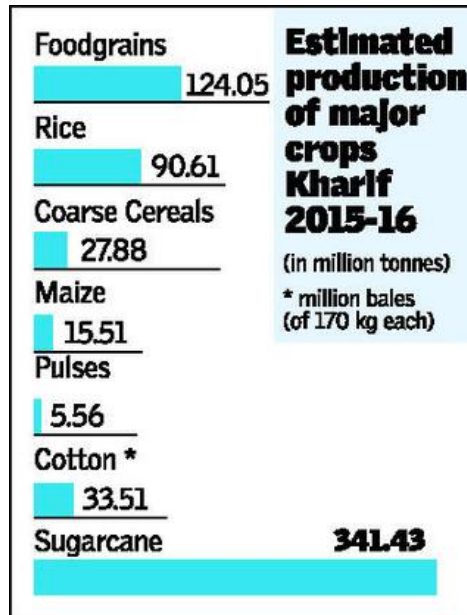


21.09.2015

# THE HINDU

## Government releases kharif crops production estimates



The cumulative rainfall during the current monsoon season has been deficient by 15 per cent (higher than rainfall deficit of 12 per cent in 2014-15). However, on account of timely onset of monsoon as well as Government's multiple interventions with contingency plans, timely advisories and regular monitoring of seed and fertilizer availability, estimated production of most of the crops during current kharif season has been higher in comparison to the first advance estimates for 2014-15, according to the Department of Agriculture, Cooperation and Farmers Welfare.

The government has released the first advance estimates of production of major kharif crops for 2015-16. As per these preliminary estimates, total production of kharif foodgrains is put at 124.05 million tonnes, which is higher by 3.78 million tonnes compared to production of 120.27 million tonnes of foodgrains as per first advance estimates for 2014-15.

Production of kharif rice estimated at 90.61 million tonnes is higher by 2.59 million tonnes. Total production of kharif coarse cereals is estimated at

27.88 million tonnes, which is higher by 0.83 million tonnes compared to production of 27.05 million tonnes of kharif coarse cereals estimated in 2014-15. However, the production estimate for maize is marginally lower this year as compared to the corresponding period.

Increase in area under urad and moong has led to increase in production of kharif pulses estimated at 5.56 million tonnes against their production of 5.20 million tonnes. Among pulses, production of tur is estimated to decline by 0.13 million tonnes compared to the previous year.

As per first advance estimates for 2015-16, production of kharif oilseeds is 19.89 million tonnes, compared to production of 19.66 million tonnes.

Production of sugarcane, estimated at 341.43 million tonnes, is lower by 1.36 million tonnes. The output of cotton estimated at 33.51 million bales (of 170 kg each) is also lower by 1.12 million bales. Production of jute, estimated at 10.28 million bales (of 180 kg each), is marginally lower than in 2014-15.

### **It's rewind time at agricultural college**



LOOKING BACK: V.K. Subburaj, Secretary, Department of Pharmaceuticals, Union Government, speaks at the reunion at Madurai Agricultural College and Research Institute on Sunday.— Photo: G. Moorthy

It was a day of recalling cherished memories and going down memory lane for over 1,000 members of Madurai Agri College Old Students' Association (MACOSA) here on Sunday at the reunion organised to mark the golden jubilee of Madurai Agricultural College and Research Institute.

From singing film songs which were popular during their college days to sharing anecdotes about their time in classroom and favourite subjects, the alumni were thrilled to meet their batch mates, seniors and juniors. On Saturday, they participated in sports events and other competitions.

V.K. Subburaj, Secretary, Department of Pharmaceuticals with the Union Government, spoke about the good facilities at the college during his student days. He said that since the college ensured that they learnt the fundamentals well, it helped in reaching greater heights in life. Mr. Subburaj was hailed by the association as the first student from the college to clear the civil services examination. "He was one of the greatest inspirations for those of us who wished to crack the civil services examinations. He led the students of this college aspiring to achieve higher goals," said Sylendra Babu, Additional Director General of Police, who is also an alumnus of the college.

Sankara Reddy, a student of the first-batch, recalled that the institute, surrounded by lush green fields, was once barren and had only a few small buildings.

"Many of the trees you see on the approach roads and on the campus were planted by students of our batch, and each tree was named after the student who planted it. We were a very closely-knit batch of 71 students who enjoyed our classes and went along well with the professors," he said. The students of the 1965 batch wore green T-Shirts for the reunion.

### **Alumni plan**

The alumni association announced that a corpus fund would be set up to help poor students and Mr. Subburaj made a donation of Rs. 1 lakh into it. Many

others also contributed to the fund and said that they would help mentor students in their career and future plans.

Mervin Alexander, Postmaster General, Chennai City region, another alumnus, said that they also wanted to do something for the conservation of Yanaimalai near the college and promoting it as a heritage tourism site.

*“The institute, surrounded by lush green fields, was once barren and had only a few small buildings”*

### **Forest dwellers receive Rs. 28 lakh loan for income generation**

The Forest Department has disbursed revolving fund loan of over Rs. 28 lakh to about 350 farmers, including women, in Hasanur Division of Sathyamangalam Tiger Reserve over the last week, for income generation activities aimed at reducing their dependence on forests for survival.

The loans were disbursed in recent weeks by Forest Range Officer of Hasanur Palanichamy and FRO of Germalam Amul Raj for undertaking agriculture and allied activities, self-employment, cattle-rearing, poultry farming, running petty shops and engaging in skill-development activities.

The loans were forwarded at one per cent interest with a people-centric approach, District Forest Officer of Hasanur C.H. Padma said, adding that the focus was on involving local people in conservation of forest resources.

Participatory approach of Village Forest Committees and Eco Development Committees has been deemed necessary by the Forest Department in its initiative to bring about socio-economic uplift of forest dwellers who were hitherto dependent on forests for their livelihood.

Their access to fuel wood, fodder for cattle, and non-timber forest products has been restricted after declaration of the Sathyamangalam forest as a tiger reserve. It was to prevent them from procuring the produce through illegal means that the Forest Department had constituted Village Forest Committees under Tamil Nadu Afforestation Project.

