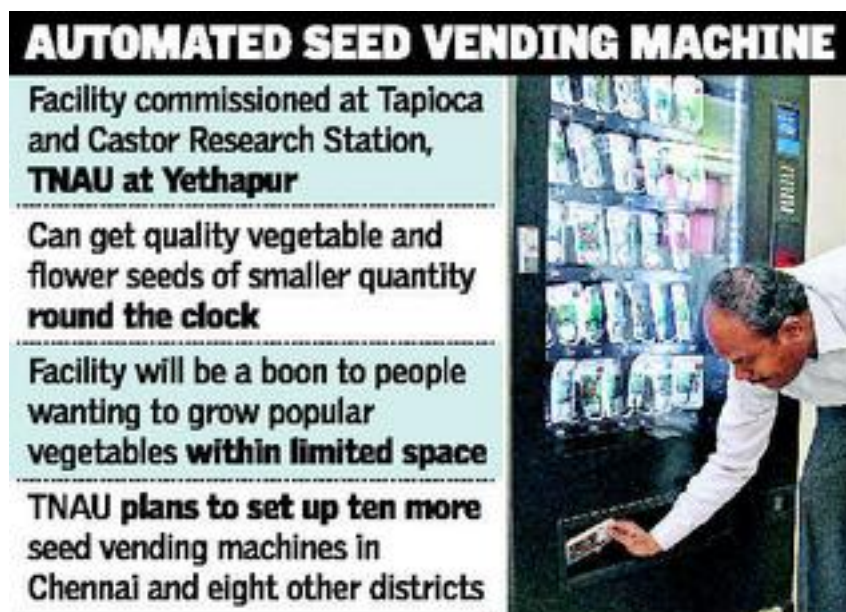


13.07.2015

# THE HINDU

## Seed vending machine commissioned at Tapioca and Castor Research Station



A unique Automated Seed Vending Machine has been commissioned at the Tapioca and Castor Research Station of the Tamil Nadu Agricultural University (TNAU) in Yethapur town near here on Wednesday.

This machine is second such facility to be commissioned in the State.

Already this facility was commissioned on the TNAU main campus in Coimbatore last year.

The commissioning of this facility would enable farmers and other consumers to have easy access to quality vegetable and flower seeds and would give a boost to kitchen garden and roof garden.

Minister for State Highways and Minor Ports Edappadi K. Palanisamy commissioned this facility on the research station premises in the presence of V. Sampath, District Collector, K. Kamaraj, MP, S. Manikkam, Professor and Head, Tapioca and Castor Research Station and M. Maheswaran, Director of Research, TNAU, Coimbatore. The machine would facilitate the availability of packets of vegetable and flower seeds to the farmers round-the-clock.

### Flower seeds

The packets of vegetable and flower seeds weighing 10 grams to 100 grams would be stacked inside the machine through the transparent glass door.

The machine would be kept refrigerated to avoid spoiling of seeds.

After inserting the Rs. 10, the customer should press the respective button of the seed he wants and the packet would be released by the machine into collection box.

This was specifically for the benefit of the people desiring to grow popular vegetables within limited space at home.

As the Tapioca and Castor Research Station has been situated on Salem – Ulundurpettai section of the National Highways No. 68, the people could easily collect the seeds, a release of the centre said.

### **10 more machines**

The TNAU has proposed to install ten more seed vending machines - two machines in Chennai city and one each in Coimbatore, Tiruchi, Pudukottai, Madurai, Theni, Tirunelveli, Salem and Tiruvannamalai districts, during the current year, the release added.

### **Meetings held to hear farmers' grievances**



Farmers attending the grievance meeting at Keregodu village in Mandya on Sunday. The district administration has launched a programme to hear the grievances of the farming community.

At least 13 farmers in the district, a majority of them sugarcane growers, had committed suicide owing to financial constraints and crop loss since June. Almost all had availed loans from banks as well as private financiers.

Subsequently, the district administration has decided to hold such meeting at all hobli centres throughout the district.

On Sunday, a team of officials held grievances meetings in Keregodu, Kikkeri, K.R. Pet and Akki Hebbalu in the district, sources at the Department of Information and Public Relations said.

The first meeting was held at Keregodu in which Deputy Commissioner M.N. Ajay Nagabhushan requested the farmers not to take extreme steps. District Superintendent of Police Bhushan Gulabrao Borase promised to initiate legal action against moneylenders who exploit the farming community with high interest rates. Hundreds of farmers, Karnataka Rajya Raitha Sangha (KRRS) leaders, activists participated in the interaction with the officials. While several demanded sufficient water and electricity for irrigation activities, many others sought action against sugar mills that are delaying to pay fair and remunerative price for their produce.

According to some farmers, the Agriculture Department has failed to guide farmers on their choice of summer crop cultivation.

Several sugarcane growers requested the officials to instruct sugar mills to start cane crushing.

Mr. Nagabhushan and Mr. Borase said they would stand with the distressed farmers and help in sorting out their issues.

### **Water to be released from Bhadra reservoir**

Water will be released from the Bhadra reservoir along the canals for monsoon crops in the command area for a period of 110 days.

According to the schedule worked out in the meeting of Irrigation Consultative Committee of Bhadra Command Area Development Authority (CADA) held recently the water would be released along the right and left bank canals and along Malebennur and Harihar sub-canals from July 15 to October 31.

Every year, water is released along the Bhadra canal from July 5 for the monsoon crop.

Since the region received good rain this year in June, farmers in the command area have started cultivating the land and raising paddy seedlings nurseries prior to the release of water.

As paddy transplanting was yet to commence, the release of water at this juncture would result in its wastage. Considering this, the meeting decided to release water from the reservoir to the canals from July 15.

### **Water-level**

The water-level in the reservoir at present was 154 ft, against the maximum level of 186 ft.

The water-level was 140 ft last year on the same day. The present water storage in the reservoir is at 40 tmcft, of which 13.8 tmcft is dead storage and 7 tmcft will be reserved for drinking water requirement. The remaining 20 tmcft would be used for agricultural purposes.

B.N. Phaniraj, Superintendent Engineer of Bhadra CADA, told *The Hindu* that 0.30 tmcft water would be released daily along the canals to irrigate fields in the command area.

With the present storage, it is possible to release water for 60 days.

The water storage in the reservoir would increase in July and August, as the catchment areas receive heavy rain during this period.

Anticipating that rainfall would be normal in the catchment areas of the reservoir in July and August, the meeting gave approval to release water along the canals for 110 days, he added.

***Since the region received good rain in June, farmers in the command area started cultivating the land***

### **Students on a tree-planting drive**

Students of Channankara Government Lower Primary School are gearing up to embark on a campaign to sensitise the public to the need to conserve trees and plant saplings on residential premises and streets.

The students, who intend to plant 120 saplings as part of the Haritha Theeram programme, launched the drive by planting a sapling on the banks of the Parvathy Puthanar near the school premises on Sunday. Kadinamkulam panchayat 'padasekhara samithy' president Pachira Sharafudeen formally launched the programme.

Kadinamkulam agricultural officer Sasikala launched paddy farming in the school farm in the new academic year. The official also conducted a class for students, guardians, and teachers on how maximum productivity could be attained during farming.

