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# THE HINDU

## Wheat procurement will be lower this year



There is a growing concern in official circles about untimely rain and hail in the northern parts of the country hitting wheat procurement for the Public Distribution System by an estimated three million tonnes this year. This may not augur well for a country that is committed to providing cheap foodgrains to 67 per cent of its population under the National Food Security Act.

The target was to procure 28 million tonnes of wheat, but it is likely to slip to 25 million tonnes, well-placed sources told *The Hindu*. This will be five million tonnes lower than what the Food Corporation of India and its agencies had procured last year.

This is on the back of the downward revision of wheat production this rabi season — from 96 million tonnes to an estimated 92 million tonnes — due to damage to standing crop.

The Agriculture Ministry estimates the loss in wheat production to the tune of about 4 million tonnes on account of late rain and hail that has played havoc with standing wheat crop in parts of Haryana, Rajasthan, Uttar Pradesh, Madhya Pradesh and Gujarat.

At places, the standing mustard and horticulture crop has suffered huge damage.

As State after State is sending memorandum to the Centre for help, the government on Tuesday relaxed the quality norms for purchase of wheat in Haryana as it had done earlier for Gujarat, Rajasthan and Madhya Pradesh.

The relaxation for shrivelled and broken wheat grains has been raised by three per cent to nine per cent for Haryana. However, the farmers whose below-par wheat is purchased for the central pool will face a cut of Rs.14.50 paise per quintal in the minimum support price for their produce.

The MSP is fixed for the Fair Average Quality of grain that is purchased by the FCI and its agencies. For the 2015-16 marketing season it is set at Rs.1,450 per quintal.

The Central government has decided that the grain that has suffered lustre loss of more than 10 per cent and up to 50 per cent of the affected kernels will also be purchased with a value cut of Rs.3.63 paise per quintal.

### **Pitcher perfect**



Summer is here and the debates on water conservation are heating up. Access to water is becoming a big issue in developing metros. And what

about rural areas and the farm lands? Through centuries, farmers have devised their own methods for preserving and conserving this precious natural commodity. This week get to know about pitcher method of irrigation. A depleting water table and rise in salinity because of indiscriminate use of chemical fertilizers and pesticides have made water conservation **imperative** for farmers.

Over the years, several water harvesting and conservation methods have been adopted in agriculture to recharge and conserve ground water. Some of the methods practised are cost effective and proven.

For example, in the coastal areas of Kerala, farmers have been using a simple indigenous technique called pitcher irrigation which greatly reduces the demand for water.

Pitcher irrigation is cost effective, farmer-friendly, and easy to install. Pitcher irrigation involves no high tech gadgets and does not require any maintenance. It is ideal for small holdings (1-2 acres) and suitable for growing vegetables, coconuts, and arecanuts. It consists of a clay pot with a cotton wick fixed at the bottom of the pot, and buried in the soil (up to its neck) and filled with water.

The natural pores in the pot allow the water to spread into the soil, creating moisture for crop growth. The water can be filled as and when required, thus maintaining a continuous supply of water to the plants. While burying the pitcher in the soil, farmers should take care to see that the neck region of the pot is positioned in such a manner that rainwater runoff does not enter into the pitcher. Otherwise small sand particles will block the pores of the pitcher. The main advantage of the wick which is attached at the bottom of the pot is to increase the water penetration into the soil and to deliver the water directly to the plant roots. The number of pitchers required per acre depends on the crop variety grown. For coconut seedlings about 170 pots per hectare (that is 70 pots per acre), and for arecanut about 1100 pots (440 pots per acre) will be required.

A farmer can save 90 per cent of water as compared to flood irrigation. Fertilizers can also be mixed along with the water and poured into the pot. Weed growth has been found to be very minimal because water delivery is limited to the roots. Many farmers in the coastal districts are following this method. If you have a garden at home try this irrigation method.

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## ‘Rain-hit ryots to be compensated’



Agriculture Minister P. Pulla Rao on Tuesday said that the government would protect the interests of farmers, who had incurred losses due to the untimely rains and hailstorms in the State.

Speaking to *The Hindu* at the Kuntimaddi village of Kanaganapalli mandal, where he visited extensively damaged paddy fields, the Minister said that farmers who had lost more than 33 per cent of their crop, would get the government benefit.

“The officers are enumerating the losses and gathering details of the affected ryots. Once it is done, the government will compensate the farmers for every acre of crop they have lost,” he promised.

Informing that the government had decided to reduce the threshold of crop damage from 50 per cent to 33 per cent, he said that Chief Minister N. Chandrababu Naidu was concerned about the plight of farmers in Anantapur district. He said that farmers cultivating papaya would get Rs. 13,000 per acre, while cultivators of sapota and banana would get Rs. 15,000 per acre.

A group of farmers from Vannedoddi village in Gooty mandal sought to draw the Minister’s attention to their woes. They said that they had cultivated watermelon and the crop would have been ready to harvest in the next 10 days, had the rains not been played spoilsport.

Consoling them, the Minister said that the government would release funds within 40 days of Chief Minister’s return from China.



Mr. Pulla Rao also visited the N.S. Gate village adjacent to Eerepalli village in Pedda Vadugur mandal of the district to assess the loss incurred by farmers of banana and watermelon .

