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THE HINDU

Odisha to launch Onion Mission; to give loans, seeds to farmers



With onion prices touching Rs. 45 per kg in retail markets, the Odisha government on Monday decided to launch Onion Mission and provide easy loans and high yielding seeds to farmers.

Though Odisha produces 3.95 lakh metric tons of onions every year against its requirement of 2.97 lakh metric tons, agriculture minister Pradeep Kumar Maharathy said people face shortage as farmers sell their produce to traders due to lack of cold storages.

Stating that the Odisha onions were being procured by traders from Chhattishgarh and Madhya Pradesh, Mr. Maharathy said steps would be taken through the Mission to create cold storages for farmers. As many as 300 cold storages were required to keep onions within the state.

Mr. Maharathy said officials engaged in market intelligence have been asked to keep a vigil on the hoarding of onion and potato and also informed that the potato procurement rate has slowed down due to the floods in West Bengal.

In the mean time, the state cooperation department has taken a decision to set up additional ten cold storages through Regional Cooperative Marketing Societies (RCMS).

Onion, which was selling at Rs. 20 per kg barely a week ago, had spiralled to Rs. 40 a kg now.

“Higher price at the source markets is the reason behind increase in price of onion in the state,” local traders pointed out adding the current rates would in likelihood continue till the new crop arrived in the market.

Aqua farmers to get help to reduce losses



Holding that “jungle law” was in force in aquaculture sector in the State, Commissioner of Fisheries Department Ram Shankar Naik on Tuesday said the department was keen on providing technical support to aqua farmers to help them reduce losses.

Participating as the chief guest at a workshop on the ‘Training Needs and Harmonisation of Aqua Lab Operations in Andhra Pradesh’ held at the State Institute of Fisheries Technology here, Mr. Naik said there was no discipline among aqua farmers, and that most of them did not adhere to government norms. “Diseases are being diagnosed in one fish tank or the other with frequent intervals. Though the department is providing technological support to farmers, there are very few takers,” he observed.

Mr. Naik said the government had recognised fisheries as one of the growth engines and a means to achieve double digit growth.

“There is vast potential to increase revenues, for which there is a need for all aqua farmers to fall in line and follow guidelines. From our side, we are focusing on addressing long-pending problems including the licensing system,” he added. He said he was personally interacting with farmers in coastal districts to garner information about ground realities.

“The government is ready to allocate funds to this sector. We are on the job of chalking out a comprehensive plan to make optimum use of the resources available,” he added. East Godavari District Collector H. Arun Kumar said there was huge potential for development of fisheries in the district, and that plans were afoot to simplify norms to accord permission for converting agriculture lands for aquaculture purposes.

He added that the idea was to encourage fishing in tail-end lands, which were not suitable for paddy cultivation in delta areas. Joint Director of Fisheries M. Basava Raju and SIFT In-charge Principal V. Venkateswara Rao were present.

4 lakh hectares of standing crop at risk in rice-bowl districts

GLOOMY SCENARIO

- ➔ **No water for this year's kharif**
- ➔ **Kharif crops sown in in 12.87 lakh hectares**
- ➔ **Half the paddy farmers already transplanted the crop**
- ➔ **They are now entirely at the mercy of borewells**
- ➔ **Farmers take up foodgrains in 5.16 lakh acres, oilseeds in 3.54 lakh acres**

The fate of standing crop over four lakh hectares in Krishna, Guntur, Prakasam and West Godavari districts has become uncertain with the Krishna River Management Board (KRMB) announcing that there is no water for this year's kharif in any of the state's reservoirs.

According to statistics released by Agriculture Minister Prathipati Pulla Rao last week, farmers have sown kharif crops in 12.87 lakh hectares and are waiting for either the rains or water released from reservoirs.

But the KRMB, which met on Monday, has declared that there's water only for drinking purposes in the Srisailem and Nagarjuna Sagar reservoirs. According to the Agriculture Department, 1,14,138 hectares have been sown in Krishna, 1,45,859 hectares in Guntur, 45,429 hectares in Prakasam and 1,29,331 hectares in West Godavari districts.

Godavari water

While some water can be drawn from the Godavari to irrigate parts of West Godavari – and the rains have been good there – there's no such recourse in Krishna, Guntur and Prakasam districts.

Half the paddy farmers have already transplanted the crop, said K Srinivas Prasad, a farmer from Kankipadu mandal. These farmers are entirely at the mercy of borewells, he said. The other half who have not transplanted yet have to reconcile to losing their nurseries.

At the end of the second month of the kharif season, farmers went ahead and sowed various types of crop anticipating rains or release of water from the reservoirs. Farmers across the state sowed foodgrains (paddy, jowar, bajra, maize, ragi) and pulses (redgram, greengram, blackgram, horsegram) in a cumulative 5.16 lakh hectares and oilseeds (groundnut, sesamum, castor, sunflower, soyabean) in 3.54 lakh hectares.

Food safety certificates for veggies going to other States

Food Safety Officers on Tuesday began issuing licences to vegetable and fruit vendors in the city under the Food Safety and Standards Act, 2006.

After reports of pesticide residue in vegetables supplied to Kerala, the Tamil Nadu government decided to issue food safety certification before the produce was sent to the neighbouring States.

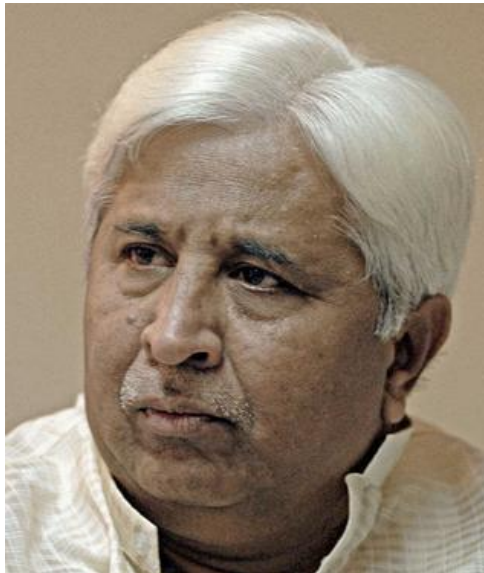
R. Kathiravan, Designated Officer of Tamil Nadu Food Safety and Drug Administration Department (Food Safety Wing), issued the certificates to 30 vendors on Tuesday.

As many as 242 vendors and traders have applied so far for the licenses, which would be issued after physical verification of the shop and the documents.

A camp to collect applications from vegetable vendors was organised here on Friday by the Departments of Agriculture, Agri-Marketing and Horticulture besides the Food Safety Wing. These departments are also part of a committee formed by District Administration to tackle the issue of excess pesticides in vegetables and fruits.

District Collector Archana Patnaik is the chairperson of the Committee, which has been mandated to conduct awareness among farmers about the adverse effects of using excess fertilisers and chemicals for crops.

Cloud seeding soon to help overcome farm crisis



The State government has decided to take up cloud seeding to overcome the crisis in the agricultural sector owing to deficient rainfall this year, according to H.K. Patil, Minister for Rural Development and Panchayat Raj.

Mr. Patil, who was here to review the implementation of rural development programmes in Koppal district, told presspersons on Monday night, that the process of cloud seeding would commence at the earliest with the hope that in the event of its success, it would help tide over rainfall deficiency to some extent besides instilling confidence among farmers and curbing suicide.

Mr. Patil was of the view that the State had not received the expected rainfall this year.

As a result, the State was reeling under a drought-like situation on the one hand, and on the other farmer suicide was on the rise. Private moneylenders charging exorbitant rate of interest resulting in economic loss to farmers was another reason that had contributed to the growing number of farmers ending their lives. “The government has viewed ‘meter baddi’ as a social torture and has taken legal action against moneylenders, besides instructing banks not to issue notices to farmers and initiate loan recovery process,” he said.

Mr. Patil also said that the government was contemplating coming out with a new policy of rehabilitating people displaced due to submersion of villages under irrigation projects, with thrust on enabling them, especially farmers, to rebuild their life in a new place.

Mr. Patil said that the absence of a pro-people/farmer rehabilitation policy, farmers were forced to undergo problems when taking up cultivation and allied activities.

“Farmers, in tune with their agricultural and allied activities, would get their houses suitably constructed with space for cattle shed, haystack and the like. But in villages that had been shifted due to irrigation projects, the sites allotted to them were small and there was no space for their daily routine activities. Keeping all these aspects in view, the government will come out with a new rehabilitation policy after discussing the issue with all concerned,” he said.

Groundwater levels rise in Mysuru district: study



Groundwater awareness initiatives are taken up at the gram panchayat level in Mysuru.— file Photo

Has the groundwater situation improved in Mysuru district? If the recent study by the Department of Mines and Geology is any indication, the answer is yes.

Out of 58 observatory borewells monitored by the department, 48 reported rise in water level, while seven reported drop in levels. The level has remained intact in another well. The observatory borewells are spread across the district, including the areas which normally reports water crisis.

“The study was done to monitor the groundwater situation. The wells are only used to watch the levels. Compared to the previous year, the situation is better, thanks to good rainfall last year. The rise in levels in water bodies helped rejuvenation of the water table,” said senior geologist Ambika.

Speaking to *The Hindu*, Ms. Ambika said the department has been monitoring the wells for the past 30 years, and works out action plans for improving the groundwater situation.

“The situation is assessed based on the depth of the water table using certain standard procedures.” The seven borewells which reported drop in levels may get recharged as has happened in the past. “There might be some fluctuations,” she added.

The outcome of the groundwater situation assessed by checking the levels in observatory wells gives a general picture of the situation. “Based on the reports, we read the scenario,” the senior geologist explained.

The seven borewells which reported drop in levels are located at Chikkehiriyur in H.D. Kote taluk; Kilanapura in Mysuru taluk; Sindhuvallipura, Deboor and Hura in Nanjangud taluk, and Bannur in T Narsipur taluk.