Likewise, Eco Development Committees were constituted under Tamil Nadu Biodiversity Conservation and Greening Project and Project Tiger. There are more than 40 such committees in Hasanur Division and over one crore rupees in their accounts as revolving fund, Ms. Padma said. Income generation activities are carried out through Individual loan, SGH loan and micro credit.

Usually, loan is sought after prior to onset of monsoon for agricultural and allied activities. The Forest Department also carries out community development works in villages. According to Field Director of STR I. Anwardeen, socio-economic development of tribal communities will, alongside reducing their dependence on forests, reflect in educational development of children and better employment opportunities.

### **Turmeric auction fetches Rs. 1.50 crore**

Turmeric was auctioned for Rs. 1.50 crore at the Tiruchengode Agricultural Producers Cooperative Marketing Society here on Saturday.

While 'Virali' variety fetched a price ranging between Rs. 6,520 and Rs. 8,569 per quintal; 'Kilangu' variety fetched a price between Rs. 5,199 and Rs. 7,810; and 'Panankali' variety fetched a price between Rs. 6,899 and Rs. 17,999. About 3,000 quintal of turmeric was auctioned for Rs. 1.50 crore on the occasion, according to a press release of the society.

### **‘NITs can contribute to Make in India programme’**

S. K. Joshi, Professor Emeritus, National Physical Laboratory, New Delhi, and former Director-General, CSIR, has said that the academic institutions like NITs can contribute to strengthen the energy security of India by training human resource needed for installation and maintenance of the solar energy systems.

Mr. Joshi was speaking on Sunday as the chief guest at the first convocation of the National Institute of Technology (NIT), Goa. Mr. Joshi also cautioned about the list of challenges such as scarcity of electrical power, the need for

agriculture modernization, polluted rivers and lowest per capita usable water in the world. He also said that the NITs could contribute to the 'Make in India' programme launched by the government by starting technology business incubators to nurture and support knowledge driven start-ups into successful business enterprises.

The President's gold medal for the outstanding all-round performance in all disciplines of undergraduate programmes of study was awarded to Muhammad Muhsin P. Saleem for the batch 2010-2014.

He also got the Director's gold medal for the best academic performance in all disciplines of undergraduate programmes of study

### **60 farmers' clubs to be launched**

Ernakulam District Cooperative Bank will launch farmers' club at each of its 60 branches by the end of October to propagate organic farming, draw young people to farming activities and to provide technical and financial assistance to farmers' groups.

Each farmers' club will have 10 members and will receive assistance to the tune of Rs. 10,000 each from the National Bank for Agriculture and Rural Development, said General manager of the Bank M. K. Radhakrishnan here on Sunday.

The bank will join hands with the Department of Agriculture for the farmers' clubs project.

The move to launch farmers' clubs takes a cue from the success of the bank's experiment with providing "poison-free" vegetables during the Onam season. He said that the move was a great success with substantial quantities of vegetables, sourced from the Palliakkal and Manjapra societies being sold with the bank's assistance.

Meanwhile, the bank's efforts to spread poultry farming and dairying have met with success, drawing hundreds of people to these activities.



The bank has set aside Rs. one crore for the poultry farming ( *Mutta Gramam* ) programme of which over Rs. 40 lakh has been distributed as loans to 250 five-member groups in panchayats like Parakkadavu, Puthenvelikkara, Nedumbassery, Kunnukara, Kizhakkambalam and Thiruvaniyoor. The programme is being implemented in collaboration with the voluntary body Bharat Sevak Samaj.

Each of the Joint Liability Group comprises five people and get a total loan of Rs. 75,000. A total of 200 more applications for the poultry farming programme is pending.

The dairying ( *Ksheera Samrudhi* ) programme has seen 22 units with two cows each being established already.

### **Comprehensive plan to benefit farmers: Bandaru Dattatreya**

Union Minister of State for Labour Bandaru Dattatreya has said that the Centre was working out a comprehensive plan to rescue the farming community from the prolonged agrarian crisis. The proposed plan includes provision of crop insurance as well as life insurance to farmer and other social securities for his family members. Free healthcare and education for his children would also be in the plan, he said while addressing a press conference here on Sunday.

He said the Centre was committed to provide assistance to the State if it comes with a perfect plan for launching asset creation works, fodder for cattle and other schemes.

Mr. Dattatreya said that Narendra Modi Government was serious on betterment of agriculture and farmer welfare for which it initiated several steps. Cotton was prevalently sown in the north Telangana region and cotton growers were also in severe crisis due to lack of profitable price for their produce. “Therefore, I will discuss the matter with the Union Agriculture Minister who is coming to Hyderabad on September 23. I will request him to

open more cotton purchase centres by the CCI,” he said and wanted the State Government to ask the Markfed to directly purchase farm produces.

Former MLA Y. Lakshminarayana and the BJP district president Palle Ganga Reddy were present. Earlier the Minister held review with Collector Ms. Yogitha Rani, Joint Collector A. Ravinder Reddy on drought conditions.

### **Sporadic cases of pest attack on sugarcane crops**



Experts visiting a sugarcane field that has come under white grub pest attack in Kaniyambadi.

Sugarcane growers are worried over sporadic attack of “white grub” pest in some parts of the district. So far, instances of the pest attack on 20 acres of sugarcane crops have been referred to the Agricultural Research Station (ARS) and Krishi Vigyan Kendra (KVK), Virinjipuram.

Experts of ARS and KVK said for the last two years, the pest had attacked several fields in Tiruvannamalai. “Sugarcane fields in Polur were the worst-hit. The pest has spread from Tiruvannamalai and has now been spotted in fields in Vellore, including at Kaniyambadi, Kaveripakkam, Arakkonam and Walajah,” M. Pandiyan, professor and head of ARS and KVK said.

He said farmers should take measures to keep their fields clean. “The pest destroys the root of the cane crop, and the symptoms of attack appear late, only after a lot of damage is done. Its presence is felt when the leaf and cane dry up,” he added.



