, of which 111 were PhD graduates, 199 were post graduate students and 860 were under graduates. Also, 33 students were awarded gold medals for academic excellence.

### **Union agri minister launches 'Grow Safe Food' drive**

Motihari: Union agriculture minister Radha Mohan Singh inaugurated the 'Grow Safe Food' and 'Responsible use of agriculture products' campaign under a pilot project launched by the Union agriculture ministry at Chandrahiya village near Motihari on Monday. He applauded the efforts of Crop Life India for initiating this two-year training programme for the farmers of the remote villages in East Champaran district.

Singh asked the farmers to adopt scientific methods to enhance foodgrain production and said his ministry was making efforts to make them aware of modern scientific advancements.

Addressing a Kisan Sammelan on the occasion, he said pesticides were critical inputs in agriculture. As farmers protect crops from pests and other diseases, it was important for them to work towards enhancing production, he said, adding that it was also important to maintain the crops quality to ensure safe food for a growing nation like India.

The programme was attended by several agriculture scientists, representatives of different agencies, MLAs and grassroots workers. Large number of farmers were educated on the scientific use of crop products protection and safe disposal of used containers.

Singh also addressed three Kisan sammelans at Kesariya, Hussaini and Dumariaghat and inaugurated the election office of BJP at Motihari.

### **Tamil Nadu Agricultural University may get Rs 750 crore for research**

The Tamil Nadu Agricultural University is likely to receive Rs 750 crore funding for focused research, vice-chancellor K Ramasamy said on Monday.

The funding may be sanctioned in the next financial budget, Ramasamy said while speaking at a convocation here. The university's funding for research has increased from Rs 210 crore to Rs 480 crore in the last four years.

"As of today, 52% of the research funding comes from external agencies," he said in his annual report. Also, the university's performance in research has improved its ranking based on h-index from category 'D' to 'A'.

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Susan R McCouch was the chief guest on the occasion and delivered the graduation day address. She is a graduate in Hispanic Literature and History, but pursued her postgraduate studies in plant pathology and later pursued her PhD in plant breeding and genetics.

"I congratulate all the graduates today for receiving their degrees today. My association with the TNAU is more than two decades old, and many of my co-researchers and students have been from this university," said Susan in her graduation day address.

Her contribution towards research in rice includes first molecular map of

the rice genome that led to further studies in understanding traits like disease resistance, drought resistance, maturity and yield in rice.

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A total of 1,170 candidates received their degrees from Susan R McCouch.

### **India to record 12.36 MT less foodgrain production in 2014-15 as compared to 2013-14**



The decline in food-grain production is attributed to deficit monsoon of last year that had affected the Kharif crops of 2014 and unseasonal rains and hailstorms of February-March this year which damaged the standing Rabi crops in as many as 14 states. (Representative photo)

NEW DELHI: India is estimated to record 12.36 million tonnes less food-grain production in 2014-15 crop year (July-June) as compared to 2013-14 when the country had reported highest ever food-grain production of 265.04 million tonnes.

The decline in food-grain production is attributed to deficit monsoon of last year that had affected the Kharif crops of 2014 and unseasonal rains and hailstorms of February-March this year which damaged the standing Rabi crops in as many as 14 states.

Government's fourth advance estimate of food-grain production for the crop year 2014-15, released on Monday, shows that the country will



report the overall food-grain production of 252.68 million tonnes (MT) as compared to 265.04 MT of food-grain production during 2013-14.

It also shows that all farm produce except sugarcane recorded decline in production in 2014-15 as compared to 2013-14 which was the best year in terms of food-grain production due to normal Monsoon.

India had last year recorded 12% deficit of Monsoon rainfall, making the year 2014 technically a drought year. Generally deficit rainfall of 10% or more during the Monsoon season (June-September) in a particular year is considered as a drought year.

"As a result of setback in Kharif as well as Rabi seasons, the production of most of the crops in the country has declined during 2014-15," said the agriculture ministry while releasing the data of fourth advance estimates for the year 2014-15.

Fourth advance estimates are released every year in July-August as fully firmed up data on area as well as yield of Kharif crops and Rabi crops are expected to be available with the states by this time. As such, fourth advance estimates are considered to be almost as good as 'Final Estimates', released in next February.

As per 4th Advance Estimates for 2014-15, total production of rice is estimated at 104.80 MT which is lower by 1.85 MT than the last year's record production of 106.65 MT. Production of wheat, estimated at 88.94 MT, is lower by 6.91 MT than the record production of 95.85 million tonnes achieved during 2013-14.