The students and teachers of the school achieved success in their endeavour the previous year by cultivating crops such as paddy, tomato, cowpea, brinjal, amaranthus, plantain, and cucumber.

### **School selected**

The school has been selected for the annual project that is being conducted by the grama panchayat. As part of the programme, the school will focus on recreation and healthcare along with education. Yoga classes and skill development programmes will also be held on all working days at the school, authorities said.

Grama panchayat standing committee (education) chairperson Naseema Kabeer launched yoga classes during the function. Assistant Education Officer Mohan Kumar also participated in the function.

***They intend to plant 120 saplings as part of the Haritha Theeram programme***

## Bumblebees dying due to climate change



Bumblebees help pollinate plants, wildflowers as well as important crops such as blueberries and tomatoes. File photo: K.R. Deepak

Climate change is shrinking the geographic range of many bumblebee species in North America and Europe, putting them in danger of future extinction, scientists say.

In a study of 67 species, researchers found that a geographic squeeze occurred on both continents over the past 40 years - While the northern borders of each species' territory remained about the same on average, the southern borders generally moved northward.

That shift, by more than 100 miles (160 kilometers) in some cases, was most pronounced for species in the southern parts of the study areas. In North America, the study extended from the southern United States to northern Alaska.

The range loss implies that populations have declined and are on the road to disappearing, said study leader Jeremy Kerr, of the University of Ottawa in Canada. Results were released Thursday by the journal Science.

Analysis showed the changes were not due to differences in land use or the use of pesticides.

"The only explanation we've got is that it's too hot for them," he said.

Bumblebees are furry-looking and wild cousins of honeybees. They play a crucial role in nature by pollinating wild plants and some crops such as tomatoes and blueberries.

He said that because the geographic ranges of species overlap, the new study does not mean that vast areas of the continents have lost bumblebees completely. Rather, it means that many areas host fewer species than they used to. Such loss of diversity can



hamper an environment's ability to cope with changes like droughts, he said in an interview.

The bee trend was surprising because other land creatures like butterflies have extended their range north while maintaining their southern boundaries, researchers said.

His study drew on museum records of bumblebees captured by naturalists and researchers over decades. It focused on about 423,000 cases where the species, location and year of capture were known. Researchers set a baseline distribution of the species found between 1901 and 1974, and looked for changes at later time periods, most recently 1999 to 2010.

### **Groundwater level in TN dips**

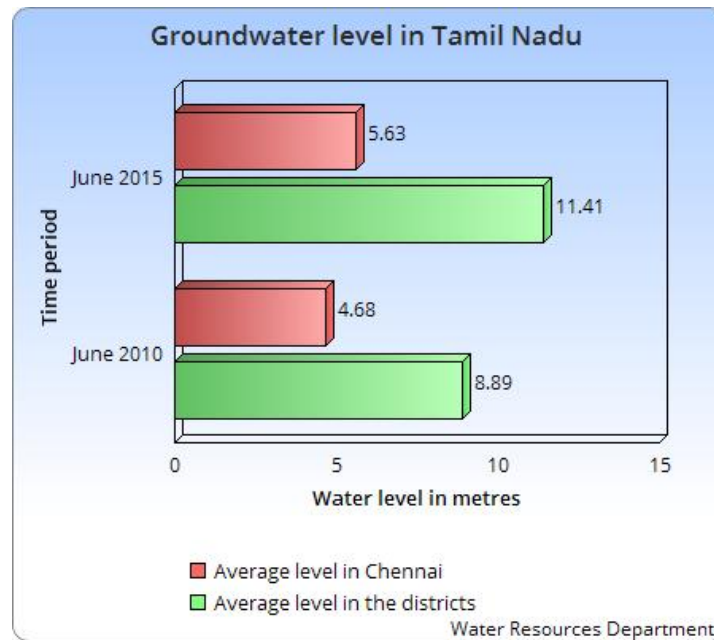


Lack of proper maintenance of lakes and tanks, encroachments are causing water levels to deplete.

*In Chennai, the average level in June 2010 was 4.68 m. This has now fallen to 5.63 m.*

The average groundwater level in Tamil Nadu has declined considerably in the past five years, with only 4 of 30 districts showing any major increase.

Coimbatore district has the lowest level at 13.12 m. In Chennai, the average level in June 2010 was 4.68 m. This has now fallen to 5.63 m, latest data from the Water Resources Department shows.



As per the data based on the observation wells of the department, the level in Dharmapuri showed a significant rise of nearly 3 m since 2010.

As of June 2015, the average level in the district was 8.89 m compared to 11.41 m in June 2010.

Although the levels rose in 24 districts in June, compared to the same period in 2014, overall levels since 2010 across 30 districts in the State had seen a considerable decline. While 30 districts were mapped in 2010, the department added two more districts from September 2012.

Other districts where groundwater levels are below the 10 m mark are Trichy, Salem and Namakkal. However, districts like Tirupur, Theni, Dindigul, Thiruvannamalai and Vellore are also inching towards the 10-m level, the data shows.

### **Rainwater harvesting**

“Rainwater harvesting is the simplest method. Initially it took off well and water levels rose,” K Sivasubramaniam, assistant professor, Madras Institute of Development Studies (MIDS) said.

However, he says, lack of proper maintenance of lakes and tanks, encroachments are causing water levels to deplete.

### **Making friends with coconut trees**

A group of trainees undergoing training in mechanised palm-tree climbing at the Krishi Vigyan Kendra at Thelliyoor, near Thiruvalla.— Photo: Leju Kamal  
For them, work is worship and dignity of labour is more important.

The 352 trained coconut palm climbers, including 68 women, are a contented lot as their new-found profession brings them a fairly good monthly earning ranging from Rs.25,000 to Rs.30,000 each.

Time has made certain positive imprints in the life of traditional coconut tree climbers in the State. Many of them have shifted from their traditional profession to other jobs, which, they considered as more dignified, badly affecting the State's coconut farming sector.



### Scarcity

Coconut-growers started feeling the heat of scarcity of tree climbers and the invention of the mechanised palm climber a few years ago enlivened their hope.

The Krishi Vigyan Kendra (KVK) attached to the Indian Council of Agricultural Research (ICAR) at Thelliyoor, near Thiruvalla, has been giving proper training in coconut tree climbing since the past one year.

C.P. Robert, KVK programme coordinator, and Vinod Mathew, training programme coordinator, told *The Hindu* that ICAR-KVK has given training in palm climbing to 352 unemployed youth, with the help of specially-developed palm climbers.

Mr. Mathew said the KVK had conducted 20 batches of training programme as part of the Coconut Development Board's 'Friends of Coconut Tree' programme. Of the 352 participants, 264 belonged to Scheduled Caste and Scheduled Tribe sections, he said.

Sumesh from Vaipur, who was a laboratory technician in North India, had to return to Kerala a year ago due to certain domestic constraints.

"I came to know about the Friends of Coconut Tree programme organised by the KVK through a media report. I have completed the six-day residential training programme on the KVK campus at Thelliyoor.

"Now, climbing is my vocation and I really enjoy it," he said.

Mini Saji from Mallappally, a young housewife-turned coconut tree climber; and Jayakumari and Sumi Reji, two other women climbers from Othara, too are proud to



say that they earn their livelihood by harvesting coconuts with the help of the machines developed at KVK.