The senior geologist said groundwater awareness initiatives are taken at the gram panchayat level and also in schools. The department had installed hoardings/flex boards in 14 to 15 GPs for spreading the message of conserving the groundwater.

Recently, water from 17 borewells had been subjected to quality tests and the results show water is safe for consumption and no impurities had been found, the authorities said.

One more meeting likely to fix compensation

Officials have told a meeting of farmers that the quantum of compensation for areca nut trees felled for erecting towers for the Nagapattinam — Dharmapuri 765 KV transmission lines will be announced soon.

They indicated that the district administration may convene another meeting to finalise the quantum of compensation for areca nut trees.



The transmission lines pass through villages in Bethanayakkanpalayam, Vazhappadi and Attur blocks in Salem district.

About 300 coconut and areca nut trees have already been felled in Attur block for erecting the towers and laying of transmission lines.

The farmers had presented a petition to District Collector V. Sampath recently complaining that compensation has not been paid even after six months of felling the trees.

The Collector called a meeting of representatives of farmers, revenue officials, and Tangedco officials.

Vijay Babu, Revenue Divisional Officer, too attended the meeting .

C. Tamilselvan, former MLA, who attended the meeting said that the non-payment of compensation to farmers had affected their livelihood.

He said that more than one lakh coconut trees, and 50,000 areca nut trees would be felled for the execution of the project in the district.

More than 10,000 coconut trees, and 25,000 areca nut trees would be felled in Bethanayakkanpalayam, and its surrounding areas alone.

Mr. Tamilselvan said that Rs. 25,000 should be the compensation amount for a coconut tree, and Rs. 10,000 for an areca nut tree felled for the project. The compensation amount should be disbursed before felling the trees, he said. The Tangedco officials told the meeting that the Agriculture Department has fixed Rs. 18,500 as compensation for a coconut tree.

The Horticulture Department has to fix the compensation for the areca nut trees, and the Forest Department for teak.

‘Declare Yadgir as drought-hit’

Demanding that the government declare Yadgir district as drought-hit, farmers, under the banner of the Karnataka Rajya Raitha Sangha, staged a protest outside the Deputy Commissioner’s office here on Tuesday.

They said that those who had sown green gram in the kharif season were likely to lose their crops due to the failure of the monsoon at the crucial stage of flowering.

If the district did not receive sufficient rain in the next couple of days, other standing crops such as paddy, cotton and red gram too would be destroyed.

They demanded that the State government take this issue seriously, declare the district drought-hit, and release compensation to farmers. The protesters criticised Krishna Bhyaregowda, Minister of State for Agriculture, for not visiting the family members of farmers, who committed suicide recently.

No hope for sowing kharif crops in Kalaburagi district



With no sign of rain, whatever little hope remained on sowing kharif crops — particularly red gram, the main crop here — and saving the standing crops on around 2.41 lakh hectares (ha), is diminishing fast in Kalaburagi district.

Officials in the Agriculture Department told *The Hindu* here on Tuesday that the situation was really bad and farmers were left with very little time to take up sowing.

As per the weather forecast, there was little or no chances of the district getting good rain till August 15.

The officials said the kharif season, for all practical purposes, would come to an end on August 20 and beginning the cultivation of red gram in or after the second week of August in case of some rain, would be risky as the crop would be prone to flower-dropping and pest attacks during winter.

All the seven districts of Hyderabad Karnataka experienced deficient rainfall from the beginning of the south-west monsoon in June, until August 3.

The overall deficit in rainfall from June to August 3 in Kalaburagi is a whopping 55 per cent. Against the normal rainfall of 281.7 mm, the district received only 126.5 mm.

The shortfall of rain during the period in Afzalpur taluk was the highest at 73 per cent, followed by 72 per cent in Aland taluk, 64 per cent in Jewargi taluk, 61 per cent in Kalaburagi taluk, 43 per cent in Sedam taluk, 42 per cent in Chittapur taluk and 36 per cent in Chincholi taluk.

The lack of rainfall in July would hit those who had taken up sowing of short-duration cash crops such as green gram on 24,676 ha and black gram on 16,712 ha and bi-seasonal crops such as red gram on 1.53 lakh ha.

Green gram and black gram crops are seeing stunted growth, with very little pod formation reported in the areas where they were sown, and the yield was likely to be very poor, sources said.

Red gram, which can sustain long dry spells, is also reportedly seeing a stunted growth, and even if there is some rainfall in the coming days, the crop yield would be very low.

Although the Agriculture Department had suggested sunflower as an alternative crop in case of lack of rainfall in July, farmers were not coming forward to take the risk due to the uncertain weather conditions.

Against the target of 22,550 ha for sunflower, sowing has been completed on only 1,699 ha so far. "The situation is really bad...we are keeping our fingers crossed in the hope of some good rain to save the situation," said a senior official.

Eco-friendly way of treating water



Panchayat head of the Chinna Kalapet fishing hamlet in Puducherry, R. Nagaraj, points to the area where wastewater from the houses in the village used to be let out.

“Water used to stagnate here, leading to the breeding of mosquitoes. Now, this area is clean and the villagers are happy about it,” he says. The change has come about after a team from the Centre for Pollution Control and Environmental Engineering, School of Engineering and Technology, Pondicherry University installed a low-cost and eco-friendly wastewater treatment plant in this village close to the coastline.

The plant, based on a technology called ‘SHEFROL’ (sheet flow root level), has been designed by Professor S.A. Abbasi from Pondicherry University, and is a bio-reactor which uses the water hyacinth (*Eichhornia crassipes*) to absorb nutrients, pathogens and micro organisms from water. Grey water or domestic sewage from 38 houses is fed into the plant which measures around 9 metres by 2 metres, and has a capacity of 10,000 litres.

The plant consists of sand bags placed in pits and channels, a sedimentation tank and a non-permeable sheet which ensures wastewater does not seep into the ground. Costing only around Rs. 15,000, the university team says that the plant is affordable.

At Chinna Kalapet, the treated water is being used to irrigate a patch of Casuarina saplings. The plant was set up in November 2014 by PhD. student Ashraf Bhat as part of his thesis work with the guidance of Assistant Professor Tasneem Bhat.

The SHEFROL technology was first tested within the Pondicherry University in 2006 to treat the wastewater for one building. Subsequently, two more plants were installed in the university, which use duckweed, water hyacinth and salvinia. A patent claim for the SHEFROL technology, backed financially by the Department of Biotechnology, Union Ministry of Science and Technology, was registered in 2011, and published in the Official Journal of The Patent Office, India.

Ms. Tasneem and Assistant Professor S. Gajalakshmi of the university are the co-applicants of the patent. The patent claim remains undisputed, says Mr. Abbasi.

“This plant takes only six hours to treat wastewater. It also rids it of its turbidity and smell. The villagers were convinced about the plant because of its flexibility, and its ability to safely discharge wastewater. The plant can be easily dismantled and set up in a new place,” says Mr. Bhat. Some of the advantages of the plant include its ability to be scaled up or scaled down according to the need. So, it can be customised to be used for one house or a large suburb, say the team members.

The plant is low maintenance one, says Mr. Abbasi. “The villagers were trained to use the plant in a day. They have been maintaining it since installation. The robustness and ruggedness of the plant is what makes it unique. It can withstand any contingency,” says Mr. Abbasi.

The team has prepared a complete inventory of commonly available plants which are present in different regions, thus emphasising that the SHEFROL technology can be used anywhere. “The technology makes use of the topography and gravity, thus doing away with the requirement of pumping water,” says Ms. Tasneem.

Though the technology has been patented, the inventors are offering free transfer of technology, like how it has been done in Chinna Kalapet, to communities and in public interest, say the team. “We want more places to take up this technology. It is inexpensive, efficient, simple, robust and eco-friendly,” concludes Mr. Abbasi.

Workshop on indigenous farming in Thrissur

The Kerala Agricultural University (KAU) will organise a workshop on indigenous knowledge in organic pest and disease management of vegetables on Thursday.

The workshop to be held at the Kerala Sahitya Akademi Hall, involving traditional farmers and scientists, is intended to consolidate, preserve and popularise the traditional know-how in pest and disease management without hazardous chemical agents.

The workshop being organised by Thrissur Krishi Vigyan Kendra (KVK) will be inaugurated by KAU Executive Committee member M.P. Vincent, MLA, at a function to be presided over by Therambil Ramakrishnan, MLA. District Panchayat president C.C. Sreekumar will be the chief guest.

Sandalwood trees to spring back to life in Bargur forest

The Forest Department has planned to undertake massive planting and sowing of sandalwood in North Bargur, South Bargur and Ennamangalam Reserve Forest areas during the monsoon season.

As many as 55,000 saplings are likely to be planted during October-November in the thick of rainy season, Department officials said. The Department extracts heartwood from dead and dried trees.

The number of sandalwood trees had diminished rapidly during the lifetime of smuggler Veerappan in the forest area.

Sandalwood oil made of heartwood and roots is used extensively in perfumery industry, and the wood is used for making idols. The Forest Department is hopeful of restoring the numbers in the Bargur forest area.

Regeneration of the trees was gradually taking place from the roots.

Sandalwood trees grow best at altitudes ranging from 600 to 900 metres above sea level, the height in which Bargur reserve forests are located. The forest area has a cool climate, moderate rainfall and sunshine, the requirements for development of the heartwood.

The Department was also in the process of sourcing seeds that would easily germinate in natural conditions during the monsoon season, District Forest Officer of Erode Division Nagarajan said. The seeds have to be dibbled in the bushes

According to studies, heartwood formation is good in trees of 30 to 60 years attaining a girth of 40-60 cm.

But, sustaining the life of the trees is tough. Sandalwood being a semi-parasitic plant, draws on the nutrients of other plants to survive.

Since sandalwood plant requires sunlight for growth, the host plants will have to be pruned periodically. But once they grow, the trees are resistant to environmental stresses, pests and diseases.

Heavy rain gladdens farmers

Heavy rain on Monday evening gladdened farmers who are already relieved over the comfortable water level in the Bhavanisagar Dam.