### **Not all fungi are bad news**



At best, they are plucked in the wild and become a popular item on the menu in restaurants. At the worst, they become the bane of stored food and cultivated crop, giving them a reputation comparable to unwanted pests

However, a scientist is now making the case for “Project Fungi”, on the lines of programmes for tigers and elephants, to conserve the ‘much-neglected’ micro-organism. Currently, fungi do not feature in the environmental or conservation laws of the country.

“In India, we do not know how many species have become extinct due to habitat loss, or at a critical stage. There has been no national conservation effort so far,” said T.S. Suryanarayanan, Director of the Vivekananda Institute of Tropical Mycology, Chennai.

He put forward the case for a “holistic effort of policy and research” for fungi during a recent meet of ecologists, conservationists and biologists at the Indian Institute of Science. “India being a tropical country is

brimming with fungi, and there is a need to identify novel species that can be used in bio-technology, agriculture, medicine and industry,” he told *The Hindu* .

Elsewhere, fungi is slowly getting attention for conservation. International Union for Conservation of Nature (IUCN) states the “ecological and economic importance” of fungi is “huge” and its conservation is “essential” for the ecosystem.

However, in a paper on “fungal conservation in India”, mycologist K.V. Sankaran believed “non-availability of funds” and “difficulty” in convincing politicians and policy makers of the importance of conserving fungi had resulted in “inadequate” conservation.

### **Low research**

Despite the use of fungal enzymes to develop cholesterol medicines and to lower rejection rate of the immune system to transplanted organs, fungi remains low on the priority list of bio-tech companies, says Prof. Suryanarayanan. More research is needed to use fungi to treat malaria and TB, and even for bio-fuel production. “Fungi that attacks insects can be researched to extract enzymes to be used as pesticides...fungi near tanneries have developed the ability to withstand high levels of chromium.”

### **Krishna water being released sans ‘official’ second crop**

Even as the second crop (rabi) is not officially declared on the Krishna delta and Irrigation Advisory Board (IAB) has not taken a call whether or not water will be released for the cropping season, water is being released to the delta sans disruption.

A few farmers, who have taken the risk of sowing paddy, seem to be the only beneficiaries.

The first summer post-bifurcation is witnessing a severe depletion of water levels in the two important reservoirs – Srisailem and Nagarjunasagar. Farmers cultivating 13 lakh acres, residents of Vijayawada and Guntur, a few towns and hundreds of villages in Krishna delta depend on these two sources for their drinking water and irrigation needs.

As of Tuesday, water level at Srisaillam dam stands 805 feet, nearly 50 feet below the minimum drawdown level (MDDL) at which power generation should be stopped. The water level at the reservoir stood at 836 feet on the corresponding day last year and 837.8 feet on the corresponding day in 2013.

Power generation, however, said to be the real culprit behind the depletion of water level in the reservoirs.

water, they are the last to get it. It is no more viable to do agriculture in the delta, because yields diminish with the delay in raising seed beds and transplantation,” Mr. G. Durga Rao, a farmer of Kankipadu.

Giving power generation precedence over irrigation will prove counter-productive in the long run. Unless the State government asserts itself and puts pressure on the Telangana to stop using water in the reservoirs, farmers would be subject to uncertainty, an official of the Irrigation Department said.

### **“Hold on to maize stock till June”**

The Agro Market Intelligence and Business Promotion Centre (AMI&BPC) of the Department of Agricultural Marketing and Agri Business has advised farmers to hold their maize stocks for price appreciation and sell the produce in June.

In a price advisory, the AMI and BPC has indicated that the price of good quality maize grains would prevail in the range of Rs. 1,420 to Rs. 1,450 a quintal in June or July.

The price advisory was based on an analysis of the wholesale prices of maize over the last 14 years at Udumalpet regulated market conducted by the back office of the AMI&BPC in the Centre for Agricultural and Rural Development Studies (CARDS), Tamil Nadu Agricultural University, to provide market intelligence to farmers in the major maize-growing districts.

At present, the price of maize was ruling at Rs. 1,330 to Rs. 1,360 a quintal at the Udumalpet regulated market. Poor quality maize (with high moisture content and damaged grains) command Rs. 50 to Rs. 100 lesser a quintal.

Arrivals from Karnataka have ceased in the market now and arrivals from Tamil Nadu were about to begin.

Tamil Nadu ranks fourth in maize cultivation and its area has increased from 1.25 lakh hectares (ha) in 2013-14 to 1.74 lakh hectares in rabi 2014-15.

Tuticorin, Virudhunagar, Dindigul, Tirunelveli, Tirupur, and Salem are the major rabi maize producing districts in Tamil Nadu.

In India, maize area has come down in 2014-15 to 12.22 lakhs hectares of land against 12.63 lakh hectares during the previous year.

Bihar is the major producer of maize which accounts for 32 per cent of the country's cultivation area followed by Andhra Pradesh, Maharashtra, and Karnataka.

But these States have reduced their cultivation area because of crop diversification, the AMI&BPC said in the price advisory.

### **TS may approach Centre for helping rain-hit farmers**



The unseasonal rains that lashed several parts of the State for the last few days causing heavy damage to standing crops and financial loss to farmers, is likely to force Telangana government to turn to the Centre seeking assistance to help the farmers.

The rains have caused extensive damage to standing crops in an extent of about 90,000 acres and horticulture crops in over 30,000 acres till Monday, besides spoiling the harvested produce lying in the market yards and in the farm fields. The loss is likely to go up further with rain occurring at some places on Tuesday too.