Total production of Coarse Cereals, estimated at 41.75 million tonnes, is also lower by 1.54 million tonnes than their production during 2013-14.

Similarly, production of pulses estimated at 17.20 MT is lower by 2.05 MT than their production during the last year (2013-14). With a decrease of 6.07 million tonnes over the last year, total production of oilseeds in the country is estimated at 26.68 MT.

Production of sugarcane, estimated at 359.33 MT, is however higher by 7.19 MT as compared to last year. Total production of cotton estimated at 35.48 million bales (of 170 kg each) is marginally lower than last year but higher by 3.01 million bales than the average production of last 5 years.

Production of jute & mesta is estimated at 11.45 million bales (of 180 kg each) which is marginally lower than their production during the last year.

In an agricultural year (July-June), the ministry of agriculture releases four 'Advance Estimates' followed by 'Final Estimates' of production of major agricultural crops of the country.

First Advance Estimates, released in September when Kharif sowing is generally over, cover only Kharif crops. Second Advance Estimates are released in February the next year when Rabi sowing is also over.

These estimates, covering Kharif as well as Rabi crops, take into account firmed up figures on Kharif area coverage along with available data on crop cutting experiments for yield assessment of Kharif crops and tentative figures on area coverage of Rabi crops.

Third Advance Estimates, incorporating revised data on area coverage for Rabi crops and better yield estimates of Kharif crops, are released in April-May.

"In order to allow sufficient time to states to take into account even the delayed information while finalizing area and yield estimates of various crops, the 'Final Estimates' are released about seven months after the fourth Advance Estimates and no revision in the state level data is accepted after release of Final Estimates by the department of economics and statistics", said the ministry.

### **Industry wants govt to set up Mustard Oil Development Board to boost productivity**

Government's decision to formulate a policy which would enable it to buy oil seeds directly from farmers, just like wheat and rice, will boost production of domestic oil seeds, but the industry believes more needs to be done specially for mustard oil seed farmers. This is to ensure India not only raises its output of mustard oil seeds but also to competes with low cost imports.

According to Mustard Research & Promotion Consortium (MRPC), "not just direct buying, there is an urgent need to invest into research and development and also towards value additions of mustard oil seeds. Crops like soya bean have numerous value-added products like soy milk,

protein, nuggets, etc. A similar focus on value addition in Mustard is urgently required."

MRPC said, "While crushing mustard seeds, the oil accounts for just one-third; the residual two-thirds is oil cake. With proper research the residual oil can be processed to produce high quality bio-diesel and can be used for industrial applications, fertilizers and protein isolation, to name a few. Moreover, high-end research in the area of protein extraction, suitable for human consumption from oil cake can help in addressing protein malnutrition that is prevalent across the country."

According to Vivek Puri, the manufacturer of P Mark mustard oil: "India needs to learn from countries like Malaysia and Italy, who have managed to sell their edible oil worldwide, which in return has contributed to their economy. Indian mustard oil has the potential to reduce imports of edible oil and can save valuable foreign exchange. What palm oil is for Malaysia, olive oil for Italy and soya oil for America, mustard oil can be for India."

Puri said there is a need to have a vision and a plan for this industry. "Ministry of Agriculture should work towards to establish a 'Mustard Oil Development Board' for the integrated development of the mustard oil industry in the country, with focus on higher productivity and value addition. The agriculture ministry should pay heed to the scenario and boost the oil seed production," he said.

India is the world's biggest consumer of edible oils. As of now, country is meeting its demand of oil seeds through 60% of imports, while 40% is domestically produced.

### **Rains bring hopes of a bumper cotton crop**

Fears of a drought in the region have now turned into hopes of a bumper crop. Rains during the last fortnight have changed the situation. It is now expected that the cotton crop, which is always linked with Vidarbha's agricultural crisis, is expected give a record yield. Last year was marred by a drought and excessive rains had hit the farmers the year before.

A good harvest may, however, not be met with good prices as well, feel observers. Cotton rates are expected to reign below the minimum support price (MSP) of 4,050 a quintal. At present, lint is being quoted at 33,000 a bale, which translates into 3,700 a quintal for raw cotton. This is because of low demand, especially in China, a major importer, and sizeable leftover stock of last year. If not below MSP, the rates may be

only marginally more than the MSP. The higher yield may only provide a saving grace, say experts.

The going has been good so far. If there are moderate showers in September and October, the yield may be the highest in the last five years, said an officer in the state's agriculture department, which is responsible for gathering field data.