White grub, as a larva, has four stages. Each stage lasts for two months, and the life-cycle of the pest is about one year.

“One way to prevent white grub attack is by checking the neem trees in the vicinity of the fields.

During the resting period, the beetles are attracted to neem trees. Farmers can set up light traps to attract and kill the beetles,” Mr. Pandiyan noted.

Once a farmer finds that his/her field has been infested, insecticide along with neem cake can be mixed and applied in the field, he said. “As a control measure, farmers should carry out summer ploughing before the next crop. It is advisable to take up paddy cultivation as the next crop,” he added.

He said that the white grub attacks all varieties of sugarcanes. A presentation explaining the white grub attack and control measures was given to farmers during the grievance redressal meeting last week.

***Experts say that in the last two years the white grub pest had attacked several fields in Tiruvannamalai***

### **Plantation sector hit by falling prices**

The Planters’ Association of Tamil Nadu (PAT) has sought measures to rectify the difference in Value Added Tax (VAT) paid by the Corporate tea factories (five per cent) and bought-leaf factories and INDCOSERVE tea factories (one per cent).

According to a press release from the association, plantation sector in the State is heading towards financial crisis because of under-recovery of prices, especially in the tea sector.

The average south Indian auction price between January and July this year had been Rs. 80.75 a kg as against Rs. 87.71 for the corresponding period last year. The average price of tea originating from Tamil Nadu is lesser.

However, the cost of production of tea is Rs. 125 a kg. This includes cost towards wages, inputs, electricity, and welfare measures for workers.

Further, the tea plantations have incurred crop loss of 30 per cent to 40 per cent in the last three months due to pest attack and disease. “The small grower community in the tea sector in the Nilgiris has been suffering immense hardship lately due to fall in prices for their produce,” according to the association.

The plantations have spent on pest control too. Coffee prices and natural rubber prices are also dropping.

Apart from rectifying the difference in VAT, the State Government should relax provisions of land reform laws, allowing plantations to use at least a part of their land holdings for growing alternative cash crops, other than plantation crops, and promoting eco-tourism. A concession to this effect has been provided to the plantation sector in Kerala.

The State and Central Governments should also share the social cost for the workers – housing, medical treatment, water supply, etc. The West Bengal government has taken an initiative in this regard and introduced the West Bengal Tea Plantation Employees Welfare Fund Act, the association said.

*The financial crisis was due to under-recovery of prices, especially in the tea sector*

### **Sankarabarani bridge brings relief to villagers**



The bridge in Vanur taluk of Villupuram district across the Sankarabarani provides connectivity to residents of several villages in the area.

Till recently, a bridge across the Sankarabarani river had remained a distant dream for residents of Pakkiripalayam and neighbouring villages in Vanur taluk of Villupuram district. Though the structure of a bridge had been completed it had not been connected on either side for over two-and-a-half years.

“The bridge is of great use to us. Now our tractors carrying sugarcane and other crops and two-wheelers are able to traverse easily. We had been waiting for over two years for it to be connected,” said Murugan, a resident of Pakkiripalayam. This particular bridge connects villages in Tamil Nadu and those near Puducherry.

“We needed land for the approach road. But now we have permission to use the land and connectivity has been provided and motorists are using the facility,” said a source in the Highways Department. This Rs.13 crore 2-lane bridge with footpaths is among the four facilities that have been completed in Villupuram and Cuddalore districts that have recently been put to use by the public. These four bridges have been constructed with Nabard assistance by the State Highways Department.

“There is not much traffic on the bridges since they connect rural areas. Nevertheless, without them residents had to use circuitous routes or travel on the river bed,” explained the source.

Other bridges that have been constructed and been put to use by the public themselves are those at Thennambakkam- Embalam across the Malattar river (Rs. 6 crore) in Cuddalore district, at Moolakkadu near Vellimalai across the Mushkunda river (Rs. 1.50 crore) in Villupuram district and across the Gadilam river at Pillayarkuppam connecting the Vridhachalam- Ulundurpet Road (Rs. 11 crore) in Villupuram district.

The one at Moolakkadu near Sankarapuram is the smallest bridge with just four spans across the Mushkunda river that has water when it rains in the Kalvarayan Hills.

*We have been waiting for over two years for the bridge to be opened, say residents of PakkiriPalayam*

### **Hydroponic fodder to revitalise dairy sector**

*The spiralling cost of packaged cattle feeds adds to the cost of dairy farming*



A farm worker with hydroponic fodder

Hydroponic fodder promises to be the way to redeem dairy farmers faced with scarcity for quality cattle feed, especially for dairy farmers in urban areas who do not have enough land to cultivate the required quantity of green fodder.

Such farmers are dependent mostly on packaged cattle feed. Of course hydroponic fodder cannot substitute green fodder and hay completely, as it lacks in fibre content. But it is definitely a better substitute for packaged feeds.

The urban dairy farmers in Kerala are worried about the ever increasing price of cattle feed, and the lack of availability of green fodder. Shrinking land size in the state ensures lack of availability of green fodder and hay in sufficient quantities. The spiralling cost of packaged cattle feed adds to the cost of dairy farming. Hydroponic fodder provides an effective solution for both problems.

Kerala Dairy Development Department (KDDD), in Kannur and Thrissur districts, under its Integrated Dairy Development Project, has recently introduced a scheme to produce hydroponic green fodder. The department has already distributed 24 hydroponic fodder units to select dairy farmers - 14 in Thrissur and 10 in Kannur. V.S. Harsha, the Dairy Extension Officer (DEO), Thalipparamba Block, Kannur, claims that hydroponic fodder is more nutritious than the conventional green fodder and cheaper and safer than the commercially available packaged feeds. A judicious management of feed mixture per cattle is 25 kg of hydroponic fodder, 10 kg of conventional green fodder and five kg of straw per day per cow, which yields about 15 litre milk a day, suggests Ms. Harsha. Such a feeding programme can result in saving 20 to 25 per cent of daily feeding and working cost.