“The State government has been reluctant in declaring drought-hit mandals in spite of several mandals recording high rainfall deficit,



ranging up to 45 per cent, during the last monsoon (kharif season) with an intention not to force farmers into debt again by seeking re-scheduling of crop loans. However, the unseasonal rains may force it to move the Centre for assistance instead of bearing it on its own,” sources in the Agriculture Department stated.

As most of those who suffered losses are small and marginal farmers, that could push them into a debt-trap again, even as the State government is implementing the farm loan waiver scheme. The loss to horticulture crops, particularly mango, papaya and banana orchards and vegetable crops could as well push their prices up in the coming weeks, the officials explained.

With the Opposition parties – Congress, TDP and BJP – stepping up their demand seeking compensation to the farmers, the State government is compelled to turn to the Centre for assistance. The proposed visit of Union Ministers M. Venkaiah Naidu, Bandaru Dattatreya and Mohanbhai K. Kundariya to Nalgonda and Karimnagar districts on Wednesday to examine the damage is also likely to push the State government towards seeking the Central aid.

### **‘Safe to eat’ vegetables**

A group of entrepreneurs in the agri-processing sector is set to launch a new project to supply ‘safe to eat’ vegetables to households. The programme is to be launched in the three districts of Ernakulam, Kottayam and Thrissur by the end of the month.

The plan is to process vegetables procured from farms and supply to the households. About 400 tonnes of vegetables are to be processed daily. A technology to get rid of the impurities including pesticide content from vegetables has been acquired from Thailand, according to Balram, the head of the project. The processed vegetables will be supplied to households under a ‘safe to eat’ tag.

“Much of the vegetables that we consume are reaching the market with a wax coating that provides a fresh look to the produce; the wax coating will not go away even if the vegetables are washed thoroughly”, says G.Srikumar, coordinator of the programme. The technology is meant to remove the wax coating as well as pesticide content, he says. The processed product is tested by employing a technology developed by

Kerala Agricultural University, he said. Several vegetables marketed under the organic title, without the organic certification from recognised entities, have been found to have harmful contents including pesticide residue. So it is more appropriate to have the 'safe to eat' tag, he argues. He claimed that the vegetables will be fresh as the supply will take place within 24 hours of procurement. Units of NSS have been involved in the distribution, he said.

About 8 lakh packets, each of one kg and half kg are to be supplied per day. Thirty varieties of vegetables, generally consumed by Keralites have been selected for supply. Processing plants have already been set up at Thodupuzha and Chalakudy. The consignments are to be sold at market rates.

### **Eraviperoor shows the way in organic farming**



The Eraviperoor grama panchayat launched harvesting of organically cultivated vegetables for Vishu in Ward 15 of the panchayat on Tuesday. President N. Rajeev said the panchayat launched organic vegetable farming on four acres in the Peruva fields three months ago. The decision to launch cultivation in the Peruva fields that had been lying fallow for several years had generated much enthusiasm among the villagers, he said.

Mr. Rajeev said the farming project was launched in association with a residents' association in the panchayat ward and the Agriculture Department.

The panchayat handed over the entire land to the Kailash Nagar Residents Association to ensure active involvement of the villagers in the project. The idea was to produce vegetables to meet the requirements of 94 families in the association for the Vishu festival.

Mr. Rajeev said 600 kg cucumber, 25 kg beans, 25 kg each of bitter gourd and snake gourd, and 325 kg of spinach were harvested on the first day. The entire produce was sold through a panchayat outlet on Tuesday, he said.

He said the local body would extend its organic vegetable cultivation programme to the other panchayat wards soon.

### **‘Make in India will degenerate into Graze in India’**



Social activist and convener of the National Alliance of People's Movement Medha Patkar said that the present government at the Centre had undone all the positive aspects of the Land Acquisition, Rehabilitation and Resettlement Act, 2013.

Interacting with presspersons here on Tuesday, Ms. Patkar who has voiced her support to Badanavalu satyagraha to bring the focus back on sustainable model of development, said the 2013 version of the Bill had been enacted after nearly a decade of consultations. “But the Modi

government first brought an ordinance nullifying all the gains of the 2013 Act and it is now a throwback to the archaic 1894 version of the Land Acquisition Act”, added Ms. Patkar.

The government was functioning as real estate agents for the corporates and on the one hand it was denying value for agricultural produce on farm land and on the other hand creating conditions for transfer of land from the have-nots to haves, said Ms. Patkar.

“This will create a situation where capitalists and even the foreign investors can buy entire districts and even take over the State and India eventually. The ‘Make in India’ will degenerate into ‘Graze in India’, she cautioned.

Ms. Patkar said Prime Minister Narendra Modi only speaks his mind in the Mann ki baath but does not listen to the farmers. She said if Mr. Modi was ready for a dialogue on the subject then he should have convened one when more than 10,000 people representing more than 300 organisations were agitating in New Delhi on the Land Ordinance which, she said, will facilitate land grab for corporates in the pretext of ‘Make in India’.

She said even in case people are prepared to surrender their land there was no need to remove the consent clause in the Bill. “Let them seek people’s consent but why should the clause be dropped from the Act? she questioned, while pointing out that the land taken away for a few lakhs of rupees are sold for crores of rupees after some time. Ms. Patkar said many politicians were engaged in real estate business and were partners with big builders some of whom got the land for a pittance.