The officer from Amravati division of Vidarbha, which is the major cotton growing area, said the recent round of showers has also washed away the dry spell in Akola and Buldhana, which were lagging behind. As far as cotton is concerned, this can be considered to be one of the best years. "Cotton yields are expected to be high this year, at around five quintals an acre. The outlook has changed for other crops like soyabean and tur also," said the official.

However, the weather has to remain conducive in the coming days. The showers in September have to be moderate. If it rains excessively, the crops will be damaged and the growth will be hampered if it does not rain, the source said.

Even farm activists, normally known to have a sceptical view, agree that cotton yields may be high this year. Kishore Tiwari of Vidarbha Jan Andolan Samiti (VJAS) said, "It is likely that the cotton yield may go up to six quintals per acre. In the last two years, it was just a couple of quintals an acre on average. But low prices may play spoilsport. The open market rates may fall below the MSP," said Tiwari. There have been losses in soyabean but the prices may be higher than last year, he said.

Vijay Jawandhia, a veteran Shetkari Sanghatana activist, said he had surveyed various pockets in Wardha district and the situation was encouraging for all the crops, including soyabean and tur. However, the non-irrigated area still need more rounds of rains in the coming two months, he said.

## THE HINDU **BusinessLine**

### **Camson Bio files patents for natural fertiliser**

Camson Bio Technologies has filed patents for its discovery of natural fertiliser – a product which is derived from microbial extracts.

The company has developed capabilities to manufacture this in large commercial quantities for meeting the increasing global demand for environment-friendly fertilisers.

The fertiliser is made of microbes available in soil, water and air. The derivation of microbes is natural and when applied it leaves zero residue in soil.

The product is water soluble and can be supplied through drip irrigation. Furthermore, it does not harm the soil topography and is completely safe for perpetual use by farmers. It will encourage healthy farming practise on a global level and can help the government save a significant spent on import subsidy of chemical fertilisers, said the company in a statement on Monday.

Santosh Nair, CEO, Camson Biotechnologies, said the product was tested and found to be very effective as compared to synthetic water soluble fertiliser, according to the data received from Directorate of Rice Research, Hyderabad and Mahatma Phule Krishi Vidyapeeth at Rahuri in Maharashtra.

“The agri-input industry is overly dependent on imported synthetic water soluble fertilisers (NPK) and our unique method to produce NPK through the microbial route would be helpful to farmers and the government in cutting cost,” he added.

### **Centre urged to hike import duty on edible oils**

The Solvent Extractors Association has urged the Centre to increase import duty on crude edible oil by over three-fold to 25 per cent from 7.5 per cent and that on refined oil to 45 per cent from 15 per cent as excessive imports is hampering the industry and farmers’ interest.

In a memorandum to the Government, the Association has said edible oil imports has touched 100 lakh tonnes in the first nine months oil year till July against 80 lakh tonnes (lt) in the same period last year.

In next three months, shipments are expected to touch an unprecedented level of 140 lt valued at Rs. 65,000 crore (\$10 billion), it said. The nominal duty difference of 7.5 per cent between the crude and refined oil has made many oil mills stop crushing oilseeds supplied farmers.

## ‘Increasing exports critical to boost S Indian tea prices’



Consumer awareness in the tea sector is fast catching up as transparency and traceability become key issues in sourcing. This has forced all major tea factories in India to go for certifications such as Trustea and Rain Forest Alliance (RFA) as the Tea Board comes up with initiatives to promote sustainability in Indian tea plantation sector.

Harrisons Malayalam Ltd (HML), part of the RP Sanjiv Goenka group, has become the first tea company to bag both these certificates in all of its factories, says N Dharmaraj, Wholetime Director and CEO. Edited excerpts:

### **Going forward, how will these certifications benefit HML?**

With the certifications in hand, HML becomes a reliable supplier of tea in both the domestic and overseas markets. It is now capable of supplying a certified product that is safe and produced in an ethical and sustainable environment.

Today, the company produces 5,000 tonnes annually, which includes CTC, orthodox, green and white tea under various brand names from regions such as Munnar, Peermedu, Wayanad and the foothills of the Nilgiris.

The company also exports 1,800 tonnes a year both in bulk and packaged form to as many as 20 countries.

The strict adherence to EU guidelines on plant protection residue limits and for heavy metals will also help us in scaling new heights in this competitive environment. Moreover, the adoption of good agricultural

practices like zero tillage, use of cover crops, regular soil and water conservation methods will ensure that sustainability in our plantation operations is maintained.