‘Hydroponics’ means the technique of growing plants without soil or solid growing medium, but using water or nutrient-rich solution only, for a short duration. The fodder production unit distributed by the KDDD has a greenhouse and a control unit. The greenhouse has tiered racks, each rack has rows of perforated trays for soaked seeds. Pipes fitted with micro-foggers above each tray ensures proper maintenance of required humidity and water fogging of the seed trays in the greenhouse. Tube lights provide optimal light requirement inside the greenhouse. The sensor-controlled unit regulates input of water and light automatically. Seeds like maize, barley and sorghum are used to grow fodder. The unit requires electricity round the clock.

The seeds are sown in a batch of 12 trays on a daily basis. Water and soluble nutrients are sprayed at regular intervals. Within six days the plants reach a

height of 22 cm; they are then peeled off from the trays, and the fodder is now ready to feed the cattle.

M.U. Pathrose, a farmer in Edakkom near Thalipparamba, has a unit installed at a cost of Rs.3 lakh, of which the department gave him Rs.1.75 lakh as subsidy. He produces 50 kg fodder a day. Pathrose gives 8.5 kg of hydroponic fodder per cow; he has six milch cows. He claims an increase of two litre of milk per cow per day, from 15 to 17 litres a day. Kerala Veterinary and Animal Sciences University Study indicates milk production increases by one to three litres per cow; in terms of quality also there is an increase of 0.3 percent in fat and 0.5 per cent in SNF, fetching better prices for the farmers.

[wymnj@thehindu.co.in](mailto:wymnj@thehindu.co.in)

### **Amarinder Singh seeks adequate compensation for Basmati growers**

Senior Congress leader Capt. Amarinder Singh on Sunday asked the Punjab government to provide adequate compensation to Basmati growers who have allegedly been forced to go for distress sale.

In a statement issued here, the leader threatened to launch a protest across the state if his demands were not met.

Capt. Singh noted that last year the Basmati sold for about Rs. 3,200 per quintal. But this year the rice variety is not selling for more than Rs. 1,200 per quintal.

“This does not even meet the input costs of the farmers.

Moreover, the Basmati yield is less as compared to other varieties of paddy,” he said.

The Congress leader lamented that he has been repeatedly reminding Chief Minister Parkash Singh Badal to take up the matter with the Central government to address this pressing problem.



“However, he (Badal) only returns after presenting a bouquet to the Prime Minister without asking for anything, for the reasons best known to him,” he said.

The former Chief Minister also warned that if the farmers do not get adequate prices for their produce it may lead to law and order problem in the State. Better you take serious note of the situation lest it is too late for you and the state as the resentment and anger among farmers is brewing fast,” he charged.

The leader added that he will personally lead the farmers’ protests as this government had failed to address their concerns.

Notably, Capt. Singh did not attend the ‘Kisan Samman rally’ by Congress in Delhi on Sunday.

### **Trains that transport you to the forests**

A big attraction of an Indian train journey is the forest routes, and many passengers may recollect how they watched a herd of elephants or deer in the woods from the coach window. Now some of these images will transport you to the world of wildlife as coaches turn into a canvas of paintings of the denizens of the forests.

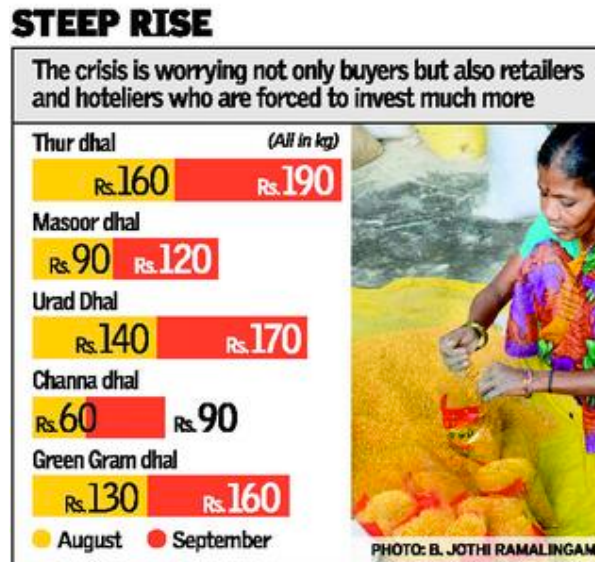
The Railways are considering a proposal of the World Wildlife Fund (WWF) to paint coaches and stations with the images of wildlife to spread awareness of conservation and promote tourism.

“We are considering a WWF-India proposal of having pictorial representation of natural habitats and wildlife on certain trains and stations to create awareness of the need for conservation and protection of forests, tigers, birds and other species,” a senior Railway Ministry official said.

Protection of tigers, apart from birds such as cranes, will be the main theme. The Sawai Madhopur and Bharatpur stations and coaches of the Nizamuddin-Kota Jan Shatabdi Express will have the paintings first.

Railway Minister Suresh Prabhu had a discussion with tiger conservationist Valmik Thapar on the work at the two stations and on select trains. — PTI  
*Railways are considering a WWF proposal to paint coaches with wildlife images*

### After onions, dhals now wreak havoc on budgets



After onions, it now seems to be the turn of *dhal* to pinch families' pockets. Prices of *dhals*, especially *thur dhal* (*tuvaram paruppu*) has shot up in the last month. The cheapest dhal - *channa*, which was priced at Rs. 60 a kilogram two months ago, now costs Rs. 90.

“The prices are slowly inching towards Rs. 200 a kilo. I cannot stop using *thur dhal* or *urad dhal* (*ulundu*). They are very much part of my daily cooking. So instead, I have started buying *dhals* from the fair price shop. It looks alright and costs lesser than the local grocery shop,” said homemaker Hemalatha Krishnamurthy.

Grocers say that the increase in prices of *dhal* has forced them to invest more to procure stocks. “In the place of Rs. 1 lakh, we spend Rs. 3-4 lakh to stock up. We have stopped buying *masoor dhal* as it has touched Rs. 120 a kilo and our customers too do not want that variety,” said G. Rajesh of Rajeshwari Stores in Velachery.