James Yohannan from Chirayirambu, near Kozhencherry, who was a motor vehicle mechanic till recently, says that he earns Rs.1,200 to Rs.1,500 a day by harvesting coconuts at various residential courtyards in and around Kozhencherry.

### **Profession**

They say that they have taken up palm-climbing as a profession and earn nearly Rs.25,000 to Rs.30,000 a month.

According to Mr. Vinod, the six-day training programme involved training in mechanised palm tree climbing, scientific coconut management, and hands on training on different cultural practices in coconut pest and disease management.

The training programme also covered yoga, time management, and development of communication skills as prescribed by the Human Resources Department, Mr. Vinod said.

Dr. Robert said even the traditional tree climbers were more comfortable with the mechanised climber as there was less strain in climbing.

### **Encouraging farmers to test unchartered waters**

The Kerala State Horticulture Mission has come up with a new scheme to fund the requirements of large-scale farmers who wished to visit various farm destinations and conduct researches by their own to expand their cultivation with newer methods and newer plants.

Under the scheme, a farmer will be able to get Rs.1,000 for each of such trips for educational purpose. It comes into effect as some of the farmers have already made the requests to the Mission. The aid will be distributed to the selected farmers through the Krishi Bhavans. Farmers can submit their applications to the near by Krishi Bhavans. It will be later forwarded to the State Horticulture Mission's office for approval.

Officials said the aid would be available for farmers to attend national and State-level agriculture workshops organised by the government and various other agencies. However, the benefit of the scheme would be available only for farmers who have good track record in the field.

Horticulture Mission officials explained that the project would largely come in help of the farmers to improve their scientific knowledge on farming and fuel their confidence to experiment in their field. Young entrepreneurs would be considered for the new scheme, they added.

### **Financial literacy awareness programme in Sivaganga**

The National Bank for Agriculture and Rural Development (NABARD) has organised a Financial Literacy Awareness Programme (FLAP) through the Integrated Rural

Community Development Society (IRCDS) and in coordination with banks, insurance companies and non-governmental organisations (NGOs).

More than 90 participants from panchayats, self-help groups, NGOs, farmers and general public attended the programme, organised here recently in connection with NABARD's 34th Foundation Day, celebrated on Sunday.

Bangaru Giri, Assistant General Manager, NABARD, Sivagana, presided over the programme.

"The aim of the programme was to enhance the financial literacy of the poor and vulnerable sections of the society to facilitate access to financial services and social security schemes and ensure them sustainable livelihood," he said.

Financial literacy materials in Tamil on various aspects of financial inclusion, including the recently launched social security schemes by Prime Minister Narendra Modi, were distributed to the participants. They were also enlightened on various credit-linked subsidy schemes of the Centre.

### **Pensioners' association branch inaugurated**

The Pensioners Association of Tamil Nadu Agricultural University, Tirunelveli branch, was inaugurated at Agricultural College and Research Institute (ACRI), Killikulam, on Sunday. It will cater to the needs of pensioners of Tuticorin, Tirunelveli and Kanyakumari districts. The presidential address was given by S. Uthamasamy, State president and former Director of Agricultural Extension Education, Tamil Nadu Agricultural University.

V.Subramanian, Dean of ACRI, in his special address, narrated the importance of health awareness for senior citizens.

A. Muthusankaranarayanan was elected chapter secretary and P. Sankaranarayanan additional secretary of the Tirunelveli Chapter. V. Veerabadran, former professor in Agronomy, R.K. Pallikondaperumal, retired plant geneticist, and V. Thirumurugan, chapter secretary in Madurai zone of TNAUPA (Tamil Nadu Agricultural University Pensioners Association), spoke.

The programme was coordinated by S. Nalliah Durairaj and A.Velayutham, Professors of ACRI, Killikulam. A total of 45 pensioners of from various parts of southern districts, participated.

***The branch will cater to the needs of pensioners of Tuticorin, Tirunelveli and Kanyakumari districts***

### **Another farmer producers' company to be floated**

Based on the success of the Tiruchi District Farmer Producers Company floated last week, the National Bank for Agriculture and Rural Development has been working on a plan for formation of second company in Thuraiyur.

While the first company, established at Thuraiyur, aimed at enhancing profitability and productivity for farmers with a thrust in the area of milk production, the second company will focus on production of millets.

Thuraiyur and surrounding blocks, with meagre rainfall, was best suited for raising conventional millets particularly ragi, kumbu, thinai, saamai, and so on.

“The company will be called ‘Thuraiyur Traditional Crop Producers Company’ and will be registered before September this year,” S. Suresh Kumar, District Development Manager, NABARD, told *The Hindu* here on Saturday.

He said farmers clubs floated by NABARD in about 50 villages in Thuraiyur, Uppliyapuram, and part of Perambalur in the adjoining district would be covered under the programme. “As a company, there will be no barrier in terms of jurisdiction of revenue districts,” he clarified in reply to a question.

A. Madurai-based service organisation, Covenant Centre for Development, had been coordinating with the NABARD for the formation of the company. “Steps had been initiated for the identification of farmer-members of the company,” he said.

K.V. Rao, Chief General Manager, NABARD, Chennai, said that NABARD had planned to start 40 companies during the current financial year, including the company for millets.

### **Fishermen told to adopt scientific techniques to boost income**



Organisers of the ‘cage culture’ project at Palair Reservoir staging a demonstration run before the formal launch of the cage culture unit in Khammam.- PHOTO: G. N. RAO

Fishermen should adopt scientific fish farming techniques to augment their income and tread the path of financial self-reliance, said Minister for Agriculture and Fisheries, Pocharam Srinivas Reddy.

The cage culture technique of fish farming holds enormous potential to provide sustainable livelihood for fishermen. The cage culture method, which proved successful in Jharkhand and Chhattisgarh, is being introduced in select reservoirs in Telangana in the first phase, he said.

He was speaking after inaugurating a cage culture unit set up by the Fisheries Department in the Palair balancing reservoir in Kusumanchi mandal.

The gross negligence of the agriculture and allied sectors under erstwhile united Andhra Pradesh severely hit traditional livelihoods of lakhs of poor people in Telangana, he deplored, reiterating that the Telangana government was committed to invigorating agriculture, horticulture, fisheries, dairy and other allied sectors.

There are around 46,000 tanks and over 70 small and medium irrigation projects in the State.

Around 40 lakh people in the State are dependent on fishing for their livelihood, he noted, underlining the need for harnessing water resources for fisheries development.

The government has made adequate budgetary allocations to raise fish seed production and give a fillip to the fisheries sector.

An amount of Rs. 9 lakh will be released for the construction of a community hall for the benefit of the members of the fishermen cooperative societies at Palair.

Around 29 veterinary hospitals will be set up in the first phase in the State soon, he said.

Minister for Roads and Buildings T. Nageswara Rao, Khammam MP P. Srinivas Reddy, Palair MLA R. Venkat Reddy and others spoke.

Earlier, a section of local fishermen of the mandal sought concrete steps to eliminate the “menace” of middlemen for enabling them to avail government schemes and secure a sustainable income.

Some of them wanted proper access to the new cage culture demonstration unit in order to familiarise themselves with the scientific method.