Gobichettipalayam received the maximum rainfall of 62mm as on Tuesday morning followed by 56 in Kavindapadi, 32.4 in Ammapettai, 30 in Modakurichi, 25 in Erode, 12 in Gunderipallam Dam, 7 in Sathyamangalam, 5.2 in Bhavani and 5mm in Perundurai.

Precipitation of run-off water was noticeable in Erode and its surrounding areas, official sources said.

Water has already been released for cultivation in the ayacuts of Kalingarayan and Thadapalli-Arakankottai canals. Farmers are certain that the schedule of releasing water into LBP canal from Bhavani Sagar Dam on August 15 will be maintained in view of the comfortable storage of 19.5 tmc.

At the same time last year, the dam had 11.7 tmc of water.

The farmers are glad since there will be enough water available for raising dry crops as well.

As on Tuesday, the water level in the dam stood at 86.69 ft compared to 71.78ft last year. The water inflow, however, was only 125 cusecs, as there has been no rain in the hills.

A discharge of 1,550 cusecs was made into the river to feed the Thadapalli-Arakankottai and Kalingarayan canals.

Water level at Mettur

The water level at the Mettur Dam stood at 96.32 feet on Tuesday against its full reservoir level of 120 feet. The inflow was 3,573 cusecs and the discharge 2,000 cusecs.

Native trees to get a fresh lease of life

Scientists at the Kerala Forest Research Institute at Peechi are gearing up for a programme aimed at protecting native trees from the threat posed by the proliferation of invasive plant species.

Designed to perpetuate the memory of former President A.P.J. Abdul Kalam, the programme will focus on preserving big trees in public places by removing the invasive plants threatening their existence.



“Many such giant trees along the roadsides or in temple grounds can be found completely smothered by creepers or plants,” says KFRI Registrar T.K. Dhamodaran. “Though research on invasive species has picked up momentum, there has been little or no effort to conserve the trees threatened by these plants,” he said.

Mooted at a remembrance meeting held at KFRI last week, the programme is envisaged as a tribute to the late President who had proposed a national level mission to plant a billion trees. It involves manual removal of the invasive species and application of weedicide to prevent subsequent infestation.

The pilot phase will cover Thrissur and neighbouring districts. KFRI is planning to seek technical advice from the Fire and Rescue Services and the Kelappaji College of Agricultural Engineering and Technology under the Kerala Agricultural University to procure equipment like the skylift and safety harness needed for the project.

“It requires some amount of skill to remove the weeds from the tall trees and apply weedicide. Considering the paucity of skilled workers, we are thinking of setting up a labour bank. That way, the programme will also provide job opportunities at the local level,” said Dr.Dhamodaran, who is attached to the Wood Science and Technology division at KFRI.

‘Dairy farmers will get required support’

Minister for Irrigation T. Harish Rao said that the government would extend the required support to dairy farmers to improve production.

Participating in a series of programmes at Siddipet on Tuesday, Mr. Harish Rao said that farmers can increase their revenue by entering dairy farming and it would help them during tough times. “The government has increased the procurement price of Vijaya Dairy by Rs. 4 per litre to encourage and benefit dairy farmers and has been offering insurance for cattle. DRDA is also providing cattle for women,” he said and urged the Animal Husbandry and Agriculture Department officials to be available for farmers at all time.

Tobacco farmers launch 'Delhi Chalo'

Coinciding with the Monsoon session of Parliament, farmers' leaders have embarked on a 'Delhi Chalo' programme to press for intervention by the Centre to create buoyancy in the market.

Andhra Pradesh Rythu Sangam district Secretary D. Gopinath said farmers' leaders would camp in Delhi from August 6 to 8 and meet, among others, the Union Finance, Agriculture and Commerce Ministers to highlight the problems of tobacco growers.

"We will drum up support for our cause," YSR Congress ryots wing district president M. Subba Reddy said.

Meanwhile, Virginia Tobacco Growers Association president Ch. Seshaiiah feared a market crash if the Union and State governments delayed purchase of tobacco by State-owned agricultural marketing agencies.

Former Tobacco Board member Ch. Ranga Rao explained that only about 85 million kg of the total authorised crop of 172 million had been marketed so far at an average price of Rs. 105.85 per

"Tobacco prices are likely to fall further if ryots are left at the mercy of traders," he said, adding that medium and low grades of tobacco, which did not find favour with traders, accounted for a lion's share of tobacco production this year.

Instead of spending huge sums on the anti-smoking campaign, the Centre could consider providing a compensation of Rs. 8 to Rs. 10 lakh per barn to those farmers who volunteered to quit tobacco cultivation altogether, Mr. Seshaiiah argued.

Farmers cannot be blamed for excess production of about 20 million kg this year, he said and added that unseasonal rains in January were responsible for improved productivity but decline in quality.


Lowering the crop size for the next year to 120 million kg without helping ryots to dismantle tobacco barns would push up the cost of production.

Choice for organic food catching up

Healthy, unadulterated food is not just a privilege of the rich.

With growing awareness among people about the significant impact of food on health, more and more people are seeking to find out where the food comes from and how it is grown.

This has given rise to a new market of organic food products.

GOING ORGANIC		■ Organic ■ Non-organic
	Rs/kg	
	WHITE RICE	65 50-55
	TUR DAL	160 155
	MOONG DAL	180 160
	Rs/500 gms	
TAMARIND	70 70-75	
Rs/100 gms		
JEERA	40 50	

According to a recent report published by Confederation of Indian Industry (CII), the organic food market in India is expanding at a staggering rate of 400 per cent every year.

Visakhapatnam, too, is gradually witnessing a feisty wave of support for organic products in the form of small businesses and on social networking forums. While organic food may not be mainstream, yet in the city, nevertheless, it is more affordable and accessible than before.

Most city malls and hypermarkets in the city have a dedicated section of organic products. In fact, the growing awareness for organic food can be assessed in a Facebook page called Vizag Safe Healthy and Organic Food which has around 500 members who discuss health tips and benefits of organic food and also studies conducted on food practices.

Popular perception

However, the popular perception about organic products is that they are pricey. A Vizag-based social enterprise called Sumaja EcoWellness is aiming at not only address this issue through awareness camps, but also working in tandem with farmers' cooperative societies across India to help them reach out to bigger markets.

The firm, that recently launched its second store in the city, works with four farmers' cooperative societies -- Sahaja Aharam Producer Company, Samarthak Producer Company, Valnadu Sustainable Agriculture Company and Titos Organic -- in Andhra Pradesh, Telangana, Rajasthan, Maharashtra and Tamil Nadu and helps them market the organic produce in Visakhapatnam. "In a direct market, for every Rs. 100, a farmer makes a gain of just Rs 20. But in the cooperative society model, we ensure that at least Rs. 50 goes to the farmer. At the same time, our product pricing is affordable due to the direct access to farmer's cooperatives," said Bandaru Naresh of Sumaja EcoWellness.

Worldwide research shows that organically produced foods are higher in antioxidants and other nutrients than conventional foods which have high levels of pesticides and chemicals. "In fact, study shows that 51 per cent of the food is contaminated in India with pesticide residues. In such a scenario, many are looking out for organic products," Naresh added.

Diverse products

Sumaja EcoWellness is focussing on bringing diverse products including some rare ancient heritage grains like samalu (little millet), korralu (foxtail millet), value foods made with ancient rice varieties, and other healthy food such as jawar rava, khandasari sugar, jaggery powder, flax seeds and general grocery items. Sumaja EcoWellness has outlets in Seethammadhara and Gopalapatnam.

Now, an app to fight plant diseases



The proliferation of affordable smartphones in the market and its ever increasing user base, especially among farmers, has prompted a senior agricultural scientist to develop an android application on farming.

M. Reddi Kumar, Plant Pathologist at the Regional Agricultural Research Station's (RARS) Institute of Frontier Technology, developed an android application, Greeshma, which highlights various diseases affecting the crops and the measures to control them.

The app, which would be released in a few days, can work offline and is available free of cost. Speaking to *The Hindu*, Dr. Kumar maintained that the app would not only specify the diseases affecting the crops but also indicate the changes in various stages of crop growth.

“We have included the information about five major crops in Andhra Pradesh such as groundnut, paddy, sugarcane, sunflower and maize. Besides this, we have also incorporated details about 'Mushroom Cultivation' as several farmers are growing them on a small scale and cottage industries,” he added.

Further elucidating on the functioning of the app, Dr. Kumar said that there were provisions indicating the usage of pesticides, including dosage and other procedures for applying it to a particular crop. “Our main motto was to help the farmers identify the plant disease and take necessary action. It will also be helpful to agricultural officers, agricultural extension officers and students, due to its role as a repository,” he explained.

Dr. Kumar's tryst with android app development began with a six month online course, before coming up with the idea of Greeshma App. “It (app) is currently undergoing quality check process and other procedures, and will be available as a free download in another few days,” he said. In a bid to bring awareness about the new development, Dr. Kumar said that they would organise training programmes for agricultural officers from various departments and subsequently to the end users i.e., farmers.

Will quinoa overtake millet?



Local farmers have started growing quinoa instead of the usual crops due to the high demand

Hollywood diva Jennifer Aniston credits her svelte figure to this super food and closer home, actor Arjun Kapoor vouched for it during his weight loss mission. Now, the elite and upper middle class citizens too have taken a fancy for quinoa, an expensive South American origin grain. Result? Local farmers have started growing quinoa instead of the usual crops.

But food activists are far from impressed with the trend and have pitted the locally produced millet variants as a superior nutritional food against quinoa, for Indians.

“Ours is a leading nation in agri-biodiversity but new foods continue to sweep us off our feet. First it was oats, then soya and now it is quinoa,” exclaimed P.V. Satheesh, National Convenor of Millet Network of India (MINI), Hyderabad. “Nobody even knew about quinoa till a few years ago but now it is being grown by farmers in Visakhapatnam, Anantapur and other districts. We are concerned because we feel quinoa is a big threat to the local crops and blindly following a trend is not good for civilization.”