### **Flower price goes up in Salem markets**





The price of all varieties of flowers has registered an upward trend in the Salem flower markets, thanks to the Tamil New Year buying spree by people.

The VOC Market in the heart of the city is a major flower market. Flowers from different parts of the western districts and also from the neighbouring Karnataka are sold here.

The market receives about 10 tonnes of flowers every day.

### **Drop in arrival**

With the commencement of summer season and recurring drought conditions, there has been a drop in the arrival of flower stock to VOC Market.

With people making a beeline for purchasing flowers for offering worship on the Tamil New Year Day, the price of flowers has gone up considerably.

The price of jasmine, which was Rs. 100 a kg last week, has gone up to Rs. 300 on Monday. The price of *kanagambaram* has gone up to Rs. 240 a kg from Rs. 160 a few days ago, *sambangi* from Rs. 80 a kg to Rs. 100 a kg, *mullai* from Rs. 140 to Rs. 200, *arali* from Rs. 50 to Rs. 80 a kg and *kozhikondai* from Rs. 50 to Rs. 80 per kg.

The price of rose stood at Rs. 40 a pack containing 20 flowers. Lotus was sold at Rs. 5 each.

Similar trend continued in all the flower markets across the district. The price of flowers will continue to remain on the higher side during the summer months, flower traders here point out.

### **Uzhavar Sandhais register record sales**



The eleven Uzhavar Sandhais in Salem district registered a recorded sales turnover of vegetables to the tune of Rs. 40.16 lakh on Tamil New Year Day on Tuesday.

A total of 1,108 farmers had brought about 200 tonnes of vegetables, greens, fruits etc to the 11 Uzhavar Sandhais in the district. About 43,500 men and women visited these markets to procure vegetables for Tamil New Year celebration.

As usual, the Uzhavar Sandhai in Suramangalam, topped the list with a sales turnover of Rs. 9.68 lakh. About 250 farmers had brought 46 tonnes of vegetables and 9,250 consumers visited the sandhai .

The Thadagapatti Sandhai attracted 220 farmers who brought 34 tonnes of vegetables. About 6,800 consumers visited the sandhai and procured vegetables worth Rs. 6.44 lakh. The Ammapettai sandhai attracted 84 farmers with 16 tonnes of vegetables. About 4,000 consumers purchased vegetables worth Rs. 3 lakh. The Hasthampatti sandhai, the fourth market in the city, registered a sales turnover of Rs. 2.75 lakh, with 3,300 consumers procuring 13 tonnes of vegetables.

The Uzhavar Sandhais in the rural areas of Attaiyampatti, Attur, Mettur, Thammampatti, Jalagandapuram, Edappadi, Elampillai too received a good stream of visitors from the break of dawn on Tuesday, the State Horticulture Department sources told *The Hindu* .

The price of vegetables such as beans, lady's finger, tomato, snake gourd, ridge gourd registered upward trend. The beans priced at Rs. 48 per kg last week was sold at Rs. 68 on Tuesday. The price of lady's finger stood at Rs. 30 per kg (Rs. 24 last week); tomato Rs. 12 (Rs. 10); snake gourd Rs. 16 (Rs. 12) per kg.

The price of brinjal was Rs. 10 per kg ; sambar onion Rs. 20 per kg , and bellary onion Rs. 22 per kg.

## Rain and hail in parched parts of state add to farmers' woes



With 15 acres of watermelon ready for harvest, Appasaheb Tikhe of Suradi-Sonsanghavi village in Beed's Kaij taluka was *all* smiles until last week, expecting to reap a handsome profit. But heavy rain and hail on Sunday afternoon in the heart of drought-hit Marathwada plunged Tikhe's family into grief. Tikhe had completed the harvest on only two acres and the hail caused *most* of the remaining fruit to split open.

As it continued to rain in Kaij on Monday, Tikhe's neighbour Bagruwan Kanse said the area's farmers, who have been cultivating watermelon since 1993, have been left in debt and penury. Watermelon is expensive to plant, with input costs reaching Rs 70,000 an acre. But it fetches three times that sum in a good harvest. "Never before have we faced such huge losses," said Kanse. "Those who had taken their crop to the market last week were lucky — everything else is destroyed. Tempos couldn't even go to the farms in the heavy rain."

In yet another bout of unexplained weather conditions, rain and hailstorms over the past two days across rural Maharashtra have left the farmsector dreading a bitter summer ahead. Maharashtra government officials pointed out that the state is spending about Rs 10,000 crore on a slew of schemes for the crisis-ridden farm sector — Rs 4,200 crore on a drought relief package, a Rs 2,000-crore sugar sector subsidy, loan waivers and a power subsidy — but the unseasonal rains have exacerbated conditions for already distressed farmers.

In Vidarbha, leftover wheat was affected while in the Western Maharashtra districts of Sangli and Nashik, vineyards and orchards were damaged.

Beed and Latur districts saw about 140 mm of rain over two days, leaving jowar and bajra crop completely destroyed.

In Jalna and Aurangabad, farmers said 90 per cent of the region's popular kesar mango crop, to be harvested next fortnight, was destroyed.