The ministers disbursed ex gratia to bereaved family members of ten fishermen who died in separate accidents in the district in the last year.



### **‘Cage-based fish culture more profitable’**

*Govt. plans to release fish seedlings in all irrigation tanks and reservoirs, say Ministers*



Minister for Agriculture and Fisheries Pocharam Srinivas Reddy and Minister for Finance and Civil Supplies Etala Rajender releasing cage-based fish seedlings in LMD reservoir in Karimnagar district on Sunday. -Photo: Thakur Ajaypal Singh  
Minister for Agriculture and Fisheries Pocharam Srinivas Reddy along with Minister for Finance and Civil Supplies Etala Rajender had released cage-based fish culture in the Lower Manair Dam (LMD) reservoir on the outskirts of Karimnagar on Sunday.

Speaking on the occasion, Mr. Srinivas Reddy said that the cage-based fish culture was more profitable and would increase the fish production benefitting the fishermen.

He said that he had personally visited the Jharkhand State to study the cage-culture fish and introduced the same in Telangana.

Stating that there were around 40 lakh fishermen depending on the fish trade, he said that the government was taking all steps to provide fish seedlings for growing in all irrigation tanks and reservoirs.

He said that they would set up a wholesale fish market in Karimnagar at a cost of Rs. 2 crore.

He also promised to open fish markets at a cost of Rs. 15 lakh in each mandals and in the major gram panchayats at a cost of Rs. 7.5 lakh each if the authorities provide land.

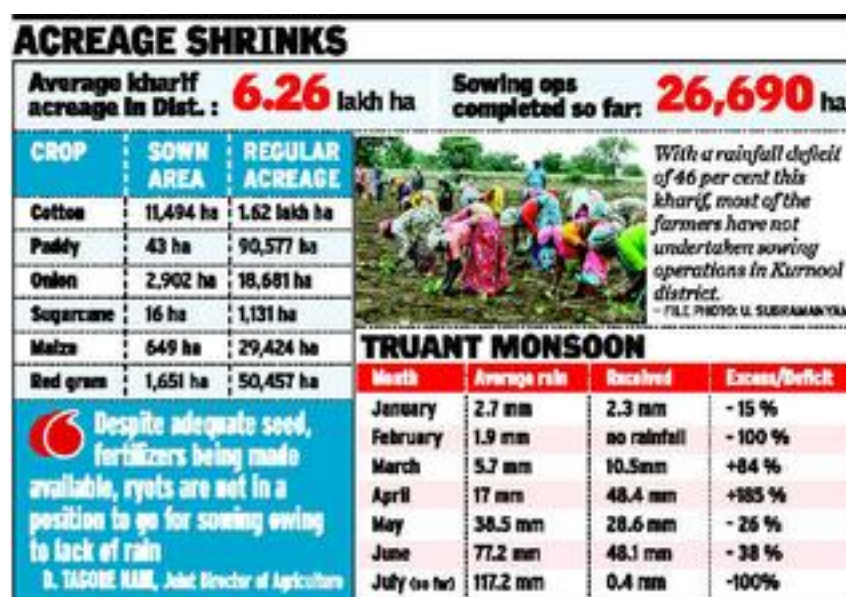
Minister for Finance Etala Rajender said that the State government had provided Rs. 5 lakh insurance coverage to the fishermen.

Stressing on the need for the removal of middlemen for the benefit of fishermen, he said that they would also provide loans on subsidy for the fish rearing.

ZP chairperson Tula Uma, Karimnagar MP B. Vinod Kumar, legislator Gangula Kamalakar, Manakondur legislator Rasamayi Balakishan, Fisheries Principal Secretary S.P. Singh, Collector Neetu Prasad and others were also present.

## Dry spell hits kharif work in Kurnool

*Farmers have sown crops in 4.26 p.c. of the total cultivable area so far*



Adverse seasonal conditions and scanty rainfall this kharif season have a telling effect on the sowing areas in the district.

Even after a month has passed since the onset of monsoon this year, farmers have undertaken sowing operations in a dismal 4.26 per cent of the normal cultivable area so far.

The statistics available with the Agriculture Department suggests that sowing operations have been completed in barely 26,690 hectares when compared to the average kharif acreage of 6.26 lakh hectares in the district which has registered a rainfall deficit of 46 per cent this year.

The situation this kharif portends grimmer situation than last year when crops were sown in 63,593 hectares, says Joint Director of Agriculture D. Tagore Naik.

A rainfall of 20 to 25 mm before July-end helps farmers take up sowing of groundnut. With lack of rain, it was sown in only 5,570 hectares out of a normal area of 1.2 lakh hectares.

Cotton, the major crop in the district, was sown in 11,494 hectares against a normal acreage of 1.62 lakh hectares. Paddy was sown in only 43 hectares, which worked out to 0.05 per cent of the normal area of 90,577 ha.

Despite adequate seed, 49,000 metric tonnes of fertilizers being made available, apart from disbursement of Rs. 820 crore as crop loans, farmers are not in a position to go for sowing owing to lack of rain, says Mr. Naik, adding that loans have been rescheduled in 20 mandals declared as drought-hit.

To help farmers tide over the adverse conditions, pulses such as green, red and black gram are being promoted. Under Polam Pilustondi programme, officials of Agriculture, Horticulture, Animal Husbandry and Fisheries Departments are making field visits every Tuesday and Wednesday and giving tips to farmers.

The Agriculture Department has supplied 1,450 quintals of red gram, 335 quintals of black gram and 750 quintals of green gram seeds on 50 per cent subsidy. Under farm mechanisation, Rs. 13.86 crore have also been allotted and rotavators with small tractors, sprayers and bullock carts and etc. are being given on subsidy, Mr. Naik adds.

Under organic farm development, vermicompost hatcheries were being sanctioned at a unit cost of Rs. 1.25 lakh including Rs. 75,000 as subsidy.

Meanwhile, farmers are seeking extension on the last date for paying weather-based insurance premium from July 9 to July 31, in view of the grim situation.

***Despite adequate seed, 49,000 MT of fertilizers being made available, apart from disbursement of Rs. 820 cr. as crop loans, ryots are not in a position to go for sowing owing to lack of rain***

***D. Tagore Naik, Joint Director of Agriculture***

### **State for lower fat content in milk**

The State government's move to seek a dilution of food product standards to suit the lower fat content of milk produced in the State has met with scepticism from a section of experts who feel that the milk fat issue should have been addressed by improving the quality of cattle feed. While dairy development experts feel that the lower fat content of milk is the result of the cattle breeding policy focussing on crossbreeds selected for their high yield, livestock scientists believe that the problem has more to do with the decline in the content of roughage in cattle feed.

The government is seeking an amendment to the Food Safety and Standards Act, 2006 to lower the prescribed fat content of cow's milk in Kerala from 3.5 per cent to 3 per cent. While most States have a prescribed limit of 3.5, the food product standards mandate a content of four per cent for Chandigarh, Haryana, and Punjab and three per cent for Mizoram and Odisha.

## **BREED OR FEED?**

**Experts divided over factors responsible for lower milk fat**



Last week, the government circulated a note among Members of Parliament from Kerala, asking them to highlight the State's demand to lower the food product standards for milk.