Some of the millets including Pearl, Foxtail, Little and Proso have similar nutrient values as quinoa, feel activists and nutritionists, who held a press meet on Monday to promote millets and talk on the issue.

According to them, 40 per cent of the world's millets are produced in the country but the area under millet cultivation has dwindled from 36 million hectares in the 1950s to 19 million hectares in 2011.

K. Manorama, principal scientist, quality control lab, PJST Agricultural University, said that in the last few months, her team has been researching on the nutritional benefits of quinoa. "There seems to be propaganda to make it look like quinoa has the highest protein component whereas even local millets have the same quantity. In fact, when the cover of quinoa is lost, then it is unsure how much protein is still left. Amino acids and iron are present in good quantities in millets. We want to say that our millets are equally good and we need to promote them."

P. Janaki Srinath, senior consultant nutritionist, pointed out that the millets make for a gluten-free diet. She also threw light on how millets prevent various ailments.

The Millet Network of India has demanded active State support for millets, apart from declaring a power, water and nutritional bonus to millet farmers since the crop requires low irrigation support.

Delhi govt to sell onions at Rs. 40 per kg

With onion prices hitting the roof across the country, Delhi government on Tuesday announced that it will sell the vegetable at Rs. 40 per kg through Fair Price Shops from next week.

The decision was taken at a Cabinet meeting chaired by Chief Minister Arvind Kejriwal. "The AAP government will sell onions at Rs. 40 a kg at 280 locations across the city. Fair Price Shops (FPS) in every ward of municipal corporations will have it. We will also sell onions through mobile shops for residential locations where FPS are not approachable," said Asim Ahmed Khan, Food and Civil Supplies Minister.

The Minister also said that the department was monitoring the prices and has now decided to intervene given the reasonable apprehension of rise in prices of onions and the hike in wholesale and retail prices in recent days. "Teams of Small Farmers Agro-Based Consortium (SFAC) were stationed at Nasik and were directed to procure and store adequate stocks of onions at hygienic cold stores. The department has factored in the time it will take for receiving the stock from Nasik and for making it ready to be sold to consumers," he added.

Spinach can curb food craving

A compound found in spinach can slow down fat digestion, leading to reduced hunger especially in men.

A compound found in spinach can slow down fat digestion, leading to reduced hunger and food craving especially in men, says a new study. A concentrated extract of thylakoids encourage the release of satiety hormones, which is very beneficial in controlling hunger.



“The reduction in hunger and the desire for salty food that we saw might make thylakoids particularly useful for people with high blood pressure and associated weight problems,” said study co-author Frank. L. Greenway from the Pennington Biomedical Research Centre in Louisiana.

The researchers examined the effect of consuming a single dose of concentrated extract of thylakoids from spinach on satiety, food intake, lipids, and glucose compared to a placebo. Sixty people (30 men and 30 women) classified as overweight or obese consumed either the spinach extract or a placebo in random order at least a week apart. The results showed that the spinach extract containing thylakoids increased satiety over a two-hour period compared to a placebo.

There were no differences in plasma lipids and energy intake at dinner but men showed a trend toward decreased energy intake. “Thylakoid consumption may influence gender-specific food craving,” the authors said.

A previous study had found that, in women, a reduced urge for sweets was significant after a single dose of the spinach extract and the reduced urge for sweets was sustained throughout the study.

Farmers uproot mulberry trees as cocoon prices crash

Farmer Chikkabuddhi had cultivated mulberry on five acres of land at Chinnamballi in Mysuru district’s Nanjangud taluk and was producing high-paying bivoltine cocoon for many years. But last week, he uprooted mulberry trees on two-and-a-half acres of land.



Had it not been for the intervention of a retired Sericulture Department official, Chikkabuddhi would have cleared his entire land disappointed over the collapse in cocoon prices over the last three months.

“I used sell cocoon for Rs. 450 to Rs. 500 per kg. I had once got Rs. 520 per kg. But, over the last two months, I am getting no more than Rs. 250 a kg,” he told *The Hindu* .

Chikkabuddhi is among the four farmers in Chinnamballi and adjoining village Hanumapurawho have uprooted their mulberry trees.

Many sericulture farmers across the region are planning to do the same, and shift to different crops.

“The collapse in price has coincided with the reduction in import duty on raw silk, seriously hitting sericulture farmers. We need to take steps against large-scale uprooting of mulberry trees by convincing the farmers,” KRRS leader Badagalapura Nagendra said.

N.Y. Chigari, who had encouraged farmers in the region to take to sericulture during his stint as Deputy Director of Sericulture in Mysuru, said he had been going around the region speaking to disillusioned farmers.

The price of cocoons dipped because reelers have not got a good price for their yarn. Weavers, who buy yarn, are now saving on the reduction in import duty by buying Chinese silk, Mr. Chigari said. The farmers have to contend with other issues like increased labour costs and failure of rain, he said. The Central Silk Board officials, however, said the issue had global ramifications. “There has been a dip in the global demand for raw silk. Besides, the production of cocoons has gone up over the last few months. It is natural for price to collapse when production is more,” an official said.

‘Implement one-time settlement scheme for farmers’

The Kisan Khet Mazdoor Congress has suggested that the government implement a one-time settlement scheme to help farmers clear loans.

“We will include this among our recommendations,” Sachin Meega, president, Kisan Khet Mazdoor Congress, told presspersons on Tuesday. The farmer would have to pay one third of the dues, and the Union and State governments would pay similar portions.

Their other recommendations include asking agencies such as the zilla panchayat to drill borewells for farmers, announcing different minimum support prices in various regions, faster completion of irrigation projects, provide easy access to loans and restructuring of crop loan insurance to make it individual farmer based with crop cutting experiments at the individual levels.

“We will also ask experts to suggest alternative crops to sugarcane, increase compensation for farmers and announce remunerative prices,” he said.

To a question, Mr. Meega said the loan waiver scheme announced by the Janata Dal (Secular)–Bharatiya Janata Party government a few years ago benefited only banks and not farmers. He also said the government should immediately stop removal of encroachment of farm and revenue land as it was also pushing some farmers to suicide.

‘Importing onion will have adverse effect on farmers’

Rajya Raitha Sangha district president Nulenur Shankarappa has said the Union government should drop the idea of importing onion from foreign countries as it would have an adverse impact on the prices of onions grown in the country.

Addressing reporters here on Tuesday, he stated that after a long time the prices of onion had increased considerably in the market and farmers were expecting good profit.

However, prices could collapse if the Union government proceeds with its decision to import 10,000 metric tonnes of onion from foreign countries.

“Farmers are already in a pathetic condition owing to adverse climatic conditions and low yield, under such circumstances the Union government’s decision would worsen conditions,” he added.

Mr. Shankrappa also said that BJP leaders in the State should apprise the Union government about the conditions of farmers in the State. Tomato growers

Tomato growers in the region have incurred heavy losses owing to a sudden collapse in prices, Mr. Shankarappa said. The government should reush to the help of farmers by declaring a minimum of Rs. 10 per kg support price and make arrangements for the purchase of tomatoes through HOPCOMS. As there has been scanty rainfall in Molkalmuru, Challakere, Hiriyir and parts of Chitradurga, the State government should declare these areas as drought-hit, he added.

Millers and ryots keep their fingers crossed

Millers and farmers in the district are anxiously waiting for the State government’s decision on new paddy pronouncement policy as the Civil Supplies Corporation has convened a State-level joint collectors and civil supply officers meeting in Hyderabad on Wednesday to discuss possible alternate ways for its procurement in the wake of Centre’s decision to stop levy from October.

Following the Centre's decision, about 250 rice millers in the district are eager to know the government's decision.

Meanwhile, sources in the Civil Supplies Department told *The Hindu* that the government is set to follow Karnataka and Chhattisgarh model by involving private players in paddy procurement.

Earlier, the Food Corporation of India used to purchase 75 per cent of paddy milled at rice mills as levy to supply the same to BPL families, but the Centre had reduced the levy to 25 per cent on October 1, 2014, and from October it has decided to stop the total levy.

Record number of mills

Nalgonda district alone produces about 20 lakh metric tonnes in both the rabi and kharif seasons, and the district has the highest number of mills in the country. While farmers fear whether they would get MSP or not on their produce, the millers say that they might incur losses.

Rice Millers Association chairman Dhana Mallaiah urged the State government to keep the interests of farmers and rice millers in mind while formulating a new policy.

“Any decisions in haste may plunge both the farming sector and rice millers into a crisis,” he said.



Facility to increase shelf life of onions lies unused in Nashik



Any leap in onion prices, as seen of late, brings the largest onion market in Asia into the picture. However, a special irradiation unit in Lasalgaon in Nashik to eliminate microbes and increase shelf life of onion goes almost unnoticed by farmers and traders.

It has been underutilised. Onion traders and farmers say simple modifications are needed in the unit set up by the Bhabha Atomic Research Centre (BARC) to make it economically feasible for them.

Set up by the then NDA government in 2002 at a cost of around Rs 8 crore, the Krushi Utpadan Sanskaran Kendra (KRUSHI) in Lasalgaon was to help irradiate onions and mangoes. The unit can irradiate 3 tonnes onions per hour.

It has been sparingly used. Sushil Chavan, radiation officer of the Maharashtra State Agricultural Marketing Board (MSAMB), said last year the unit was used for irradiating 30 tonnes of onion.

Chavan said the unit has been sparingly used although the MSAMB had undertaken various outreach programmes for traders and farmers. The unit within 500 metres of the Agricultural Produce Market Committee (APMC) market, Lasalgaon, goes unnoticed.

Deepak Pagar, a farmer said he knew the unit was used for irradiation of mangoes but was not aware it could be used for onions. Mangoes for export are brought to Lasalgaon for irradiation. It involves exposing the produce to gamma radiation for a short period of time. This kills microbes and increases shelf life.

The summer crop of onions harvested early April if irradiated can be stored for more than six-seven months. Many farmers point out that the unit does not make economic sense as the process is labour intensive.