“Kesar is harvested slightly later than other mango varieties —this proved to be our undoing,” said Deepak Deshpande, a farmer from Kaij and a local journalist. Pomegranate, an increasingly popular choice among horticulturists in Marathwada, also suffered extensive damage. In Beed district, worst affected were the banana plantations and watermelon fields, both set for harvest this week.

Suradi-Sonsanghavi villagers call themselves experts in growing watermelons of all varieties. Traders who annually ferry Suradi-Sonsanghavi's watermelon straight to the Vashi APMC market in Mumbai's suburbs will this year not pick up the crop, which fetched local farmers Rs 2 per kg on Tuesday, down from Rs 10-14 per kg last week. An estimated 375 acres of watermelon crop was destroyed in this one village alone.

Banana plantations in Nashik and Jalgaon reported heavy losses as well.



### **Native stamp: Local specials tagged 'home-grown'**

Sweetmeats, fried snacks, palatable fruits, spicy condiments, stunning handicrafts and manufacturing traditions dating back to centuries... these are among the 20 products and categories — comprising agricultural, natural and manufactured goods — that have been received Geographical Indication tags for the financial year 2014-2015.

GI, a form of intellectual property right, provides exclusivity and legal protection to a product in a defined geographical area. It helps a community of producers to differentiate their products in the market and build goodwill, which often fetches a premium price. For consumers, GIs act as a stamp, which help them to identify genuine quality products.



India enacted the Geographical Indications of Goods (Registration & Protection) Act, 1999, to comply with the TRIPS Agreement.

The act came into force on September 15, 2003.

In the list of GI tags, northeastern states have received the maximum number of tags (nine) for agricultural products. These include Naga tree tomato (Nagaland), Arunachal orange, Sikkim large cardamom, Mizochilli, Assam Karbi Anglong ginger, Tripura queen pine apple, Tezpur litchi (Assam), Khasi mandarin (Meghalaya) and Kachai lemon (Manipur). Karnataka received the tag for the Bangalore rose onion and Kerala for Changaliodan nendran banana.

Among handicrafts Uttar Pradesh heads the list (four) with Khurja Pottery, Benares Gulabi Meenakari Craft, Varanasi Wooden Lacquerware and Toys and Mirzapur Homemade Dari. Madhya Pradesh received tag for its leather toys from Indore. The famous Meerut scissors has received the tag for manufactured products. Makrana Marble from Rajasthan known for its milky white colour and smooth texture has got the tag for natural products. The sweetmeat, Joynagar Mocha of West Bengal has received the tag. For its unique spicy blend, the gram flour crispies, Ratlami Sev from MP has received the tag for food products.

The Office of the GI Registry has received 526 GI applications till March 2015. The total number of products with GI tag in the country is 235.

### **Centre must ban sugar import to protect industry, farmers: CM**

Chief minister Nitish Kumar on Monday urged the Centre to ban sugar import to protect the interest of domestic sugar industry and sugarcane farmers. Supporting the demands of Bihar Sugar Mills Association, he also urged the Centre to provide a special relief package to sugar mill owners so that they can pay the dues to farmers.

Addressing a joint conference of sugar mill owners and sugar cane producers after inaugurating a daylong training workshop for farmers here, Nitish also announced opening of a national institute of sugarcane research in Champaran area. He said since majority of sugar mills and sugarcane producing areas are in Champaran region, the state government has decided to open an institute there.

The CM asked state finance minister Bijendra Prasad Yadav and sugarcane industries minister Ranju Geeta to expedite work on the institute. "We have already made provisions for opening such institutions in the agriculture road map. You just expedite the movement of files," he told the ministers.

Recalling the glorious past, Nitish said Bihar used to produce 20% of the country's total sugar till independence. But gradually, the sugar industry developed faster in western and southern states like Maharashtra and Tamil Nadu due to wrong policies of successive governments at the Centre. The CM said he was aware that the country's sugar industry was in crisis these days. The mill owners had cleared up to 90% of farmers' dues last year, but this year only 60% of dues have been cleared.

## THE HINDU BusinessLine

### Fruit exports to the US set to get smoother



The US is ready to sort out the long-pending problem of pre-shipment inspection of farm products which has impeded exports of fruits including mangoes from India.

“Technical teams from the US will visit India over the next few months to inspect the packaging process and pre-shipment handling of fruits such as mangoes, litchis, pomegranates and grapes and give prior approval for smooth exports process,” a Government official told *BusinessLine*.

#### **Stringent rules**

While the US already buys mangoes, pomegranates and litchis, exports are low because of stringent pre-shipment rules of the US Agriculture

Department which stipulate that consignments be inspected by US quality inspectors prior to shipment from Indian ports. There are also inflexible irradiation norms for fruits that exporters find difficult to fulfil. Of the total agriculture products worth over \$100 billion imported by the US every year, India's share is miniscule.

India has long suggested that the responsibility of the pre-clearance inspection and oversight operation for fruits such as mangoes should be shifted to the National Plant Protection Organisation (NPPO).

Once the US agrees to it, it will not have to send its inspectors to inspect each time consignments are to be shipped out, adding to the costs further.

### **Bilateral meeting**

The decision to send inspecting teams to approve India's over-all pre-shipment processes for fruits was taken at a recent video conference meeting between the US Department of Agriculture and the Commerce and Agriculture Ministries from India.

This followed a bilateral meeting on plant health last month where US agreed to India's demand that efforts be made to recognise India's pre-shipment processes. The EU has already approved packaging and pre-shipment inspection process put in place by the Agriculture and Processed Food Export Development Authority, following which it withdrew a prior ban on import of mangoes from India.