According to the latest estimates, more than 90 per cent of milch cows in Kerala are crossbred. Scientists point out that cows supplied with adequate high fibre roughage like hay and fodder, as those in the government farms in the State, produce milk with fat up to 4.2 per cent, unlike animals fed with concentrated feed.

The rumen (stomach chamber) of a cow on a high roughage diet produces acetic acid, a precursor for mammalian milk fat. Animals fed with concentrated feed release lactic acid instead, resulting in lower fat content.

The ideal ratio of roughage and concentrated feed is 60:40 but most dairy farmers in Kerala, especially those in urban areas, depend on compounded feed. "While the steady fall in paddy production has affected the availability of hay, the scarcity of land has led to a decline in the supply of fodder, with the result that farmers are increasingly forced to depend on concentrated feed. This has impacted on the fat content of milk produced in Kerala," says a dairy management expert.

Farmers are deterred by the higher price tag for total mixed ration feed, a combination of high fibre roughage and concentrated feed is a deterrent for dairy farmers. Meanwhile, the government is understood to be drafting a Bill prescribing standards for cattle feed.



### **Farmers set sugarcane crop on fire**

Sugarcane growers in Betageri village in Koppal taluk are setting their seven month-old sugarcane crop on fire. The crop was damaged in the recent hailstorms. As an alternative, they plan to take up cultivation of short duration crops to get something in return. According to Hemareddi Nagralli, the growth of sugarcane in his four-acre land was affected due to hailstorms. Now, he had to wait for another 10 months to obtain a yield. However, the crushing season would be over by then and he would not be able to sell the crop. Delay in harvest only meant rising debts. With that in mind, he said, he set his crop on fire and got the land ploughed to take up cultivation of short duration crops such as maize and sunflower for the kharif season.

Venkatesh Nagireddy and Yankanna Madinur Shankarappa Nagireddy are a couple of other sugarcane growers who have followed suit.

The farmers also pointed out that they had to repay interest on the loan they had taken from banks.

In addition, they had to pay for sugarcane seeds and fertilizer provided by the sugar factory, failing which other farmers who had stood guarantee would be bothered.

To avoid that they had decided to opt for short duration crops with the hope that they would be able to repay their loan after harvest.

*Now, they plan to take up cultivation of short duration crops*

### **Rich treasure house of plant samples, molecular study**



The staff at the Herbarium Centre Library at St. Joseph's College in Tiruchi have been carefully preserving the study material and plant samples.— PHOTO: B. VELANKANNI RAJ

The Rapinat Herbarium and Centre for Molecular Systematics (RHT) and the adjoining Newton Natural History Museum will be among the direct beneficiaries of the heritage status and financial support extended to St. Joseph's College recently by the University Grants Commission (UGC).

“This building is not really reflective of Indian culture,” Dr. S. John Britto, director, RHT, told *The Hindu*. “It actually reminds you of medieval European castles, ramparts, and towers, and a bygone age. But when people come to our campus and

see our modern buildings next to our heritage ones, they see how well these old structures have been preserved.”

The herbarium and natural history museum are housed in a 150-year-old building that had earlier been used as a school. RHT has been acknowledged as a centre of excellence in its own right by the Bharathidasan University.

“St. Joseph’s College is the oldest Catholic institution in India, and the founding fathers, who were missionaries from Toulouse, in the south of France, were largely from agricultural backgrounds,” said Dr. Britto.

“As such, they were interested in preserving the natural habitat of the areas they worked in, and started collecting anything that would help to educate the common man.”

This interest extended to a detailed study of the flora of southern India. The herbarium today has a collection of two lakh physical plant samples in herbarium sheets, which have been painstakingly archived by succeeding generations of botanical experts at the college, notably the late Fr. K.M. Mathew, one of the select foreign members of the Linnean Society of London, the oldest natural history society in the world.

In addition to plant samples, RHT has 5,000 reference volumes and over 90 periodicals, and maintains an in-campus consultation herbarium for students. The Anglade Institute of Natural History at the Shembaganur, Kodaikanal-based Sacred Heart College functions as RHT’s hill laboratory.

Digitisation of the herbarium’s classical taxonomic records is among the more recent projects undertaken by RHT. As many as 20,000 samples of plants had been scanned and classified according to genus and barcode since the project was started last year.

Once complete, “any subscriber can access our records through our website, so it can become a resource centre that can be used worldwide,” said Dr. Britto. Some 30 computers have been dedicated to the task.

Simultaneously, RHT has started a study to use DNA molecules to identify the plant, with the help of outside agencies. “This is a more advanced stage of taxonomy, and will help us maintain a database of these plants,” he added.

The UGC funds would help the herbarium gain a floor on the existing premises, said Dr. Britto. “An additional floor will help us give a rational display of the specimen here, complete with legend to help visitors understand the exhibits,” he added.

### **Market booming for homemade chocolates**

Every year, when thousands of tourists visit the Nilgiris for vacation, one item that many of them would want to take back home is the homemade, Ooty chocolates.

The climate is favourable for chocolate-making and Ooty has some retail outlets that are selling homemade chocolates for more than six decades now. Raw materials are important for the quality of the chocolates and these materials are available in the

local market too. There are outlets that source raw materials, especially cocoa, from Pollachi, Kerala and even from other countries. They also have in-house specialities – varieties that are unique to the respective outlets.



The market for chocolates, especially homemade ones, is booming in India because of better awareness, says S.M. Fazloor Rahman, director of M & N Goodies.

Though summer is the peak tourist season, Ooty is becoming a weekend destination. So tourists are present almost all through the year and they do buy chocolates to take home for their friends and relatives, adds Vivek Jayaraj, owner of Jai's Kingstar.

The volume of sales is growing every year and the varieties that are available are also increasing. There are outlets that have semi-automatic production facilities and some sell hand-made, artisan chocolates too. Customers are willing to pay high prices for select varieties.

The demand from corporates is just starting. But there are some varieties that cannot be made in bulk. These are usually made in batches of 25 kg to 50 kg, says Mr. Rahman.

There are customers from other cities who place orders over phone, adds Mr. Jayaraj.

## Salt manufacturers worried over declining market price



The plummeting price of salt has put manufacturers in a spot. Though production of salt has started rising with conducive weather conditions prevailing this season, declining market price has worried them.

Price decline was triggered by accumulated stock of salt shipped from Gujarat seaport, G. Grahadurai, president, Tuticorin Small-Scale Salt Manufacturers' Association, told *The Hindu* on Sunday.

The initial production this year suffered a blow owing to unseasonal rains and salt production took off after four months.

This unusual situation prompted the manufacturers to rely on Gujarat, the largest producer of salt in India, and large quantities of salt shipped from Gujarat were still stocked.

The stocked commodity had moved to some extent, but it was affecting the market condition.

Despite the rising cost of production with an increase in electricity consumption tariff and labour cost, market value at this scenario was not encouraging. However, the manufacturers were primarily concerned as salt in pans near thermal power plants was being exposed to pollution following southwest monsoon season, which affected its quality and thus creating market uncertainty, he noted.

Fly ash deposits were obviously visible on heaps of salt in pans as strong winds carried such pollutants, he added.

He sought action from Tamil Nadu Pollution Control Board officials to prevent such a situation from occurring.