Nanasaheb Patil, president of Lasalgaon APMC said irradiation involves loading the produce onto trolleys in gunny bags, sending it to the chamber and unloading it after the process. "Onions come to the market in trucks. If we take them for irradiation then it would involve extra cost in gunny bags, labour etc.

Although charges of irradiation are low, the additional cost makes it non-viable," he said. Irradiation charges for onion was as low as 15 paise per quintal but transport and labour expenses come to Rs 50-60 per quintal.



THE TIMES OF INDIA

[Drought at our doorstep](#)

HYDERABAD: Telangana appears to be heading towards a drought. Half of the monsoon season is over and apart from the initial days of rainfall, the state has had a dry spell. Water

levels in reservoirs are dropping rapidly and many towns are facing a drinking water crisis. In rural areas, the crisis is in the form of dying crops and a looming threat of fodder shortage.

In fact, more than half the mandals in the state have recorded deficit rainfall. As many as 278 out of 459 mandals have a deficit ranging from minus 20% to minus 59% since June. The situation is far worse in 46 mandals that have received scanty rains (minus 60% to minus 99% of normal rainfall).

Officials said that 21 of the 64 mandals in Mahbubnagar fall in the scanty rainfall category while several mandals in Karimnagar and Medak districts have recorded deficit rainfall.

Officials told TOI that the 10 districts of Telangana normally receive 905.4 mm of rainfall in a year. Of this, 715 mm (79%) comes from the south-west monsoon between June and September, 129 mm (14%) is received from north-east monsoon (October to December) and the remaining seven per cent during the other months.

In a normal rain year, the state is supposed to receive 385 mm of rain till August 1. However, this year only 306 mm of rainfall has been recorded as on date, with the overall deficiency being pegged at 21%.

Under these worrisome conditions, the farming community in the state is under stress, more so because they had pegged their hopes on the initial bout of plentiful rains in June. Taking it as a sign of good monsoon, the farmers went ahead with the sowing of paddy and other crops. Against the normal sown area of 29.12 lakh hectares, 26.97 lakh hectares (93%) was sown, both in farmland with assured irrigation and rain-fed areas. The highest percentage of cultivation was recorded in Adilabad, Nizamabad and Karimnagar districts.

"The farmers took up cultivation in June itself due to the active monsoon that month. Later, dry weather gripped the state in the first two weeks of July followed by isolated rains on July 14 and 15 and scattered rains in the third week of July. But due to the overall rain deficit, many crops are exhibiting moisture stress symptoms in many areas," a deputy director of the agriculture department said.

When contacted, commissioner, disaster management, and principal secretary (revenue) BR Meena said the situation is being closely monitored. "Since the monsoon will last for two more months, one cannot conclude that the state is facing a drought. However, contingency plans are being prepared by the respective departments," he said.

Last year too, as many as 103 mandals had faced drought during the kharif season, but the government had not declared them drought-hit. As per the drought manual, mandals are declared drought-hit based on the rainfall, dry spells, reduction in crop area and reduction in crop yield (less than 50%). Last year, officials held meetings on declaring the 103 mandals as drought-hit, but the Kharif season ended before the government initiated any relief measures.

"Initially, a list of 80 drought-hit mandals was prepared by the committee on disaster management. Later, it was decided to take the National Differential Vegetation Index and National Differential Water Index. As per these parameters, the mandals increased to 103. By the time we got reports from the district collectors, the Kharif season had ended and the Rabi season had begun," an official involved with disaster management plans in the state said.

40% rain shortfall in state likely in next 10 days: Met office

Patna: Rain deficiency in Bihar and Uttar Pradesh has increased to 31%. Indian meteorological department (IMD) says it may reach 40% as there is little hope of good rainfall in the region in the next 10 days.

"We are about 50% behind our paddy transplantation target. However, under the contingency plan, diesel subsidy is already being provided to farmers and measures have been taken for irrigation purposes. But if it does not rain in the next 10-15 days, drought is imminent," state agriculture minister Vijay Kumar Chaudhury said.

State IMD director AK Sen said, "Bihar has 31% deficient rain. If it does not rain in the next one week, it may reach over 40%. Incidentally, the monsoon trough this year has diverted from its original path and has been drooping southward for the last two months.

The normal monsoon axis after originating from north Bay of Bengal moves towards West Bengal, Jharkhand, Bihar, UP and then reaches the foothills of the Himalayas. After some activity in the foothills, the trough moves towards south and crosses Odisha, Chhattisgarh, Madhya Pradesh and Maharashtra.

In fact, it keeps oscillating from north to south. But for the last two months, there has been virtually no oscillation barring on July 13 when the trough had moved to north for a day. Hence, the rainfall activity in Bihar is subdued."

Apart from the trough, all weather systems which originated over North Bay in June and July, moved in west/northwest direction. These systems travelled on the path of monsoon axis which, for the last two months, is bending southward and did not reach north depriving Bihar, east UP and other northeastern districts of rain, Sen said.

Even Cyclone Komen moved in westerly direction after bringing heavy to very heavy rain in the Gangetic West Bengal and Jharkhand.

After making landfall in Bangladesh last Friday, Komen brought heavy showers in central Indian states and coastal areas like the Gangetic West Bengal and Odisha. Jharkhand also received very heavy rainfall, added Sen.

Incidentally, IMD and another weather observatory, Skymet Weather, had predicted moderate to heavy rain in south Bihar on August 2 and 3 as the axis of monsoon trough was likely to run close to the foothills of the Himalayas. But unfortunately, the trough remained stationary and all hopes of monsoon revival were lost.

Now, order chicken and eggs online in Bhubaneswar

BHUBANESWAR: One can now order chicken and eggs online in Bhubaneswar. The Odisha State Poultry Products Co-operative Marketing Federation (Opolfed), a state level poultry co-operative marketing organization, on Monday launched an online shopping platform to provide its customers a flexible buying experience of its products such as chicken and egg.

Agriculture minister Pradeep Maharathy launched the e-chicken portal . "Opolfed symbolises quality and hygiene. It is a trusted name in Odisha," secretary, fisheries and animal resources development, Bishnupada Sethi.

The online shopping platform will provide the residents of Bhubaneswar who cannot visit the Opolfed-CHICKEN FRESH to place order online and get delivery at home, he said. The Opolfed would take flat delivery charges of Rs 50. One has to order minimum amount of Rs 500.

Onion Mission to check price in Odisha

BHUBANESWAR: To check soaring onion prices, the state government has decided to launch Onion Mission in the lines of Potato Mission in the state.

Under the mission, farmers would be given loan and quality seeds to cultivate onion, said agriculture minister Pradeep Maharathy. It would also ensure proper storage facility for the bulb in the state. "We are planning to set up 300 cold storages because frequent rise in onion prices causes severe inconvenience to people," said Maharathy. Onion price have gone up to Rs 50 a kg in the last few weeks.

Though the state produces more onion than its annual requirement a large amount goes waste or farmers are forced to resort to distress sale due to lack of storage facilities. The state

produces around 3.95 lakh metric tonne (MT) of onion every year against the demand of 2.95 lakh MT.

"We are aware that onions produced in Odisha are sold to traders in Chhattisgarh and Madhya Pradesh. Once the mission starts functioning the crisis would be over," said Maharathy.

The state depends on Maharashtra, Karnataka and Andhra Pradesh for onion. Scanty rainfall in these states affected the onion crop leading to price rise.

Frequent onion crisis has led to a blame game between agriculture, cooperation and food supplies and consumer welfare department. Cooperation minister Damodar Rout said, "Lack of coordination between departments has been a major reason for recurring crisis in onion prices. We have planned to set up 10 additional cold storages through Regional Cooperative Marketing Societies (RCMS)."

On Monday, onion sold at Rs 45 a kg in the retail market while the wholesale rate was Rs 3,500 a quintal. In the last 10 days, the prices have increased by Rs 20 a kg.

Food supplies and consumer welfare minister Sanjay Dasburma said, "The state has sufficient stock of onion and we are keeping a close watch on the market. There is nothing to panic."

The state government set up the Potato Mission earlier this year to overcome potato crisis which will be implemented under the horticulture directorate and will continue till 2023-24. The government has earmarked a Rs 267.0574 crore for the mission.

Under the mission, the government has planned to set up 112 cold storages of 5,000 metric tonne capacity, official sources said.

Veggie traders rush for food safety docus

COIMBATORE: Vegetable and fruits traders in Tamil Nadu are racing against time to obtain licences and registration certificates from the state food safety department to be eligible to transport and sell their produce in Kerala.

The state horticulture department in Coimbatore confirmed that 223 wholesale vegetable traders have been issued licenses and 30 small-scale wholesalers have been registered since Monday last week.

"We, along with the food safety department, have set up camps on and off in many markets like Thyagi Kumaram Market, Ottanchathiram Market, MGR Market, Mettupalayam Market and Pollachi Market," said deputy director of horticulture department, A Ramakrishnan.

The food safety department is conducting camps in all major fruits and vegetables markets in the districts to issue these mandatory permits. The move comes in the wake of its Kerala counterpart making food safety license or registration compulsory for any trader selling food items to or within the neighbouring state. A sizeable chunk of Tamil Nadu's fruit and vegetable produce is sent to Kerala daily. Coimbatore district alone sends about 200 tonnes of vegetables while Oddanchatram market in Dindigul supplies about 500 tonnes daily to Kerala. Kerala would start enforcing its order mandating the documents from traders from Wednesday.

The Kerala government has informed the traders that the food safety license or registration under the Food Safety and Standards Act of 2006 will be demanded at all check-posts through which vegetables and fruits cross over into their state. However, officers in Kerala's side of the Walayar check post say that trucks were not inspected by food safety officers on Tuesday.

Wholesalers in markets who missed their date with food safety officers, are flocking to the food safety department's headquarters on Race Course Road to apply for these licenses. "We have put up notices in all the markets informing traders about this rule. So, many farmers and traders have been approaching us directly for licenses," said designated food safety officer, Dr R Kathiravan.