**How do you propose to tap the domestic and overseas markets in the new environment?**

It is a pre-requisite for the certified teas to conform not only to FSSAI (Food Safety and Standards Authority of India) codes but also the EU guidelines on plant protection and heavy metal residue.

HML believes that such teas, which are a combination of superior quality and high standards in product safety backed by traceability and production under ethical sustainable conditions, will contribute to product differentiation. We are expecting a 30 per cent rise in exports from our current level of 1,800 tonnes.

**How are these certifications going to benefit the company's workforce?**

We have always maintained high standards in terms of amenities provided for the workforce. These certifications will improve the system discipline in such matters. The workforce is also enthused by the accreditations, since they have been an integral part of the journey.

HML is also supporting the local livelihood of small tea farmers, supporting their farms with technical advice and supply of materials, transparency in pricing, supporting the management of their farms, improving quality and quantity and bringing them within the certification net.

**How do you compare the corporatised plantation model with the rural agricultural scene in India?**

The corporatised plantation model must be seen against the bitter experience of fragmentation in rural agriculture, unhealthy agri-practices and poor social and economic conditions.

This has particularly led to the disintegration of social quality of life, especially in the less developed parts of the country.

**Of late, the tea industry is passing through a crisis with price fluctuation and other issues. What is your take on this?**

The South Indian tea industry has been impacted by low prices and high cost of production. This region exports 40 per cent of its annual production of approximately 230 million kg of tea as against 15 per cent (of annual production being exported) in the case of North India.

Increasing the exports is critical to shore up the price line of the south Indian teas. This has to be done through a combination of quality improvement initiatives by the producers and with trade support from the government.

### **Monsoon deficit at 10%; Met Dept sees situation worsening this month**

The overall monsoon deficit for the country as a whole is in double digits for the first time this season, and forecasts suggest it may worsen during the rest of August.

India Met Department assessed the deficit at 10 per cent with the worst-hit South topping a list of three geographical regions with 20 per cent. The other deficits are reported from East and North-East India (-12 per cent) and Central India (-9 per cent). The lone surplus in North-West India has narrowed further to just one per cent.

These figures are set to undergo further downside revision if the forecasts are anything to go by. North-West could just slip into deficit while in Central India, it could enter double-digit figures. What is likely aggravating the situation is the absence of any rain-making weather systems (low-pressure areas) over the landmass and the reduced likelihood of any such materialising in the near term.

### **Pacific typhoons**

This outlook is not helped either by the feverish activity building in the central and northwest Pacific, which has a bearing on a concurrent monsoon over India.

Depending on the time and place of their genesis and their track, Pacific typhoons (cyclones) help drag in moisture into the Asian monsoon, of which the South-West monsoon of India is a part. But the rogue ones can do the exact reverse and 'bleed' the monsoon to near-death – as looks likely the case currently with the dynamics associated with typhoons Atsani and Goni raging in that basin. Earlier, the expectation was the systems would help drag in a fresh wave from south of Sri Lanka and trigger rains over the peninsula to start with.



## Below normal

Those hopes are now being discounted heavily. While both typhoons are expected to grow in strength, forecasts also suggest they turn away from their westerly course and head back into central Pacific. Parts of the peninsula have already started getting rains as the twin typhoons race in but may dry up soon as they turn tail with whatever little moisture available over India.

The Indian Institute of Tropical Meteorology is of the view that the country is bracing below normal rain for the rest of the month. It expects some activity to start in the Bay of Bengal with its rustling up some energy of its own; but this can happen only after a while after the typhoons die out completely.

## Business Standard

Cotton mills slash production as demand wanes



Bogged down by [high input costs](#) and subdued demand, cotton spinning mills are going slow on production. To take stock of the situation, representatives of the Confederation of Indian Textile Industry, South India Millers' Association, North Indian Millers Association, and Texprocil met in New Delhi on Monday.

In the meeting, it was decided to appoint an agency to study the gravity of the situation, prepare a memorandum, and send to the government.

Most of the mills have either already cut production by 15-20 per cent or are mulling to do so soon. Salem-based Sambandam Spinning Mills is one such. Its director S Dinakaran says the mill is keeping operations suspended for one day every week, starting this month. He says this is the first time in 40 years that the mill has faced such a crisis that production has had to be scaled down.

While bigger players are resorting to a one-day production cut, smaller ones have opted to shut production for two days a week. The plight of [cotton mills](#) in north India, too, is similar.