A.R.A.S. Dhanabalan, secretary of the association, said the problem of pollution had been continuing for the last five years. He alleged that pollutants emitted by power plants affected around 200 acres of salt pans at Arasadi area and they were found in about 20,000 tonnes of salt, resulting in loss of Rs. 30 lakh ultimately.

This issue was taken to the notice of Collector M. Ravikumar to initiate action against those causing pollution, he added.

### **NABARD to establish financial literacy centre**

National Bank for Agriculture and Rural Development (NABARD) plans to establish a financial literacy centre at the Kottur branch of Pallavan Grama Bank, R.I.A. Selvan, assistant general manager of NABARD said in Pollachi on Sunday.

NABARD had organised a financial literacy awareness programme in Pollachi as part of its Foundation Day events.

He said that a pilot project was already launched in Dharmapuri district.

The NABARD was in the process of digitisation of existing data on self-help groups in the country.

### **Banking products**

The financial literacy awareness programmes were aimed at creating awareness on the banking products among the public.

During the programme, Indian Bank sanctioned loans to the tune of Rs. 1.25 crore to self-help groups and joint liability groups of small and marginal farmers.

K. Krishnamoorthi, lead bank manager, said that the banks in the district have been advised to lend to over 1,500 joint liability groups of small and marginal farmers, rural artisans, and micro entrepreneurs so that they could take up income-generating activities.

### **Farmers along forest fringes wary of ‘trunk calls’**

*Stray incidents of elephants raiding agricultural fields surface*

Elephant herds have reportedly raided agricultural fields in Shivapura and Kheddapura in the Kundakere range of Bandipur.— FILE PHOTO: M.A. SRIRAM  
In addition to the prospects of crop failure, farmers living on the fringes of Nagarahole and Bandipur forests are on tenterhooks over wild elephants raiding crop.

Though elephants tend to stray out of their habitat and enter agricultural fields once the crop matures during the harvest, there have been a few incidents from the outskirts of both Bandipur and Nagarahole over the last two weeks.



Elephant herds have raided agricultural fields in Shivapura and Kheddapura in the Kundakere range of Bandipur close to the Gundlupet buffer zone in Chamarajanagar district.

In addition, similar incidents have been reported from Sindinahalli, Konanahosahalli, Chikkahejjur, Kolalige etc in the Veeranahosahalli range of Nagarahole.

A farmer, Somaiah, at Chikkjahejjur, who had cultivated sugarcane on his 2 acre plot lost the crop due to elephants known to relish the luscious crop.

A Forest Department official said that though the crop loss would be around Rs. 1,00,000, the compensation would not exceed Rs. 1,500 to Rs. 2,500 and would take up to an year for its release.

D. Rajkumar of Wildlife Conservation Foundation told *The Hindu* that the season of crop raiding is still a few months away but small group, which break away from larger herds to avoid competition for fodder, tend to enter agricultural fields in search of food.

“There are islands of forests outside the national park boundary where elephants find refuge and sustain themselves on the available fodder as also raiding agricultural fields,” he added.

### **Measures taken**

While the Forest Department has completed the elephant-proof trenches (EPT) and solar fencing along the periphery of Bandipur and Nagarahole, there are vast swathes of forest boundary where the EPT are ineffective because the trenches are filled up with silt and does not prove to be a barrier for animals to cross.

In addition, about 42 km of forest has been left unfenced in Omkara range due to difference of opinion over forest boundary and private land from where elephants do cross.

Though the Forest Department has plans to erect the country's first rail fence along the forest boundaries to prevent elephants straying from their natural habitats, it is yet to commence.

The foundation for the project was laid in April this year but there has been no progress beyond that.

The project entails installing 33 km of rail fence in the first phase along critical areas where conflict is very high.

### **NABARD conducts Financial Literacy Awareness Programme**



A leaflet on financial literacy being released at the awareness programme organised by NABARD at Edanganasalai village in Salem district on Sunday.

The National Bank for Agriculture and Rural Development (NABARD) as a part of its 34th “Foundation Day” celebrations, conducted a Financial Literacy Awareness Programme (FLAP) at Edanganasalai village in Magudanchavady block on Sunday.

The programme was organised in co-ordination with banks, local administration and NGO Best Empowerment Services Trust (BEST).

Farmers, members of women self-help groups and joint liability groups (JLGs), students and general public attended the programme.

A. Bhama Buvaneswari, Assistant General Manager (DD), NABARD, Salem, briefed about the need for conducting the programme. She explained about the various loan products available from the banking channel and also the need for taking up supplementary activities like dairying; sheep / goat rearing, etc. and the Government of India subsidy schemes available.

K. Sivalingam, president, Edanganasalai Town Panchayat, insisted that people make use of the banking sector for improving their livelihood.

J. Ravichandran, Lead District Manager, spoke on the need for saving and also highlighted on the insurance and pension schemes of the Central Government.

M. Venugopal, General Manager, Pallavan Grama Bank and P. Ravikumar, CRO, Salem District Central Co-operative Bank, explained the need for saving, insurance and pension and informed about the various savings products of their respective banks.

### **Schemes**

A. K. Palanivelrajan, Counsellor, Financial Literacy Centre, Indian Bank, explained in detail about the various government schemes. The Chief Manager - Financial Inclusion Chidambareswaran and the FLC Counsellor of Pallavan Grama Bank explained about the functioning of the FLC at their Head Office, Salem.

R. Santhanam, Principal, Indian Bank Self Employment Training Institute (INDSETI), addressed the gathering and explained to them the various training camps being conducted in the Institute for the benefit of the rural people and the guidance offered by the Institute in helping the trainees take up self-employment by availing bank credit.

V. Mohan, Branch Manager, Pallavan Grama Bank, Magudanchavady branch disbursed the loans sanctioned to various Joint Liability Groups promoted by BEST. K. Kannagi, Managing Trustee, BEST, also spoke.

A leaflet in Tamil on various aspects of financial inclusion including the recently launched social security schemes were distributed to the participants and the local public.

### **Deficit rain sows seeds of doubt in Chittoor**

# **TO SOW OR NOT TO SOW**

☉ **Total cultivable area:**  
**2.1 lakh ha**

→ **Sown so far:**  
**80,000 ha**

With absolutely no rainfall so far in July and with only a week left for the sowing season to commence, agriculture officials in this district are seriously concerned by the prospects for the groundnut crop this year. The crop is normally sown over 1.4 lakh hectares in the district, which is primarily rain-fed.

Of the 2.1 lakh hectares of potential cultivable area in the district, farmers have stayed away from tilling the land in about 1.3 lakh hectares. As things stand, farmers are preparing to sow groundnut in just 80,000 hectares, mainly because there have been no rains this month.

Agriculture officials are advising farmers to wait till the last week of July to make a decision on whether to sow or not to sow.

Joint Director (Agriculture) Nirmal Nityananda told *The Hindu* that when there was above normal rainfall in June (85 mm as against the normal of 78 mm) hopes rose in the hearts of officials and farmers alike.

"The June rains led farmers to till lands in 60 per cent of the groundnut sowing area. But since the last week of June, farmers' interest has dwindled. In last year's kharif, the groundnut crop withered away in over 20,000 hectares in the Kuppam and Palamaner areas due to a severe drought.