Manish Parmar, vice-president, Madras Kirana merchants Association, said that with major festivals just around the corner, prices are likely to go up even more due to the demand. “We do not see prices coming down even by Deepavali,” he said.

K. Mohan, State general secretary, Tamil Nadu Vanigar Sangangalin Peramaipu, said the Association has been demanding that the government begin the process for imports as soon as they know that the harvest will not be good. “The next crop will only be in January,” he said.

With the prices of onions just stabilising, hoteliers are a worried lot with the increase in dhal prices. “If this trend continues, we will have to hike prices by at least 5 per cent. We do calculate prices considering regional fluctuations. But this is indeed a steep one,” said R. Rajkumar, secretary, Chennai Hotels Association.

Bimal Kothari, vice-chairman, Indian Pulses and Grains Association, said that over the next four months, 25 lakh tonnes of *dhals* will be imported by the government to tide over the present shortfall.

“Unseasonal rains during the harvest and insufficient rains during the cultivation have caused a reduction in production. The prices of *thubar* and *urad dhal* touched historic highs this time,” he said.

### **Madurai jasmine taking root in Vavuniya**

Vavuniya, an area having higher rainfall than other places in the Northern Province, has started growing Madurai jasmine or Madurai malli.

Madurai, located in the southern region of Tamil Nadu, is famous for the flower, which was given by the Geographic Indication Mark a few years ago.

One of the popular varieties of flower used by Tamil women.

A few days ago, planting of 30,000 saplings began on a private farm in Puliyankulam, near Oamnthal check post. This has become possible due to the initiative taken by the office of Consul General of India based in Jaffna and the Tamil Nadu Chamber of Commerce and Industry, Madurai.

H.M.G.S. Palihakkara, Governor of the Northern Province, and Consul General of India A. Natarajan attended an event on Friday last to mark the inauguration of the planting that took place in the farm of Thambapillai Premendrarajah.

### **Mass growth of food algae in nursery stage under research**

The Central Salt and Marine Chemicals Research Institute and its field laboratory, the Marine Algal Research Station here, a constituent laboratory under the ambit of the Council of Scientific and Industrial Research (CSIR), New Delhi, has embarked upon a research to develop methodologies for mass multiplication of some of the food algae at nursery stage.

The Department of Biotechnology, Union Ministry of Science and Technology, has recently sanctioned a grant of Rs. 1 crore to set up the outdoor continuous running seawater facility to carry forward this research, Vaibhav A Mantri, senior scientist and scientist in-charge of the Research station said. The CSIR had also given a matching grant to establish the state-of-the-art research laboratory under this programme, he told *The Hindu* .

“The aim is to achieve effective need-based sporulation, preservation of gemlings, selection of fast growing strains at outdoor tanks and develop improved varieties of desired traits,” he said adding “with these efforts we envisage to bring new edible seaweeds under the ambit of commercial cultivation for the benefit of rural coastal population of our country.”

Seaweed was generally regarded as marine vegetable and consumed as direct human food. The extracts from seaweeds were used as food additives and as ingredients of functional food, pet food, fertilizers, bio-fuel, cosmetics and medicines, he said.

About 65 per cent of the 221 marine algae had been exploited for edible purpose and the marine algal biomass was widely used in the snack food industry, he said. Research studies showed that incorporation of most common edible green alga *Enteromorpha compressa* in snack food could increase iron and calcium content to about five fold.

The antioxidant potential of several marine algae was being studied and it appeared that some of these species could be utilised for potential health benefits. “Our studies showed that the mineral content of edible red alga *Porphyra vietnamensis* is higher than land vegetables,” he said.

There were about 1,000 types of snack foods and the market was driven by creating innovative snack foods.

However, commercial cultivation of edible seaweeds required more systematic attention on their life cycle, phenology and effective control on reproduction as these seaweeds, unlike phycocolloid yielding species, propagated only through spore culture, he said.

*Seaweed is generally regarded as marine vegetable and consumed as direct human food*

### **New biomethanation plants to help light up the city**

*‘Biogas produced will be used to make electricity, slurry will be turned into compost’*

<b>USING WASTE TO SOLVE POWER CRISIS</b>	
☞ Nine biomethanation plants to be set up at Rs. <b>2.72</b> cr	☞ First plant will come up at Freedom Park
	☞ Electricity generated can be linked to CESC grid
	☞ Each plant can process 3 to 4 tonnes of waste daily

While Mysuru generates more than double the quantum of garbage that is processed at the Waste Treatment Plant at Vidyaranyapuram, a power crisis in the State is plunging the city into darkness during load shedding.

Why can't the excess garbage be used to generate electricity? The Mysuru City Corporation's (MCC) Standing Committee on Town Planning and Improvement has mooted the idea of setting up biomethanation plants in each of the 65 wards of the city that produce electricity from waste.

To start with, the MCC will be setting up nine such biomethanation plants here at a cost of Rs. 2.72 crore, said Chairman of the Committee Shivakumar. "The Committee's proposal has been approved by the MCC Council. We have sent it to the Deputy Commissioner for approval. Once, the approval comes, we will begin with setting up two such plants at Freedom Park in the city," he said.

With each plant having a capacity to produce 10 kW of power from two tonnes of waste, Mr. Shivakumar said the electricity generated by these plants can be linked to the Chamundeshwari Electricity Supply Company (CESC) grid.

When the first biomethanation plant is set up at Freedom Park, the authorities will illuminate the lights in the park from the power generated at the plant. While biogas produced from the waste is used to generate power, the slurry can be used for manufacturing compost that can be sold. Each biomethanation plant, which costs around Rs. 30 to 35 lakh, can process around 3 to 4 tonnes of waste every day. "If the city is to hold on to its tag as the cleanest city, these biomethanation plants are essential," Mr. Shivakumar said. Also, the civic body can save money for transporting the waste from different parts of the city to the Waste Treatment Plant at Vidyaranyapuram. The MCC is unable to transport the waste from many wards to Plant in Vidyaranyapuram every day, leading to accumulation of garbage in most areas for more than a day or two. "These biomethanation plants can help treat the waste locally," he said.