This rule had mixed response among big traders across the state. While a majority of the traders in Ottanchathiram market, in Dindigul, felt that the new license and registration was "unnecessary", a few traders in Coimbatore did not mind.

"This could lead to unnecessary complications and more hassles for traders," said the president of the Ottanchathiram market, K Thangavel. "We do not know why such a measure is being taken all of a sudden, though we have sending vegetables for ages," he said. "However, this license qualifies us as "traders" and it will help during loan applications," he added.

Traders also said that making food safety licenses and registrations compulsory was not going to make their vegetables any safer. "For a food safety license, people just check for our tax receipts, address, location of the shop and the owner's identity proof. They don't even talk or check for pesticide content," said Thangavel.

UP's mangoes amount to less than 10% of exports to the US

MEERUT: The unseasonal rains have severely hit mango cultivation in the state, to such an extent that the Uttar Pradesh Mango Growers Association told **TOI** that exports from the state are likely to remain under 10% of the country's total exports.

"So far, only 15-20 tonnes of mangoes from UP have been exported to the US. This is a very insignificant number compared to the national total. In fact, it is less than 10% of the total export from across the country. Most of the exports this year have taken place from Maharashtra and UP has lagged behind. Even though there has been a huge rise in exports, Maharashtra has bagged the lion's share of the benefits," said S Insram Ali, president of the Uttar Pradesh Mango Growers Association (UPMGA).

"This year was particularly bad. Of the total mango production of 1.5 crore tonnes, UP has produced only 40 lakh tonnes. Maharashtra and Andhra Pradesh have produced much more than we have this year. The reason for low production is the unseasonal rains that lashed the state in March. The hailstorms hit the state at a very crucial time, when the mango-bearing bohar flower was very tender," he explained.

Ali said that while the mango season in western UP will last a little longer, it is almost over in Malihabad from the state's eastern belt. "The mango season in eastern UP is almost over. It will last for another 10-12 days. Western UP still has a month of mango season left but I doubt the rise in exports will be radical."

He attributed this to unfavorable government policies in the state and to unseasonal rains, which lashed the state in March this year. "The state government in UP does not even consider mango growers to be farmers and do not have enough policies to address the problems of mango growers. There are several subsidies that we are denied. These subsidies were granted to the wheat growers, but not to the ones who grow mangoes," he added.

After dry spell, rain trouble for soya

INDORE: Uneven rain spell across the state has left soyabean farmers and industry and worried lot. In some parts of Malwa region where heavy rainfall was recorded, Soybean Processors Association of India (SOPA) noticed yellow leaves on saplings that might affect yield.

"In Ujjain, Ratlam and nearby areas where heavy rain was recorded yellow leaves have been found. Due to this flowering and pot formation gets affected which might lead to yield loss and less productivity. It is initial days and we are still analyzing the whole situation and teams are working on it," said SOPA chairman, Davish Jain.

In other regions of state after a month-long dry spell, things seem to be looking up. Malwa region faced non-stop rain in the past month which resulted into re-sowing in areas where crop loss was suspected.

This year, sowing of soybean began earlier as compared to last year. In Malwa region, approximately 2 lakh hectares were under severe moisture stress and crop in this area was virtually lost. "Largely adequate rain showers in most part of the Malwa region have helped soya producers. Month-long dry spell had created a possibility of crop loss but soon re-sowing was done in those areas where crop loss was expected," said DN Pathak, executive director, soyabean processors association of India (SOPA).

More than 80% sowing of soybean was completed during the first spell of rain in mid June. Crop sown during this spell was under moisture stress. "At present sowing has been done on 100 lakh hectares," he added.

SOPA has expressed a possibility that this year area under soybean will be between 100 to 110 lakh hectares. As per SOPA officials' analysis would be conducted on the region where leaves are affected.

THE HINDU BusinessLine

Gujarat farmers bet on gau mutra to fight bollworm in cotton



In what is seen as rural innovation for agriculture crops, a farmer from Gujarat's Bhavnagar district is using his homemade mixture with ingredients ranging from asafetida to *gau mutra* (cow urine) to fight pink bollworm in the cotton crop.

Chandubhai Baraiya, 43, from Piprala village of Talaja taluk, undertakes cow-based farming on his 10 bigha (approx 5.7 acres in Gujarat) land for five years.

"Last year we had pink bollworm attack in cotton crop. Most farmers were clueless about how to deal with it, but I found the solution in my homemade mixture. And it proved effective as well," said Baraiya, who now guides other farmers of nearby villages to prepare the mixture.

This year, Baraiya has taken up maize and vegetables including brinjal on his land.

The Central Institute for Cotton Research (CICR) has been tracking the pink bollworm issue for about two years. Pink bollworm is a monophagous insect (single host pest), found in cotton and okra.

Crop cycle extension

"Gujarat is a case study for us as it is not prevalent in other parts of the country. Constant surge in cotton prices during past four years prompted these farmers to extend the crop beyond its normal cycle of 6-7 months. This caused this pest to appear," said KR Kranthi, Director, CICR, Nagpur. A CICR team is currently in the State to study the bollworm menace that's prevalent in the irrigated belts of Saurashtra and north Gujarat.

Earlier, cotton crop used to be terminated post-December. The pest develops during summer months, but in the lure for more profits, farmers took early sowing during summer months. Notably, the pest is immune to the available BG-II seed, hence there is no remedy for the pest at present.

Having learned from Babariya, Rohit Ramna from Chudi village strongly believes that it was due to this mixture, he could save his cotton crop last year and get an output of over 50 quintals.

"My cotton was sold very fast because of good quality. I could save it from the attack as was faced by other farmers in the region," he said adding that just like other farmers he too used Bt seed.

This mixture helped him save a cost of ₹ 45,000 on pesticides or insecticides. The mixture is sprayed every 10 days to the crop.

"Initially, for about couple of years, you get lower output. But as the land gets used to such mixtures, the output as well as quality improves," added Ramna.

The mixture

According to Babariya, the base of the mixture requires extremely sour 11 litres of buttermilk (stale about 30 days old), green chilli, garlic, crown flower leaf, eucalyptus, dhataki (dhatura) leaves, pomegranate leaves, asafoetida and 250 ml of kerosene and 500 ml of gau mutra.

The ingredients are mixed thoroughly and placed in a copper vessel wrapped with an airtight paper cover and kept for about 10 days.

“Mix one cup of this mixture with 400 ml of water and spray it on 10-day old cotton plants. If there are pests, it will get suffocated and if there are eggs, they won’t hatch. This avoids damage from pink worm,” he said.

Scientific measures

According to Bharat Char, Lead-Biotechnology, Mahyco, the homemade method needs to be documented for scientific analysis.

“If there is anything credible in these claims that needs to be validated. Data will be required and for that the practice needs to be documented,” said Char.

Notably, some of the farmers in Gujarat have expressed fears of a repeat of pink worm attack this year as well. Already 8-10 per cent of early sown cotton crop has been removed suspecting presence of pink bollworm attack.

State agriculture department also acknowledged the panic due to pink bollworm attack. “We have planned short-term and long-term measures to tackle this menace. We are planning week-long awareness drive for farmers on how to control it,” a government official informed.

SFAC, Nafed leading charge to curb onion price rise



The retail price of onion touched Rs50/kg in New Delhi on Tuesday with lower supplies and consumers are likely to be affected for the next two months before the Kharif crop arrivals hit the market around early-October.

Average retail price of the bulb stood at Rs 45/kg, according to Consumer Affairs Ministry data, up from Rs 36 three weeks ago and Rs 29 three months before. Retail prices have jumped over 45 per cent from a year ago when it stood at Rs 31/kg.

Onions were selling at Rs 45-46/kg in Safal stores and sellers warned that prices could hit Rs 70.

Stock shifting

The sustained rise in onion prices has prompted Government agencies like Small Farmers' Agribusiness Consortium (SFAC) and National Agricultural Cooperative Marketing Federation of India (Nafed) to swing into action.

While the Centre has said that it is in the process of importing 10,000 tonnes of onions through Nafed and directed States to crack down on hoarders to ensure adequate supply, the SFAC is augmented onion availability in the Delhi markets by shifting its stock from Nashik.

“We have gradually started bringing the stocks we have in Nashik to Delhi gradually. Safal is picking up all its stock from us and we are also retailing directly to consumers at ₹ 35/kg through the 150-odd Delhi Milk Scheme kiosks,” said Pravesh Sharma, Managing Director, SFAC.

The agency had procured 10,000 tonnes of the vegetable under the price stabilisation fund announced by Finance Minister Arun Jaitley in the last Budget. It has already brought 600 tonnes into the Delhi market and is averaging about 100-150 tonnes each day.

“The Delhi government had asked us to procure 2,500 tonnes which is already stocked. A decision will be taken in a day or two over direct sales to consumers,” said Sharma.

Citing a supply-demand mismatch, he said that the Government had to tide over the next two months through which stocked onions are to be continuously released into the market.

Supply-demand gap

The idea was to keep all channels flushed with stocks to prevent speculation and if necessary, the SFAC and Nafed could step into the market to procure more.

“The high prices could last between 6 and 8 weeks. Right now, it's the stored onion that is being released and the Kharif crop will start coming to the market by early-October. So it's these two months that we have to tide over and we have sufficient stocks to ensure that prices don't go through the roof,” Sharma told *BusinessLine*.

Union Food Minister Ram Vilas Paswan had earlier said that the bids for the tender floated by Nafed for imports would be finalised this week. The price rise is attributed to widespread

damage to the Rabi crop caused by unseasonal rains between February and April. Total production is estimated at 189 lakh tonnes (lt) in 2014-15, lower than 194 lt recorded the previous year.

Raw sugar near 6-1/2-year low on Asian glut



Raw sugar futures hovered on Tuesday above a 6-1/2-year low, pressured by a weak Brazilian currency and hefty stocks in Asia, while arabica coffee futures firmed and cocoa held steady in light volumes.