"That phenomenon is still haunting us and the farmers as well," Mr. Nityananda said.

"The dry spell in July is causing us worry. By now, we should have received 102 mm of rainfall. In case of a failure of the rains, we have no option but to go in for alternate crops like black and green gram from August 1," the joint director said.

Meanwhile, in view of the adverse climatic conditions in Chittoor district, collector Siddarth Jain directed officials to hold Farmers Awareness Meets at all constituency headquarters.

A unique feature is that officials of agriculture, horticulture, animal husbandry, microirrigation, sericulture and other allied wings would converge at one place as against sessions by individual departments.

The first leg of the camps have started in Kuppam and Palamaner constituencies. Farmers would be given orientation on the latest trends in agriculture, mechanized farming, water conservation and provision for alternate crops.

### **Okra farmers dump produce**

Okra (lady's finger) farmers dumped their produce on the state highway at Dommeru here on Sunday to protest the poor prices they are getting in the markets.

They alleged that middlemen were forcing them to make distress sales at an abysmal price of Re 1 per kg while officials of the agriculture stayed away from intervening in the market. Traffic came to a halt for sometime on the Devarapalli-Kovvur route as




ryots squatted on the road. They said their production cost has ran up into the thousands while price stayed low, forcing many into a debt trap.

### An invisible defence against crop-raiding animals

## A SOUND PROSPECT

Bioacoustics, which uses the distress calls of wild animals, is the latest attempt at engineering a defence against crop-raiding animals



### THE MODUS OPERANDI

- An amplifier plays out recorded distress calls of wild animals
- Sequence is changed every two or three weeks to ensure animals do not become accustomed to the sounds
- One amplifier covers 5 acres
- The equipment produces a 90-dB sound (same as city traffic) within a distance of one metre
- Sounds of 10 animals, 17 bird species have been recorded
- Equipment has reduced crop damage in 90% of cases

### BEING PUT TO THE TEST

- 25 fields in Telangana and Andhra Pradesh
- North Karnataka
- Coffee estates of Kodagu

The wailing cry of an animal in distress reverberates through arid fields. At a distance, the instincts of wild boars kick in, and they scoot in the opposite direction having been warned of danger in the fields. By the lush forest of Western Ghats, an amplifier plays out noises of monkeys, keeping away these animals from cultivated lands.

With both physical and biological barriers turning out to be incapable in deterring animals from running over crops, bioacoustics — which uses the distress cries of wild animals — is the latest attempt at engineering a defence against crop-raiding animals.

Hyderabad-based agricultural scientist V. Vasudeva Rao cites success rates of 90 per cent in most cases. “Numerous calls of animals are taken and put in a sequence that sends out messages of warning...This in no way harms these animals,” said the scientist, coordinator of the All India Network Project on Agricultural Ornithology. It was funded by the Indian Council of Agricultural Research. The resulting technology is in the process of obtaining a patent, Prof. Rao said.

Field trials have been carried out in a range of terrain and against a spectrum of wild animals. In the mountainous Kodagu district farmers were beset with the twin problems of troops of monkeys and herds of wild elephants.

“We have experimented with traditional methods such as bursting crackers, firing in the air, but this did not stop elephants from destroying the crops. Bioacoustics, however, has been an effective solution,” said K.P. Ganapathi, from Siddapur village in Kodagu. On the other side of the ghats at Kalladka in coastal Karnataka, amplifying monkey noises has seen crop damage reduce in the farm of Govinda Bhat.

In the arid fields of north Karnataka, the concept had seen raiding by wild boars come to a halt in the ten places tested, said Raju G. Teggali, Project Director, Krishi Vigyan Kendra in Kalaburagi. Calling it an “invisible shield” against animals, Anand Chinchapur from the Bengaluru-based company Grus Ecosciences — which is manufacturing the equipment — said calls for nearly 27 animals and birds had been developed.

### **Out of reach**

While the nascent technology is taking off in places with high man-animal conflict, farmers and researchers admit that the cost of the equipment — pegged at nearly Rs. 25,000 — may be out of the most farmers’ reach of most farmers. “For marginal farmers, they find low cost physical barriers far more affordable than bioacoustics,” said Raju G. Teggali from Kalaburagi Krishi Vigyan Kendra, who is supervising its use in Kalaburagi district.

However, agricultural scientist V. Vasudeva Prof. Rao believes the patenting of the equipment and its consequent mass-manufacture by the Bengaluru-based company Grus Ecosciences will see the prices reduce drastically. “Once the trials are over, state governments will be asked to provide subsidy for this.”



### **Like sugar, new law soon to ensure MSP for dairy farmers**



The state government is working on a legislation to enforce a uniform minimum support price regime for dairy farmers.

The decision comes amid growing unrest among dairy farmers that dairy companies are unwilling to increase milk procurement prices.

In an exclusive interview to [The Indian Express](#), Chief Minister Devendra Fadnavis said, “The milk federations are making a huge profit selling milk at Rs 35 to Rs 55 per litre. Why don’t they want to pay farmers rates commensurate with the profit earned? The farmers are paid Rs 16 to Rs 18 a litre, which is bound to generate unhappiness.” The minimum support price would be similar to the sugar sector where it is mandatory for the sugar mill owners to pay a MSP to sugarcane cultivators.

Currently, there is no mechanism in the dairy sector.

The chief minister’s decision comes in wake of growing demand from the Opposition [Congress](#) and NCP for subsidies in the dairy sector.

Several Congress and NCP leaders own dairy plants and have repeatedly voiced their disappointment with the government for not giving subsidies to the sector. “If the farmers leader (Swabhimani Shetkari Sanghatana chief) Raju Shetty can pay the farmers Rs 23 per litre why can’t other leaders who make higher profit give better remunerations. Why should they pay only Rs 16 to the farmers?” asked Fadnavis.

He also slammed the “double standards” of the Congress-NCP that has asked for subsidies citing high operational costs, and is reluctant to pay higher milk procurement prices.

To ensure that agricultural loans reach farmers easily, the state government has decided to become a guarantor for such loans. This decision is in response to the growing complaints of poor disbursement of agricultural loans by banks.

Fadnavis said, “We have issued directives to the banks to effectively implement our loan rescheduling policies in letter and spirit.” While ruling out complete loan waiver as sought by opposition he said, “In the past they have waived loans what difference did it make to farmers? Instead, our policies are directed at making higher investments and creating assets in agriculture sector.”

## BusinessLine

### **Farmers in Latur begin to chant the organic mantra**

#### **LATUR (MAHARASHTRA), JULY 12:**

Even as Maharashtra continues to grapple with an agrarian crisis, farmers in Latur, one of the drought-prone districts in the state, are slowly moving towards the organic way of farming to reduce input costs and increase agriculture output.

Planting variety of trees on the farmland, using organic manure and bio-enzyme in soil stabilisation are some of ways being adopted by the farmers for a healthy growth of crops that is safer for human consumption.





**Costly affair** “The government and researchers have been focusing mainly on how to increase the yield. But in the process, agriculture has become a costly affair with the use of costly fertilisers, pesticides and commercial seeds. If the farmer sells his harvest at ₹100, then his input cost is ₹80 and hence the profit is only ₹20. And when crop fails, there is a huge debt burden due to the heavy expenditure on input costs,” Mahadev Gomare, Latur Head of Sri Sri Institute of Agricultural Sciences and Technology Trust told PTI.