The proposal to establish biomethanation plants comes even as the nine 'zero waste treatment plants' set up are finding the going tough with insufficient collection of dry waste.

Solving the power problem with garbage

Nine biomethanation plants to be set up at Rs. 2.72 crore

First plant will come up at Freedom Park

Electricity generated by these plants can be linked to CESC grid

Each plant can process 3 to 4 tonnes of waste daily

### **Food safety tools sharpened**

The Health Department took a major step forward in the enforcement of food safety regulations across the State when it entered into a memorandum of understanding with the Central Food Technological Research Institute, Mysuru, for enhancing the State's laboratory capabilities.

Kerala is the first State to enter into a formal agreement with the CFTRI, one of the referral labs for food analysis under the CSIR, for the enforcement of Food Safety and Standards Act (FSSA), Health Minister V.S. Sivakumar, who formally inaugurated the MoU signing function, said.

He said the State would strictly enforce the mandatory FSSA licence/registration for food-related businesses. Anganwadis, school canteens, hostels, and mass feeding or mass food distribution by religious organisations and institutions would be brought under the ambit of the FSSA.

### **Strict enforcement**

The concept of food safety and the public's right to safe and hygienic food have been gaining much ground in Kerala in recent times, especially after

the food safety wing began strengthening the enforcement of regulations guiding food safety, Health Secretary K. Ellangovan said.

An increasing number of judicial pronouncements in recent times in the enforcement of food safety has boosted the awareness of consumers and the confidence of food safety enforcement officials.

### **Improving labs**

Enhancing the capability of the State laboratories in the scientific analysis of food and various aspects of what makes a food safe or unsafe for consumption is thus the natural step forward in ensuring food safety.

Director of the CFTRI Ram Rajasekharan said the State's commitment to ensuring food safety would inspire others to do more in the area of food safety

Under the terms of the MoU, which will initially be for 18 months, the CFTRI will lend its technical capabilities in modernising and strengthening the State analytical laboratories in Thiruvananthapuram, Ernakulam, and Kozhikode.

### **Scientists' training**

Over 100 scientists and laboratory staff in the State laboratories will undergo training at the CFTRI, which has the expertise to conduct over 250 chemical and biological tests in the area of food analysis.

Some of the areas that the State food safety wing has specified include tests for detecting the presence of antibiotics/hormones in meat and poultry, formalin, mercury in fish, trans fats and acrylamide in fried foods, and safe limits for food additives/preservatives. The CFTRI will also conduct food-related studies for the State as and when requested.

The MoU was signed by Commissioner of Food Safety T.V. Anupama and CFTRI administrative officer Mallika P. Kumar.

*State government inks MoU with CFTRI to enhance lab capabilities.*



### **STR in Coimbatore launches scheme to help**

In an attempt to reduce illegal activities in the forest zone, the Sathyamangalam Tiger Reserve (STR) has launched a scheme called revolving fund loan for villagers who live in forest areas.

According to the forest department, the purpose of the scheme is to ensure the socio-economic development of the locals including tribal communities.

According to forest officials, most people living in fringe villages in Sathyamangalam are either partially, or totally dependent on forest resources including fire wood, fodder for cattle, grazing and other resources for their livelihood.

But, with Sathyamangalam having been declared as a Tiger Reserve, attempts were made to restrict illegal activities, without hampering the traditional rights of villagers, the forest department said.

"When restrictions are posed on villagers, some of them tend to find illegal ways of using forest resources. To prevent such illegal activities and reduce dependence on the forest, the department constituted the Village Forest Committee under the TAP (Tamil Nadu Afforestation Project) scheme," said a senior forest department official.

Currently, Eco-Development Committees have been constituted under Tamil Nadu Biodiversity Conservation & Greening Project (TBGP) and Project Tiger that aims at the development of local community.

At present, there are more than 40 such forest and eco development committees in Hasanur Division of STR and these committees together have more than 1crore as revolving fund, said a forest department press release.

Dependency on the forest is reduced by financially supporting the communities with individual loan, SHG loan and micro credit for supporting income generation activities (IGA), agriculture allied activities, self-employment, poultry, cattle rearing, petty shops, skill development activities, etc.

"Loan is given on nominal 1% interest and the money generated by the villagers with interest is pooled back to the committee's account to be used again as revolving fund," said a forest department official.

Usually, villagers would seek loan prior to monsoon to support agriculture & allied activities. In the past week, the forest department has given revolving fund loans worth more than 28.00lakh to more than 350 villagers.

### **NABARD sanctions 462 crore for third Mandovi bridge**

The National bank for Agriculture and Rural Development (NABARD) recently release a booklet on NABARD's contribution to the development of Goa. The book was released by Harsh Kumar Bhanwala, the chairman of NABARD.

NABARD has disbursed a cumulative total of 386.05 crore as refinance including 58.67 crore sanctioned in 2014-15. The funds include 5 crore sanctioned for rural housing in the state through the Goa State Cooperative Bank limited. It sanctioned 462 crore for the third Mandovi bridge under the NABARD Infrastructure Development Assistance Program (NIDA). Against the 462 crore sanctioned, NABARD has already disbursed 75 crore for the bridge construction work which is on. 70.69 crore has also been sanctioned for development of a sewerage network in Porvorim and over 14 crore have been disbursed to the Sewerage and Infrastructure Development Corporation of Goa limited to begin the work. NABARD has already disbursed 2 crore to Goa State Cooperative Bank at a rate of 9.5% out of the sanctioned 5 crore for rural housing.

On the agriculture front, the bank has assisted cashew entrepreneurs in Morpirla, Quepem, through a concessional loan assistance of 25 lakh for procurement of raw cashew nuts, processing and marketing of the produce.

### **Experts for double bonanza crops**

A group of agriculture scientists on Saturday suggested a plausible solution for farmers often affected by erratic rainfall in the state.