October raw sugar futures on ICE traded up 0.07 cent at 10.96 cents a lb at 1042 GMT, after falling on Monday to 10.84 cents, the lowest since December 2008.

Huge Thai and Indian sugar stocks weighed on prices.

October white sugar were up \$0.20 at \$347.30 a tonne.

“The influence of the real (Brazilian currency) and the very strong dollar has ultimately been the driver of the weakness in sugar prices for some time now,” said Tracey Allen, commodities economist with Rabobank.

“The other factor is that we have fairly good weather in the centre-south of Brazil and that's enabling the harvest to progress relatively rapidly for the time being.” September arabica futures were up 0.7 cents at \$1.2465/lb.

“Because there isn't a fundamental story for the market to hold on to, it's following the commodities complex and the fundamentals of the dollar,” said Ricardo Santos, coffee trader with Equatorial Traders.

He was referring to a softer dollar against a basket of currencies, underpinning dollar-based arabica and robusta coffee futures.

September robusta futures were up \$8 at \$1,633 a tonne, after touching a two-month low of \$1,621 on Monday.

New York September cocoa rose \$8 to \$3,174. London September cocoa firmed £7 at £2,117a tonne.

Pacific super typhoon helps monsoon to rev up over central India

As expected, the monsoon has flared up another time over central India after a well-marked low-pressure area (remnant of cyclone 'Komen') ramped up back to being a depression over Madhya Pradesh.

This happened with the initiation of super typhoon Soudelor in the west Pacific which has caused the monsoon flows to strengthen across the Arabian Sea.

The super typhoon is expected to barrel into the east China coast by Thursday/Friday and weaken.

Super typhoon

Even before this, brakes would have been applied to Soudelor as it grazes the northern tip of the Philippines.

This would bring about a corresponding wind-down in intensity of the depression over Madhya Pradesh. India Met Department sees it travelling to the west to west Madhya Pradesh/Gujarat and petering out.

Though early forecasts suggested this phase could signal a lull in the monsoon, the European Centre for Medium-Range Forecasts disagrees. It sees scope for yet another 'low' in the Bay of Bengal.

Here again, it will be another Pacific that typhoon that will initiate the activity off the Andhra Pradesh-Odisha coasts by the same day as the prevailing system signs out of west Madhya Pradesh/Gujarat.

Fresh bay 'low'

This time, the typhoon would be located farther out to the west/central Pacific and is forecast to wheel into the south-east Japanese coast. The US Joint Typhoon Warning Centre too agrees with the prognosis.

The 'low' in the Bay of Bengal would have picked up required momentum to stand on its own and prosper even after the typhoon blasts its way into the Japanese coast.

A US Climate Prediction Centre outlook suggested that the 'low' would sustain the rainfall over east and central India, east and southeast Rajasthan, and northern Gujarat until August 15.

The west coast and eastern parts of the peninsula, including coastal Andhra Pradesh and Tamil Nadu, too are projected to slip under a wet spell during August 10-16, the forecast said.

Wheat procurement up



Food Minister Ram Vilas Paswan informed the Lok Sabha on Tuesday that around 281 lakh tonnes (lt) of wheat has been procured for the central pool during the 2015-16 Rabi marketing season, marginally higher than the previous season's 280.23 lt.

Wheat output in India, the world's second largest producer, is pegged at 907.8 lt in 2014-15, against a record 958.5 lt achieved the year before. Significant damage was caused to standing crop and grain quality by unseasonal rain between end-February and early-April.

The government is currently mulling the imposition of a 10 per cent import duty to dissuade local millers from procuring overseas wheat, in order to use local supplies.

Krishna water woes will hit kharif crops

Water in reservoirs needed for drinking purposes

Poor monsoon and low reservoir levels in Krishna river system has forced the Krishna River Management Board to make it clear there would be no water for crops served by the river in Telangana and Andhra Pradesh.

This decision highlights the severity of the situation, leaving farmers in both the States in a quandary.

Factoring the low water levels in major reservoirs of Srisailem and Nagarjunasagar, and a poor monsoon adding to the woes of both States, the working Group of the Board decided that the available water would be required for drinking water supplies.

Due to prolonged phase of weak monsoon in both States and poor inflows from the river catchment areas, the water level is down to 510 ft in Nagarjunasagar as against the full

reservoir level of 590 ft, and 802 ft in Srisaillam dam (FRL of 885 ft), with the latter stated to be the lowest in the past few decades.

Majority of the 34 reservoirs on Krishna and Godavari river system have received poor inflows this monsoon from upper riparian States of Karnataka and Maharashtra.

Poor water levels, following failure of the monsoon, have had a telling impact on kharif sowings. With the board making it clear that allocation would be made only for drinking purpose, farmers will have to wait for rains in the upstream.

Sowings in at least 40 lakh acres in five districts (three in Andhra Pradesh and two in Telangana), will be adversely impacted. Sowings in Krishna, Guntur and Prakasam districts in Andhra Pradesh and Nalgonda and Khammam districts in Telangana were far below normal.

Latest figures available with the Agriculture Departments show a dismal state of affairs. "They will have to wait through this month. If we get rains, we can hope for late sowings this month," a Telangana Government official said.

Of the average cropped area of 42.55 lakh hectares in kharif, Andhra Pradesh farmers covered only 12.68 lakh hectares by now as against the as-on-date average of 20 lakh ha. Areas under the Krishna Delta are among the worst impacted. Those who had already cultivated are experiencing wilting due to inadequate water.

Business Standard

Non-food credit growth slows to 7.7% in June

Non-food credit growth of [commercial banks](#) slowed to 7.7% in June 2015 as against 13% expansion in the same period last fiscal.

The non-food credit growth in June was also slower than 9% in the previous month of May, [RBI](#) data showed.

Credit to [agriculture](#) and allied activities increased by 10.6% in the period as against an increase of 18.8% in the year-ago month.

RBI collects data on a monthly basis from select scheduled commercial banks, accounting for about 95% of the total non-food credit deployed by all scheduled commercial banks.

In the month, credit to industry rose by 4.1% against that of 10.2% in June 2014.

"Deceleration in credit growth to industry was observed in all major sub-sectors," RBI said.

Advances to the services sector increased by 6% in the reporting period as compared with the increase of 13.6% in the same month last year.

Loans to non-[banking](#) financial companies (NBFCs) increased marginally by 1.6% as compared with the increase of 16.7% year-ago.

In May, banks credit to NBFCs had increased by 5.6%.

According to analysts, NBFCs reliance on bank borrowing has reduced in recent past and they are raising money through debt routes where the cost of funds is lower.

The growth in personal loans given by these banks increased by 16.5% in the month as compared with a rise of 15.2% in June 2014.

THE FINANCIAL EXPRESS

Column: [E-linking farmers with markets](#)



The government recently announced a countrywide e-marketing platform for agricultural produce. This is expected to aid price discovery, provide greater returns to farmers, and ensure seamless availability of agricultural commodities, thereby taming price spikes. It would further enhance marketing efficiency and eliminate rent-seeking practices.

The Agri-Tech Infrastructure Fund will be rolled out by the Department of Agriculture & Cooperation with the Small Farmers' Agribusiness Consortium as the executing arm. The scheme proposes to integrate 585 regulated mandis across the country over 2015-16 to 2017-18.

An amount of R200 crore has been earmarked for the scheme for two years, which includes provision for supplying free software to states and Union Territories. The cost of related hardware and infrastructure will also be subsidised by the central government up to R30 lakh per mandi (except private mandis).

While there is no state-specific allocation, states will need to meet certain prerequisites including a single licence to be valid across the state, single-point levy of market fee and provision for electronic auction for price discovery.

The scheme promises to benefit farmers by enhancing prospects for marketing of produce; improved access to market-related information and better price discovery; access to a greater number of buyers through transparent auction processes; and increased access to markets through warehouse-based sales, thereby bypassing the need to physically transport commodities. It would also curb rent-seeking and 'finger-touching' or call-out auction, thereby alleviating the stranglehold of large wholesale traders and commission agents.

However, the scheme further needs to consider certain policy and institutional changes. For instance, farmers often do not sell their produce directly and this is typically done through aggregators, transporters or traders. Hence, intermediation might still continue, although in a different form. Without the farmer's actual participation in the e-auction through guaranteed access to the e-platform, the opportunity for fair price realisation despite a fair price discovery may be limited.

Second, credit and advances for growing and harvesting the crops are provided by the intermediaries and local aggregators, often at hidden and exorbitant interest rates. The farmers are thus locked-in with contracts and are unable to exercise their freedom to sell. The access to affordable credit would need to be addressed as well.

Also, mandis guarantee sale of commodities, particularly fresh produce of any quality, which raises farmer dependence on these markets. This may not be possible through the e-platform, although increasingly buyers are providing the necessary inputs to ensure that farmers are able to grow the quality they are looking for.

Third, the scheme provides for warehouse facilities which will be subject to investment. Despite the warehouse receipt system, there has been little progress in farmers' access to warehousing.

According to a CII study on agriculture marketing, reforms beyond marketing and upgrading the existing system are required to benefit farmers and consumers. One, institutional arrangements for credit and insurance are required to eliminate the grip of intermediaries in the traditional mandis. Often farmers lack the resources to travel distances to sell their produce in the mandi and it makes more economic sense for someone else in the chain to facilitate the transaction.

Two, although some state marketing boards have moved towards simplifying multiple licensing, the current licensing regime lends itself to a strong informal economy where rent-seeking and malpractices are prevalent, with discretion on issuance of licences residing with APMC authorities. States need to be guided on the single licence system, with a fee structure that makes up for potential revenue losses. Piloting of this model in different production zones taking into account the diversity of commodities, farmers and marketing channels will be important to ensure the scalability and replicability of this model.

Three, the e-platform needs to be backed up with monitoring of actual use and training of market staff due to poor infrastructure in the mandi. Also, sorting and grading facilities—critical to better price realisation for farmers—did not exist in the markets surveyed in the CII report. The facilitation and maintenance of these platforms will require technical knowhow and hence there is need to have the right human resources within the mandi system.