"We are positive that the US, too, would approve our processes. It has recently agreed to start importing grapes from India after the country supplied it sufficient information on pest risk analysis.

Problems related to Basmati exports have also been sorted out," the official said.

### **Packaging norms**

India also asked the US to enhance the quota for export of tobacco beyond 3,000 tonnes so that its share could increase.

The US, on its part, asked India to make its packaging norms for food items more flexible to allow weight of food items in pints and ounces instead of kilograms and grams.

India said that it could not do away with its regulation as it followed the global metric convention, but the US could print the weight in both.

## Monsoon calling

<b>Drought-prone Met subdivisions</b>			
<b>(Based on observations between 1875 and 2004)</b>			
<b>West Rajasthan</b>	<b>25</b>	<b>Himachal Pradesh</b>	<b>16</b>
<b>Saurashtra &amp; Kutch</b>	<b>24</b>	<b>Marathwada</b>	<b>14</b>
<b>Gujarat Region</b>	<b>21</b>	<b>Uttarakhand</b>	<b>13</b>
<b>Jammu &amp; Kashmir</b>	<b>20</b>	<b>Andaman &amp; Nicobar</b>	<b>13</b>
<b>Punjab</b>	<b>17</b>	<b>Vidarbha</b>	<b>12</b>
<b>East Rajasthan</b>	<b>17</b>	<b>Coastal Andhra Pradesh</b>	<b>10</b>
<b>Haryana, Delhi &amp; Chandigarh</b>	<b>17</b>	<b>East Uttar Pradesh</b>	<b>10</b>
<b>Rajalaseema</b>	<b>17</b>	<b>West Madhya Pradesh</b>	<b>10</b>
<b>Telangana</b>	<b>17</b>	<b>Lakshadweep</b>	<b>10</b>

Source: IMD Drought probability (%)

Moisture wrecks a farmer's life. Since February this year, lakhs of farmers across 14 states were left with damaged crops. Unseasonal rains destroyed crops on 11 million hectares spread over Rajasthan, Uttar Pradesh, Haryana, Madhya Pradesh, Maharashtra and Punjab. It can lead to up to five per cent loss in this year's wheat harvest. After a deficit monsoon last year and low prices for key crops such as rice and wheat, the unseasonal rains and hailstorms now have put rural incomes under severe stress.

All because of moisture, or to be accurate, too much of it.

Moisture is the fuel that sustains seasonal weather-creating atmospheric systems called western disturbances. Originating from the Mediterranean, the disturbances travel across geographies before moving into north-west India. They stick to their usual frequency of rains once or twice (or even an odd third) a week. But this year, they packed more power as the level of moisture was above normal. In the bargain, there were at least two full-blown low-pressure areas (intensified weather) spinning up over north-west India, sparking off snow in the hills and thunderstorms/rains in the plains. In Jammu and Kashmir, there was a near-repeat of the flood that wrecked the valley six months ago.

### A 'gamble'

Indian agriculture's tryst with monsoon, or the South-West monsoon to be precise, is an age-old one. It is also unique. There is hardly any other climatic event across the globe that can match the Asian monsoon in its grandiose sweep and bearing on the economy. The monsoon that



hits India is the largest in the world because of the extent of area covered, which is practically the whole subcontinent. “Industry in India depends greatly on the monsoon,” says Laxman Singh Rathore, Director General, India Meteorological Department (IMD). “It is believed that only the agriculture sector is affected by monsoon. Despite its contribution to the GDP declining to 15 per cent, it remains a vital sector for rural India where 65 per cent of our population resides. But all other sectors, particularly power, are equally dependent on the season,” adds Rathore.

A century ago, Viceroy Lord George Curzon had said that the Indian economy is a ‘gamble on the monsoon.’ Rathore agrees that it continues to be so. Weather patterns impact farm and industrial output, labour productivity, energy demands and health. India, which is the world’s second-biggest grower of rice and wheat, depends on the June-September rains to water its farms because about 60 per cent of arable land isn’t irrigated. Farmers rely on the timing of the monsoon to decide which crops to grow. The season typically starts on the first day of June. Every few years, parts of the country are impacted due to insufficient rains. This drives up food prices and hits electricity output. This causes inflation, the bugbear of policymakers, to flare up.

Reserve Bank of India’s Governor Raghuram Rajan acknowledged the role of monsoon in taming inflation. “The upside risks to inflation stem from the unlikely possibility of significant fiscal slippage, uncertainty on the spatial and temporal distribution of the monsoon during 2015 as also the low probability but highly influential risks of reversal of international crude prices due to geo-political events,” he said while presenting the credit policy earlier this year. “Food prices will be affected by the seasonal upturn that typically occurs ahead of the South-West monsoon and, therefore, steps the government takes on food management will be critical in determining the inflation outlook,” he added.

A bad monsoon crimps rural incomes and slashes demand, forcing the government to offer more support to farmers. In recent years, the worst monsoon was in 2002, when GDP growth fell to 4 per cent for the fiscal year 2003, from 6 per cent a year earlier. During years of poor monsoons, either tax payers and consumers, or farmers – sometimes all three – get hurt, according to a recent Credit Suisse note. Farming makes up 10.6 per cent of China’s economy and 13.5 per cent of Indonesia’s. In India, while the share has shrunk to around 15 per cent from nearly 30 percent in the early 1990s, it still employs 60 per cent of the country’s massive population.