Dr George John, vice-chancellor of Birsa Agriculture University, said nutrient-rich underutilized crops — like chenopodium (bathua saag), amaranthus (laal saag), faba bean (Bakla), rice bean (Rajmoong), winged bean (Pankhiya sem) and cancode (kheksa) — are climate resilient and are easy to grow in Jharlhand's adverse climatic condition.

Tribals in the state have been cultivating the crops, but for personal use, for a long period of time and need the right knowledge for commercial cultivation, said Dr John.

"Chenopodium, commonly used as a leafy vegetable, can be left to flower and the seeds thereafter to mature as grain which is kind of millet. Similarly, amaranthus (laal saag) seeds mature to form Ramdana another nutrient rich grain," he said and urged officers associated with extension programme to explain the importance of these crops to the farmers for commercial cultivation.

"By ensuring availability of quality seeds, fields, technologies and buy back system; such crops should be taken up on commercial mode to remove malnutrition from the state," he added. Poor soil condition, lack of irrigation facility and small landholdings are common in most parts of the state.

Dr John, who was speaking at the Rabi Group Meet of All India Coordinated Research Network on Potential Crops in the city on Saturday, also said the crops "will play an important role in reducing malnutrition in the state".

"Despite being able to afford foodgrain, people often suffer from malnutrition that can be effectively managed by these crops, if cultivated on massive and commercial scale," said Dr John.

Some of these underutilized crops are cultivated, but at a very small scale, mostly as backyard farming.

Talking to TOI, BS Phogat of National Bureau of Plant Genetic Resources (NBPGR), New Delhi said systematic research on lesser known crops was started in 1982 through All India Coordinated Research Project and at present the project is working on 15 crops at 29 locations of the country.

Phogat explained that these potential crops survive in extreme climatic conditions and offer nutritional value of desired level thereby identified for their industrial importance.



Director Research, BAU Dr DK Singh 'Dron' said potential crops may not have wide coverage but are very important because of nutrient component.

### **Kanker farmer reaps profit from organic cultivation**

After adopting organic methods of farming, using vermi-compost manure and drip irrigation system, 25-year-old Chitrasen bought and expanded agriculture practice from three to ten acres of land in just three years at village Markatola in Kanker district.

Earlier, Chitrasen and his father did farming on acres of leased land and would yield 12 quintal of rice from each acre." I decided to unplug from traditional method of farming and consulted scientists of Indira Gandhi Agricultural University, who provided technical assistance and suggested to adopt National Agriculture Innovative Projects (NAIP). Under NAIP, I received financial assistance and electric pump of one horse-power."

It has been no looking back for Chitrasen ever since. Besides, installing water-pump in one acre of land, Chitrasen prepared vermin-compost on his field. His first step towards success was vegetable farming on his one acre of land for nine months. "I initiated the process in another two acres, which reaped profits and motivated me to expand agricultural area by another seven acres," said Chitrasen.

Of ten acres of land, Chitrasen has cultivated rice in six acres along with maize and vegetables in another four acres. Selling vegetables earned him Rs 1,50,000 in last two years with surplus income of rice and maize.

Chitrasen feels elated on sharing the fact that he is not burdened by any debt from bank and finds farming interesting to carry out under the guidance of scientists and government projects.

## **Hot, humid weather triggered whitefly attack, says experts**

The hot and humid weather in the northern region was instrumental in the huge build-up of whitefly that caused massive damage to the cotton crop in Punjab and Haryana, forcing both states to look for ways to contain it.'

Use of "cocktail of insecticides" by some "ignorant" cotton growers, which led to killing of "friendly insects" to keep a check on whitefly, was another reason, experts said.

"It is hot and humid weather condition, which was the main reason for whitefly attack," said Hisar-based Haryana Agricultural University (HAU) vice-chancellor Krishan Singh Khokhar.

"Initially, June saw heavy rains which made climate humid. Hot and humid climate favours whitefly. July and August did not see well distributed rains, which also led to build-up of whitefly. This is the major factor," said HAU Director of Research, SS Siwach.

Farm scientists further pointed to farmers using a number of insecticides to contain the spread of whitefly that led to the flare-up of the problem. "Another factor is that worried farmers used cocktail of insecticides for spraying, which compounded the whitefly problem," said Siwach.

The heavy spray of insecticides on cotton, they added, also killed friendly insects which usually eat up nymphs of whitefly. '

The attack of whitefly is considered as more damaging as the pest thrives on Bt cotton plants that contain more juice. "Leaves of Bt cotton have more juice and whitefly lives on by sucking juice. We have about 95 per cent area under Bt cotton which proved favourable for the pest to spread fast. You will not find heavy damage in desi cotton," said Khokhar.

Scientists have also warned against use of unrecommended insecticides. "Spurious pesticides are also one of the reasons behind the whitefly attack," said the HAU VC.

Notably, agro-chemical company Bayer CropScience has claimed that "lack of awareness" among cotton growers about life cycle of whitefly has contributed to the damage.

Meanwhile, whitefly has started spreading to other crops including sugarcane, guar and bajra though it is not alarming at the moment.

Of the total cotton area of 4.50 lakh hectares in Punjab, nearly 1.36 lakh hectares have come under the whitefly attack. In Haryana, out of 5.80 lakh hectares, about 3 lakh hectares of cotton area were affected by whitefly.

A 5-member committee of agriculture experts was constituted to find ways to control the impact of whitefly on cotton crop, which is expected to submit its report in one month.

## **TN plantation sector seeks Govt intervention to avert financial crisis**



The plantation industry in Tamil Nadu has sought immediate Government intervention for a bailout from the impending crisis.

"It is unprecedented; if not checked immediately, the situation would only worsen and running this industry would become economically unviable in the years to come," V Suresh Menon, Chairman, Planters' Association of Tamil Nadu, said.

Caught between under-recovery in price realisation on the one hand and heavy crop loss due to pests and diseases on the other, the tea industry in the State is heading towards a looming financial crisis.