Four, payment settlement and mode of payment are increasingly through cash transfers and within a day to a month depending on the volume of trade, debt, frequency and personal rapport between market functionaries and farmers. Payment and settlement terms will need to address these aspects.

Measures to ascertain that the e-platform actually connects farmers with buyers and does not remain with the traders and intermediaries will be critical to ensure that fair price discovery translates into price realisation. This will entail educating the farmers about the e-platform and hand-holding them into the process.

While this scheme is for three years ending 2017-18, an action plan on how to move beyond 585 markets needs to be put in place. Also, with the current 585 markets that will be integrated in a phased manner, the choice of such markets and commodities to be included needs to be drawn out. The challenge will lie with perishable commodities.

The e-marketing platform will benefit farmers subject to certain critical reforms that extend beyond marketing. It is definitely one of the models that will see their way into the future of agriculture marketing, but other models of direct linkages such as private markets need to be encouraged to be able to connect maximum number of farmers with markets.

Also, with increasing demand and awareness about safe and quality food, it will be imperative to ensure that farming practices conform to higher food safety standards, and traceability along the value chain will be critical. This will need private sector coming into the agricultural marketing space in a major way and investing in the backend, thus creating an enabling environment for such practices that cater to consumer demand.

Soya acreage touches record 112 lakh hectares this season

The total area sown under soyabean has crossed 111.85 lakh hectares this kharif season, probably the highest in recent years, officials from the Soyabean Processors Association of India (SOPA) said. Last year, the area under soya was around 108 lakh hectares.

According to DN Pathak, executive director, SOPA, there has been a shift from paddy to soya in some parts of Madhya Pradesh as farmers were not getting enough prices and this may be one of the reasons for the increase in area under cultivation. In Rajasthan as well, the area under soyabean cultivation has increased, he said.

As per the data presented by SOPA, some 33.400 lakh hectares in Maharashtra has come under soya cultivation as against 38 lakh hectares in kharif 2014. In Madhya Pradesh, the area has increased to 59.610 lakh hectares this season as compared to 55.462 lakh hectares while in Rajasthan the area has jumped to 10.849 lakh hectares as against 6.820 lakh hectares last season.

The sowing of soyabean and groundnut has increased by 10.686 and 2.765 lakh hectares, respectively as compared to figures of last year. As per data released by the ministry of

agriculture, the total area under kharif oilseeds has increased by 12.91 lakh hectare. Total sowing of oilseeds during entire kharif 2014 stood at 174.8 lakh hectares.

According to industry experts, farmers received good returns in groundnut, sesame and soyabean during 2014 due to lower production which also encouraged farmers of Gujarat, Maharashtra and Rajasthan to shift towards oilseed crops. Pathak said the prices of oilseeds have been one of the major factors to boost sowing this year.

The weekly report released by the Directorate of Oilseeds Development reveals that soyabean plantation has crossed 32.20 lakh hectares this season as compared to 25.80 lakh hectares last season.

In Madhya Pradesh, sowing operations are marginally lower at 55.5 lakh hectares as opposed to 56 lakh hectares same time last season.

An earlier survey conducted by the association reveals that in Madhya Pradesh, the sowing of soyabean started earlier as compared to last year. Almost 80% sowing was completed during the first spell of rains in mid-June.

Maharashtra, which is the country's second-largest soyabean growing state, contributes 35-40% of the total output. The commodity is planted on nearly 38 lakh hectares in the state. Last year, 6.86 lakh quintals of new seeds were required.

This season 10.38 lakh quintals of new seeds are available with the government, Jayant Deshmukh, director, Quality Control and Planning, Maharashtra Agriculture Department, had said earlier. The shortage of soya seeds posed a challenge last year and therefore the government decided to run an awareness campaign among farmers to use their own seeds, he said.

Monsoon picture remains cloudy

The jury on this year's monsoon and its impact on the farm sector is still out. The India Meteorological Department (IMD) on Monday retained its earlier forecast of a deficient monsoon season for 2015, with rainfall at 88% of the benchmark long-period average (LPA) — the same as last year — as monsoon rains lost intensity since early July after a bountiful June.

Private weather forecaster Skymet also revised its monsoon forecast last week with showers at 98% of the LPA for season, from 102% of LPA predicted in April.

The IMD has now predicted rainfall to be 84% of the benchmark average in the second half of the June-September season, with a model error margin of 8%, far worse than the actual showers of 95% of the LPA in the first two months of the season. It has also maintained its rain forecast for August at 90% of the LPA, with a model error margin of 9%. As of Monday, the monsoon showers were 94% of the LPA.

The IMD defines deficient monsoon rains as below 90% of the LPA of 89 centimetres of showers recorded between 1951 and 2000. In June, the Met department had revised downward its rainfall forecast for the year to 88% of LPA, from 93% reported in its first forecast in April.

Although a 16% above-normal rainfall in June helped boost the initial phases of sowing, a likely slowdown in monsoon intensity could affect sowing in subsequent phases and also hurt yield level where planting is already done, if the geographical spread of the showers, too, remains erratic. The area under various kharif crops rose almost 9% up to July 31 from a year before, but the lead over last year has been significantly bridged from as high as 63% until July 17.

“From April to July 2015, El Nino conditions have strengthened from weak to moderate level. Latest forecast from ESSO-IMD-IITM coupled model indicates 72% probability of El Nino conditions to become strong during remaining part of the monsoon season,” the IMD said.

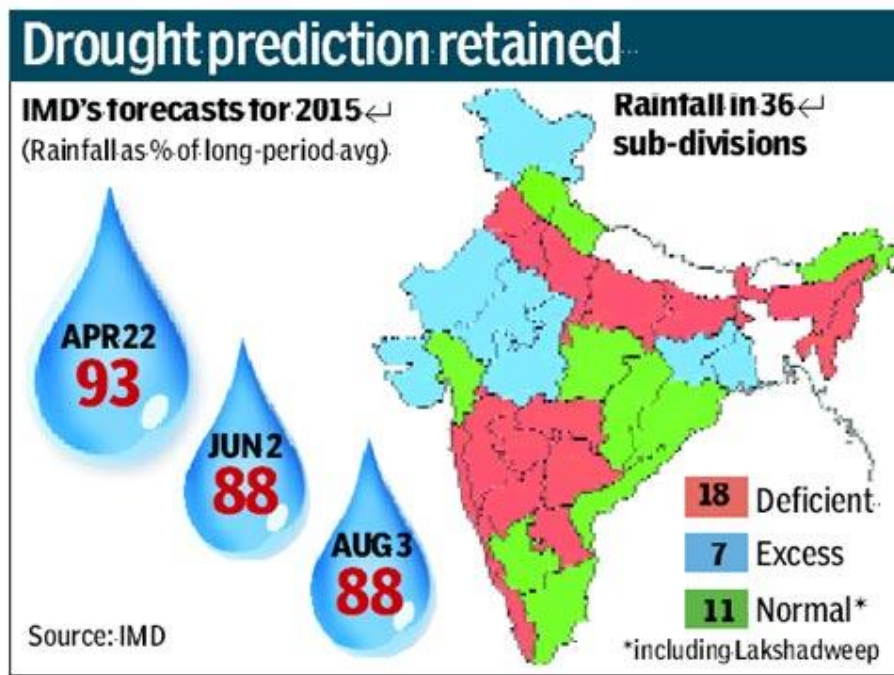
The deficient monsoon for a second straight year is set to hurt farmers, already struggling to cope with a plunge in commodity prices for over one year and consequent drop in income and low-wage spiral. It also cast a shadow over farm sector growth, which, in any case, was just 0.2% in 2014-15, compared with 3.7% a year earlier.

In June, the Reserve Bank Of India ([RBI](#)) had revised its retail inflation forecast to 6% from 5.8% earlier for January 2016, anticipating monsoon fears. If the rains continue to remain patchy, posing risks to food inflation, the leeway for the central bank to cut the benchmark lending rate to spur growth would be further squeezed. As such, many analysts believe the RBI would hold rates in its next monetary policy review meeting on Tuesday despite lingering signs of weak private demand.

Already, retail inflation scaled a nine-month peak of 5.4% in June, as food inflation rose almost 0.7 percentage point from May to touch 5.48% in June. However, analysts believe the fall in global commodity prices, administrative steps like release of buffer food stocks and modest hikes in the minimum support prices of summer crops could keep food inflation from rising sharply.

India's foodgrain production dropped 5% to 251.1 million tonnes in 2014-15 thanks to a 12% drop in seasonal monsoon showers from the normal levels.

The Modi government, which witnessed low inflation until recently due to the commodity price crash, will face its first major challenge on inflation now.



Analysts said the government can reduce the import duties on all food products across the board and augment supplies.

According to agriculture ministry data till the end of July, kharif crops (paddy, pulses, oilseeds, etc) have been sown in 76.42 million hectares, which is 8.6% more than the same period last year. Sowing activity is completed in over 72% of the usual area under kharif crops and is around 105.28 million hectares.

Meanwhile, the quantum of average monsoon rainfall across the country between June 1 and August 3 has been 450 millimetres, which is 6% less than the LPA. However, the regional distribution of rainfall so far has been uneven.

The northwest region, consisting of key states including Punjab, Haryana, Uttar Pradesh and Rajasthan, has received 8% excess rainfall than the normal benchmark while the central India region consisting of states such as Chhattisgarh, Madhya Pradesh, Maharashtra and Gujarat has received 6% less rainfall than normal.

The regions worst hit due to less rainfall include east Uttar Pradesh (-30%), west Uttar Pradesh (-22%), Marathwada (-58%), Madhya Maharashtra (-28%) and Vidarbha (-24%). The south peninsula has received 21% less rainfall than normal with Rayalseema (34% deficiency) and North Karnataka (46% deficiency) being the worst affected. The eastern and northern eastern regions have received 8% less rainfall than normal with Bihar receiving 29% less rainfall than normal.