### **Riding the luck**

The country rode the crest of luck (see tables) with a series of successive good monsoons since 1988. But it has become increasingly unpredictable ever since, giving a torrid time to the India Meteorological Department. And this has exposed the country's nagging reliance on the seasonal rains despite its rapid growth and modernisation in recent times. But, according to investment firm Morgan Stanley, its importance to investors will slowly decline as agriculture's share of the economy falls. The rural economy has also been bolstered by remittances from migrant workers and farm-friendly policies, including a job guarantee scheme for landless labourers and subsidised fertiliser. "From a client's perspective, a commercial investor's perspective, this could be gone in say, maybe, three, four years. But from a human impact perspective, it will remain an issue," Morgan Stanley adds in a recent note.

At present, though, monsoon-watch continues to be an annual financial and political event. And therein is the problem.

### **Searching for perfection**

Monsoon is generated from a seasonal reversal of trade winds in the southern hemisphere, dictated by the northward movement of the sun. Being a global phenomenon, it is influenced by what happens in large water bodies such as the Pacific Ocean and the Indian Ocean (El Nino-La Nina and the Indian Ocean Dipole, for instance).

There are other minute factors that work at the core of the system, any disorder of which can impact monsoon performance – something unfailingly brought home year after year. Evolving weather in India's backyard also has a major say on how a prospective monsoon may perform. The extent to which the land gets heated up during the summer and the length of the winter in the Himalayas are among them. The unpredictability of the monsoon is synonymous with the indifferent success that the IMD has had with various models it has used to base its forecasts. In 2012, the then minister Jaipal Reddy admitted in the Lok Sabha that the IMD's statistical model has limitations and the monsoon forecasts have often gone wrong. From 1998 to 2002, the IMD used the 16-parameter statistical model, which worked well until it floundered on the 2002 drought. The IMD later realised that some parameters in the model showed increasingly weakening correlations. Since then, the new eight- and 10-parameter models using newer parameters have been at work.

The IMD is now working on the National Monsoon Mission (NMM). Under the mission, the IMD will collaborate with weather research organisations nationally as well as internationally to improve monsoon forecasting. "The NMM aims to improve models for short (12-72 hours),

medium (72-240 hours), extended (10-30 days) and seasonal prediction,” says D Sivanand Pai, Head, Long Range Forecasting Division, IMD, Pune. “For example, since the introduction of the Statistical Ensemble Forecast model for long period average, the average absolute error for the 2003-2014 period has come down by 2 per cent in comparison to the previous 12 years. We are also working on a hybrid model using both statistical and dynamic forecasting, as well as trying for multi-decadal forecast,” he adds.

NMM’s focus is on developing a dynamic model (dynamic because it is not based on set parameters) for monsoon prediction and Rs. 400 crore has been earmarked for it over five years. Dynamic models simulate sea and atmospheric conditions and are acknowledged the most dependable across the world. But they are still in the experimental stage when it comes to the Indian monsoon and need a lot more investigating and research. “It is still in research mode. The Indian Institute for Tropical Meteorology is the main coordinator and is interacting with US agency NOAA (National Oceanic and Atmospheric Administration). We are trying to improve forecast across the seasonal model and make it suitable for Indian conditions,” says Pai.

Date palm farmers in Kutch set to get lucrative returns

Gujarat government is in the process of setting up a centre of excellence for post-harvest treatment of dates that would revolutionize the date palm cultivation in the state. Very soon, farmers would start getting lucrative returns on their date produce. The centre, which is being developed under the Indo-Israel Agriculture Project, is expected to start by the end of this financial year at Kukama village in Kutch.

Sources said that the Indian harvest of dates coincides with monsoons and the highly perishable fruit is consumed in its raw form unlike the dates that are imported.

"We have to consume the fruit when it is in the second stage of ripening. It has four stages of ripening. The centre will work towards conversion of this raw stage to the ripe stage of the fruit and also for the cold storage of the harvest so that farmers can sell it at a later stage and earn handsome amount from the produce that has been harvested at the second stage of ripening," said an official.

The four stages of ripening of the fruit are Kimri, Khalal, Rutab and Tamar.

Sources said that Gujarat has 17.17 thousand hectare of land under date farming which is the maximum in India and production amounts to 138.17 metric tonne from approximately 17 lakh trees.

"We experimented with the cold storage of the produce for three months last year and were able to sell it at Rs 800 to Rs 1,000 per kg at a horticulture export event in New Delhi whereas the small farmers who have to quickly sell off their product on account of its perishability hardly get Rs 80 per kg to Rs 100 per kg for their produce.

"Our local variety is very good and even Israel is interested in it. There have also been efforts made in promoting its tissue culture," said the official. It was disclosed that the Kutchi variety is pretty popular and some of the bigger farmers in the district are actually exporting the variety.

Sources said that besides being consumed directly, there are several other products that can be derived from dates. These include cookies, syrup, pickles, etc.

"Our focus will be only on post-harvest process. There is a cultivation project of dates already running in Rajasthan in Jodhpur and Jaipur," said the official.

### **Wet spells wipe out most mango orchards**

It seems mango lovers would have to be satisfied with water melons this summer.