What has added to the woes of the sector is the dramatic increase in capacity over the past few years on the back of incentives offered by various state governments. This, as well as a drastic fall in export demand, has put the sector in a shambles.

Says D K Nair, secretary-general, Confederation of Indian Textile Industry: "The sharp decline in exports from a peak of 140 million kg a month last year to an average of 100 million a month in this quarter has put the spinning sector in doldrums. A 40 per cent decline in export demand in such a short span was unexpected and the sector was not prepared for this. The devaluation of yuan might further hamper exports as Indian yarn has become more expensive in the international market in the aftermath of Chinese currency's fall."

According to experts, the delay in disbursement of Technology Upgradation Fund, or TUF, has affected the sector.

Dinakarn, who is also the chairman of Texprocil's yarn committee, said: "Chinese buyers have been delaying the LCs (Letters of Credit) and not opening the LCs. The mills are bleeding and there is no option other than suspending production. Of the 500 small mills in Tamil Nadu, most are keeping operations shut once or twice a week." "These mills are into blended yarn and fibre. Since there is no excise duty on cotton, the 100 per cent cotton yarn makers are disrupting production only once a week.

According to C Varadarajan, president of South Indian Spinners' Association, there is a need to revive the interest subvention, for release of pending TUF, and introduction of measures to expedite exports. As the

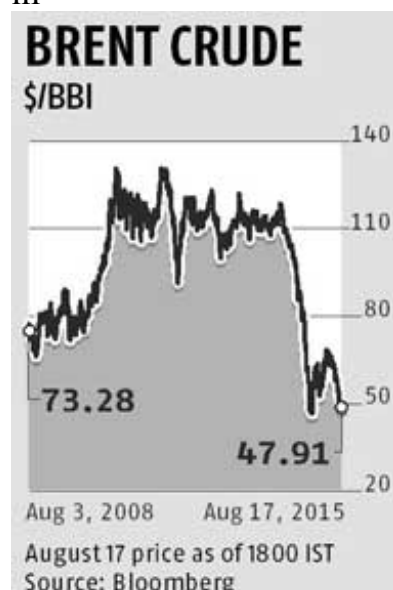
textile sector is one of the largest employers, production cuts for a longer time could result in layoffs, resulting in labour unrest.

The situation is precarious and the government should provide immediate relief to save the livelihood of millions engaged in textile sector, he added.

### Oil nears to 6-yr low on Japan data, oversupply



Oil fell towards six-year lows on Monday on data showing the economy of Japan, the world's third-biggest oil consumer, contracted in the second quarter. The global oversupply picture was exacerbated by another weekly jump in US oil rig additions on Friday, hinting at growing production, and news that Oman produced a record-breaking 1 million barrels per day in July.



US crude, or [West Texas Intermediate \(WTI\)](#), for September was trading 65 cents lower at \$41.85 a barrel at 1155 GMT, close to its lowest level in more than six years.

Brent futures briefly reversed losses on news that Kuwait's 200,000-barrel-per-day Shuaiba refinery had been shut down following a fire.

Brent for October reached an intra-day high of

\$49.44 a barrel shortly after news of the fire but had fallen back to \$49.05 by 1155 GMT, down 14 cents on its previous close. The Brent September contract expired on Friday.

Over the past two weeks, [US crude](#) prices have fallen by more than 10 per cent on US supply concerns. Brent has fallen by around four per cent.

"We have seen Brent swing up and down over the past two weeks because of a lack of consensus about where oil should go directionally," BNP Paribas energy commodities strategist Gareth Lewis-Davies said.

Production by the Organization of the Petroleum Exporting Countries is running well above demand, filling stockpiles worldwide.

Iran is expected to increase its oil exports once Western sanctions are lifted after ratification of a recent nuclear deal.

"The oversupply story remains well intact, which fuels the bearish sentiment," said Carsten Fritsch, senior oil analyst at Commerzbank in Frankfurt.

Many money managers and hedge funds agree with the view that prices will likely remain low for a while as they cut net long positions of Brent crude futures for a fourth straight week, data from the Intercontinental Exchange showed.

"The end of the summer driving season and the start of refinery maintenance season will weigh on near-term demand and pressure prices," said Societe Generale oil analyst Michael Wittner.

"Oversupply, high stocks, and seasonal weaknesses are outweighing record demand growth," he said.

Demand for crude oil is set to fall in the next few weeks as refineries start annual maintenance. A number of European refineries will close for maintenance in September and October, including facilities operated by Royal Dutch Shell, Statoil and Total.