He said the Trust is striving to improve farmers’ financial condition through the practice of ‘zero cost farming’ and ‘sustainable practices for irrigation.’

“Land itself is a self-sufficient unit that can produce all fertilisers and pesticides required. The first step is to plant more trees. In every acre of farmland, there should be around 40 trees. Varieties like shisham, sandalwood and neem are ideal for this purpose. These grow in 3-4 years and produce enough organic matter to keep the land fertile. They improve percolation of water and reduce soil erosion. Neem tree is the best form of natural pesticide,” he said.

“Also, waste material from trees should never be burnt. It should be allowed to decay and become a part of the soil. Since the Green Revolution, many new crop varieties and hybrids have been introduced. These commercial seeds have poor resistance against disease and require ample amount of water and fertilisers,” he added.

Gomare said that farmers should shun the conventional way of sowing a single crop as it causes depletion of soil nutrients and makes crops susceptible to pest attacks. “It is possible to plant over 150 types of fruits, vegetables, pulses, grains and other plants in a single acre. We have developed model farms to show that it can indeed be done,” he said.

## **Nabard aims Rs 30,000 cr farm credit for irrigation**

**MUMBAI, JULY 12:**

The state-run National Bank for Agriculture and Rural Development (Nabard) has set a target of providing Rs 30,000 crore as credit to farmers for irrigation over the next three years, a senior official said here today.

The agriculture and rural focused lender has already sanctioned Rs 1,000 crore so far this year, the official said.

This funding will be in addition to the government's recent announcement of providing Rs 50,000 crore of loans to farmers over the next five years under the Pradhan Mantri Krishi Sinchai Yojana (PMKSY).

"We have decided to provide loans amounting to Rs 30,000 crore for irrigation to farmers over the next three years.

This year we are looking at providing Rs 10,000 crore of loan for this purpose and I am happy to inform you that we have already sanctioned Rs 1,000 crore so far," Nabard Chairman and Managing Director Harsh Kumar Bhanwala told reporters here today.

"Rather than merely creating capacity we are looking at help improve irrigation efficiency," he added.

Speaking at the 34th Foundation Day of Nabard, Bhanwala said, "The bank has been accredited by the Green Climate Fund (GCF) as the national implementation agency for climate change at the rural level."

"The idea is to create a Green Climate Fund with a commitment of \$100 billion against the present commitment of around \$10 billion. So, for this \$10 billion fund, they want a proposal to be routed and implemented with chosen entities who are good in procurement, sensitive to gender issues and who have transparency mechanism," he said.

There are 20 such entities like the World Bank and Asian Development Bank among others which have already been shortlisted. And from the entire South Asia, Nabard is the only one which has been shortlisted for the purpose.

"Our endeavour would be to source around \$500 million worth of projects from within the country in the next three years," he said.



## **`Agri-insurance cover with farm holding as a unit likely soon'**



If plans of Telangana Government go well, insurance companies might soon launch agriculture insurance schemes with individual farm holdings as a unit.

With making districts, crops and villages as units for crop insurance yielding no results, insurance companies have agreed in-principle to make holdings of farmers as units in the State.

Telangana Agriculture Minister Pocharam Srinivas Reddy has said that a pilot would be launched in a backward area to test the model.

“We will launch the pilot after preparing a detailed report on the issue,” he said after a meeting with representatives of Insurance Regulatory Authority of India (IRDA) and insurance companies here on Saturday.

“We have requested them to make farm holdings as a unit to make insurance coverage meaningful. They have related the problems associated with the limitations in this model,” he said.

### **Interest waning**

With high premium rates and generic coverage norms, farmers have been showing no interest in taking an insurance cover for the crop, exposing themselves to financial

risks. Farmers' unions have been arguing that giving cover to only a few crops won't help.

“If you keep premium rates unaffordable, who will buy a policy? As a result, buying a policy is not on the agenda of farmers,” S Malla Reddy, Vice-President of All-India Kisan Sabha, said.

Pocharam Srinivas Reddy asked the officials of his department to discuss the issue further with IRDA to prepare a detailed proposal.

### **Monsoon depression brings rain to East, N-W India**



Thursday's low-pressure area over Gangetic West Bengal flared up to become a rare land-based depression and was located above north Chhattisgarh and adjoining Jharkhand on Friday evening.

It helped drive the monsoon to a peak over east India and parts of northwest India. It also breathed fresh life into the offshore trough along Kerala and Karnataka, bringing rain there as well.

### **Interactive rain**

India Met Department said that the depression might weaken by Saturday, but the US Climate Prediction Centre stated that it would continue to produce rain over east and adjoining northwest for a few days more.

There is also the possibility of interaction of the system with an incoming western disturbance, which was parked over north Pakistan and adjoining Jammu and Kashmir on Friday.

Already south-westerly flows from the Arabian Sea and easterlies from the Bay of Bengal are running into each other over the eastern flanks of northwest India, along the hills and plains.

Very heavy rain has been reported from Jammu & Kashmir, Himachal Pradesh, east

Madhya Pradesh, Gangetic West Bengal, Jharkhand, Chhattisgarh and coastal Karnataka overnight on Friday morning.

#### **Even more forecast**

The Met has forecast very to heavy rainfall for the next four days across north-east India, east India and adjoining north-west India and along the west coast.

This would come about under the overall influence of west Pacific typhoon Chan-hom bracing to home in over east China as also twin-typhoon Nangka, which is still raging in the open west Pacific Ocean.

The European Centre for Medium-Range Weather Forecasts depicts how Nangka would take over from Chan-hom and pull monsoon flows across the Arabian Sea, the Bay of Bengal and South China Sea.

#### **Allow coconut growers to harvest neera, say experts**



Experts from the coconut sector have stressed the need for amendments to the Excise Act in Karnataka to permit members of coconut growers' federation to harvest 'neera' from coconut trees.

('Neera' is a sweet sap tapped from coconut tree. If not consumed within a couple of hours or stored under controlled temperature, it will ferment into toddy with alcohol content.)

Speaking on the occasion, TK Jose, Chairman of the Coconut Development Board, said neera is a non-alcoholic nutritious natural drink. Karnataka's value-added coconut products can surpass the combined production of Indonesia and Malaysia, he said.

P Chowdappa, Director of Kasaragod-based Central Plantation Crops Research Institute, said the country has coconut plantations on around two million hectares of land. Even if 'neera' is extracted from 10 per cent of those plants, it can lead to an

income of more than ₹35,000 crore. It can provide additional income of around ₹20,000 a plant annually.

**Budget announcement** Delivering the budget speech for 2015-16, Karnataka Chief Minister Siddaramaiah had stated that amendments will be made to the Excise Act to permit members of the coconut growers' federation to harvest 'neera' in limited quantities.

Jose said that the Coconut Development Board, Horticulture Department and farmer-producer organisations are making efforts for the amendment of the Excise Act for 'neera' tapping.

The organisations had met Siddaramaiah during the Assembly session at Belagavi recently. Jose said the Chief Minister has directed the team to distribute 'neera' and its value-added products to the elected representatives during the session in Bengaluru after July 15.