Five spells of unseasonal rains since February have caused massive damage to the succulent kesar as well as Valsadi hafoos (alphonso); the latest wet bout being the most destructive.

On Tuesday, TOI talked to large number of farmers in Amreli and Junagadh, the maximum kesar producing districts as well as hafoos orchard owners in Navsari, who described how their orchards have been destroyed.

Agriculture experts seconded their concerns. An average 70% of the kesar and hafoos has been damaged, according to experts and farmers.

In Dhari region of Amreli, tonnes of mango fruits withered away due to



gale and rain were lying scattered in many orchards. "No one is ready to buy these fruits for even Rs 5 per kg. The stormy weather has resulted in many trees, some over 20 years old, falling," said Tinu Laliya, an orchard owner in Jar village near Dhari.

For the first time ever, mango growers are planning to seek relief package from the government.

"Over 70% of the crop has been destroyed this year. Apart from fallen fruits, the quality of the remaining fruits would be badly affected and there would be few buyers," said Vaju Dobariya, orchard owner and member of Talala Agricultural Produce Market Committee.

"While branches of old trees fell, the newly planted trees were uprooted in majority of the orchards," said Ashraf Kamyani from Mitiyala village.

N I Shah, in-charge of Pariya farm of Navsari Agriculture University, told TOI, "Inclement weather has ruined majority of the mango crop in the region. In March-end, it was extra heat that led to dropping of small fruits and now rains and humidity has led to lack of pollination and flowering that happens in later stages. This also resulted in fruits not setting on the branches. Moreover, it has increased the threat of insect and pests on the trees." Jigar Nayak, a farmer in Gandeva village of Navsari said, "We have only 40 per cent of the fruits on our 1,500 trees."

### **Arrivals rob Jasmine's fragrance**

Higher arrivals in the Sathyamangalam flower market are pulling down jasmine prices.

Jasmine is cultivated on over 20,000 hectares in Sathyamangalam and some 20 villages in Erode district. Every day during the demand season over 25 tonnes of jasmine and 40 tonnes of Arabian jasmine (*mullai*) are produced. Jasmine has good demand in the UAE, besides domestically from Karnataka and Kerala. But only quality flower is preferred and ordered by the Arabs. Now, due to Tamil New Year and also *Vishu* in Kerala, the sale of jasmine has increased with arrivals touching 12 tonnes on Tuesday.

SR Muthuswamy, President, Tamilnadu Flower Cultivator Farmers Association, said, "In the morning the jasmine was sold at ₹500 a kg and slowly it started declining and at noon it was sold at ₹200. It fell further to ₹120."

Usually, during summer production increases and prices decrease, but current prices are unremunerative. “We are getting only medium and low quality jasmine for sale, so buyers are quoting lower price. On Tuesday, the Arabian jasmine went for ₹200 a kg,” he said.

# Business Standard

## University generated technologies reach rural entrepreneurs in Assam

An [Agriculture](#) Innovation partnership, an initiative which has a potential to create a cluster of small ventures that can adopt university supported technologies, is stated to have been successful in Assam.

The partnership, supported by the United States Agency for International Development (USAID), has brought together American land grant universities, Indian agriculture universities and a Hyderabad-based private sector consultancy firm Sathguru to play a role in transfer of university generated technologies to reach [rural entrepreneurs](#) in Assam.

Under the partnership, the process technologies for fruits, vegetables and [dairy](#) products, developed by Assam Agriculture University with the help of [Cornell University](#) of the US, have been delivered to small entrepreneurs.

“This has resulted in value-added fruit and vegetable products, dairy products and conversion of bio mass into particle panels,” [Sathguru Management Consultants](#) founder director, K Vijayaraghavan, told Business Standard.

According to Vijayaraghavan, though Assam produces a number of fruits such as [pineapple](#) and spices like ginger, a large quantity of them decay due to lack of local markets for fresh produce. Almost a third of the 220,000 tonnes of pineapple produced in the state get wasted due to lack of adequate storage facilities and local purchases. Due to difficult terrain for road movement, the fresh produce do not get easily transported to urban areas of other states.

Vijayaraghavan said Sathguru, which is currently working with Assam and Banaras universities, was looking at how universities could trigger technologies for adoption by small entrepreneurs.

He said Innovation partnership had demonstrated how solar-dried and low-heat processed fruits such as pineapple and spices like [ginger](#) could provide shelf-stable products for the urban markets.

“The partnership has not only provided hand-holding support to small entrepreneurs to embrace appropriate technologies to bring their rural products to urban markets, but also supported a number of self-employed youth to seek financial support from bank to establish small ventures,” said Suresh from Sathguru who has been engaged in the region for over four years.

Suresh said small entrepreneurs in Assam were trained to convert fish and [poultry](#) into shelf-stable pickle products, now branded and distributed not only in Assam but also in other parts of the country. This effort was successfully carried out by a women entrepreneur.

While the dairy based beverage, according to Suresh, had been transferred to an existing dairy venture in the state, the technologies relating to processing of fruits and vegetables and meat products have been transferred to two local entrepreneurs who came forward to set up their units. The pickle unit has the potential to do about Rs 5 crore business this year and the fruits and vegetable units have the potential to achieve Rs 1 crore annually.

“The approach such as this has the potential to create a cluster of small ventures that can adopt university-supported technologies with low investment of Rs 50 lakh to Rs 1 crore per venture,” he added.