The average price at the tea auctions has slipped by almost Rs. 7 a kg to Rs. 80.75 a kg during the first seven months of the current calendar year compared to the corresponding period of the past year.

This is much lower than the production cost of a kg of tea in TN, which at present hovers at around Rs.125. This cost of production includes not only wages and wage-related payments, but cost of inputs, which has spiralled over the years, enhanced electricity charges, and expenses incurred by plantations on several welfare measures such as housing, medical, education,

etc, required to be provided free-of-cost to their workers, in strict adherence to the statutory provisions.

Coupled with this, tea plantations have, during the past three months, registered heavy crop loss ranging between 30 and 40 per cent due to pests and diseases, including severe attack by tea mosquito bugs.

As there is no expected crop to be harvested, several man-days have also been lost, resulting in huge loss in price realisation. The industry has appealed to the State to do away with the discriminatory VAT rate on sale of tea by the corporate tea factories, relax land reform provisions by permitting crop diversion, and sharing of social costs, among others.

### **National conference on improving rabi output begins next week**

A two-day national conference on ways to increase foodgrain output in rabi season will begin here from September 22 against the backdrop of rainfall deficit in some parts of the country.

About 51 per cent of the country's foodgrain output comes from crops grown in the rabi season, beginning next month. The normal area that is cultivated in the season is 61.43 million hectare.

Agriculture Minister Radha Mohan Singh will inaugurate the conference at the National Agriculture Science Centre (NASC) in the national capital, an official statement said.

There will be broad-based discussions with state agriculture officers on preparedness for the rabi season.

There will be a detailed deliberation on six emerging topics, including agrarian crisis, ways to promote pulses and oilseeds in rice fallows, promotion of horticulture and organic farming.

Besides, the conference will discuss ways to enhance area under irrigation through Pardhan Mantri Krishi Sinchayi Yojana (PMKSY) and creation of National Agricultural Market.

Progress in sowing of crops during the kharif season, which ends this month, will also be taken into account, the statement said.

The main rabi crops are wheat, barley, gram, pulses, linseed and mustard.

The conference would discuss timely supply of farm inputs such as seeds, fertiliser, credit and insurance to farmers during the season.

### **Monsoon withdrawal delayed in the last leg**



A sudden turnaround in the south-west monsoon, only to be expected given its truant nature, has resulted in moderate to heavy rains in the last leg of the four-month season. This has effectively brought to a halt its early withdrawal from north-west India. The withdrawal is not expected to be reversed until rains diminish in the southern peninsula. Indications are this could take the rest of the month.

So, this year too, the south-west monsoon is likely to spill over to October after a delay in its withdrawal, beyond the normal date of September 30. This is a trend that has persisted for the last few years. This makes it likely that the arrival of the north-east monsoon could get delayed over the southern peninsula.

### **Peak rain deficit**

Meanwhile, the ongoing spell in the south peninsula has reduced the peak rainfall deficit for the country as a whole from 16 per cent to 15 per cent as on September 18. With another 12 days to go and rains forecast to continue, it is likely that the season might end with a deficit of 14 per cent or thereabouts. It may be higher by 2 percentage points than the India Meteorological Department may have factored in its earliest long-range forecasts but goes to crown the national forecaster in glory. IMD had forecast a deficit monsoon for this year to start with and stayed with it for

the rest of the season, refusing to be fooled by the 'flash-in-the-pan' surpluses during its humongous run in early June and July.

September began with the worst start possible, running into deficits of a massive 55 per cent during the first full week ending September 9 when the monsoon ran dry in the entire north India even as the south began to slip under a renewed rain spell. The sustained spell in the south helped the monsoon to improve the deficit significantly to 30 per cent during the week ending September 16. The excess spread out to more parts of the northern peninsula although at the expense of Kerala, Tamil Nadu and south interior Karnataka. This is how the deficit for the country as a whole has come to 15 per cent latest (as on September 18).

### **Better outlook**

During September, the cumulative rainfall for the country as a whole had slipped to 42 per cent below average before recovering a bit in east and central India. The rains have been very weak in Uttar Pradesh, Madhya Pradesh, Bihar and West Bengal during the month. The dry spell in Madhya Pradesh, however, is good for the maturing soyabean pods, according to experts. But the maturing groundnut and cotton crops in Gujarat have run out of the much-needed wet spell since late July. Similarly, the guar crop in Rajasthan has come under moisture stress and requires at least one or two spells.

Here, it is likely that some rain will come to its aid next week as a prevailing depression stays put.

According to the extended range weather forecast by the India Met Department, India Institute of Tropical Meteorology and the Hyderabad centre of the India Council of Agricultural Research, rainfall is likely to improve over southern peninsula and parts of central India during the next 10 days.

Moderate to heavy rainfall is expected over certain parts of Maharashtra, the west coast, and the east coast till the end of this month.



## Agricultural area in AP shrinks due to weak monsoon



The total agricultural area in Andhra Pradesh has shrunk by 5.24 lakh hectare during this Kharif season to 32.52 lakh hectare, mainly due to weak monsoon, according to an official report.

Chief Minister N Chandrababu Naidu yesterday released a progress report submitted by Agriculture department on first five months of the current financial year here during a two-day District Collectors conference.

In April-August period, acreage under various crops stood at 32.52 lakh hectares against the targeted 37.76 lakh hectare on the back of thin rainfall this year, the report stated.

Area under paddy has declined by 2.45 lakh hectares due to shortage of water in Srisailem and Nagarjunasagar reservoirs, it said.

Expressing concern over the fall in acreage, Naidu said in order to meet the challenges owing to drought conditions in the state; the government has brought an alternate crop plan for farmers.

Under the plan, the farmers will be provided seeds with 50 per cent subsidy. A total of 142 lakh quintal seeds of various crops are ready for distribution to farmers.

The report said scanty rainfall has also impacted the crop loan target of the banks in the state.

Banks had a target to disburse Rs. 29,000 crore under crop loan category in the Kharif season, but currently the sanctioned amount stood at Rs. 23,000 crore, it added.