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# THE HINDU

## Project planned to boost pulses production



Cultivation of pulses to get a greater thrust in Tirupur during 2016-17 fiscal. To put pulses production back on growth trajectory, the Department of Agriculture has planned to implement a project in the district at an outlay of Rs. 41.6 lakh and increase the acreage to 21,303 hectares during the 2016-17 financial year.

The acreage under pulses declined from 20,528 ha in 2014-15 fiscal to 18,429 ha during 2015-16 fiscal in Tirupur district.

### **Foliar sprays**

As part of the new project, it has been planned to distribute around 2,000 foliar sprays for application of Di-Ammonium Phosphate (DAP) at subsidised rates and promote bund cropping as well as line sowing methods of cultivation.

“Farmers will be given incentives for quality seed production, which is a key factor in improvement of yield and acreage. We are planning to procure 60 tonnes of quality seeds produced by the farmers during this fiscal, which in turn, can be used for distribution to more numbers of farmers”, Joint Director of Agriculture S. Renganathan told *The Hindu* .

Subsidy will be extended to farmers to get high quality new pipelines to draw water from nearest sources to the fields.

“The farmers will be given the choice to select the manufacturer of the pipes from the list approved by the State Government bodies”, said Mr. Renganathan.

Though pulses have presence in all 13 blocks of the district, it is largely grown in select blocks of Madathukulam, Gudimangalam, Udumalpet, Dharapuram, Kundadam, Mulanur and Vellakoil blocks.

### **Yadgir district receives heavy rain**

Yadgir district received a good spell of rainfall between Tuesday night and Wednesday morning.

The showers brought some respite to farmers in the district, who had been worried about crops withering owing to moisture shortage. Farmers, who had sown green gram, red gram and cotton this monsoon, had feared another crop loss when the district had not witnessed any rainfall till second week of July.

“We hope that this rain helps us grow green gram,” Rajshekhar, a farmer from Doranaghalli village in Shahpur taluk, said.

Yadgir taluk recorded 141.6 mm rainfall, followed by 45.4 mm in Shahpur taluk and 30.8 mm of rainfall in Surpur taluk. The rainfall was recorded with gauges established at revenue hobli centres across the district.

The highest rainfall recorded was in Yadgir city at 68.4 mm and lowest at 2.06 mm in Narayanpur village.

Shahpur recorded 20.5 mm rainfall. Gogi and Bheemarayangudi recorded 28.2 mm, Hayyal (B) recorded 20 mm, Wadagera recorded 47 mm, Dornahalli recorded 52 mm and Hattigudur recorded 27.4 mm rainfall in Shahpur taluk.

Surpur recorded 16.2 mm rainfall. Kakkera recorded 19.4, Kodekal, 4.02, Hunasagi, 11.6 mm and Kembhavi 5.2 mm recorded in Surpur taluk.

Saidpur recorded 30 mm, Gurmitkal recorded 14.2 mm, Balichakra, 16.2 mm, Konkal, 10 mm, Hattikuni, 17.2 and Yadgir station recorded 65.4 mm rainfall.

## **No crop damage**

There was no crop damage reported despite widespread rain and the flood-like situation created by the Krishna, which has been in spate from two days.

Chetana Patil, Joint Director of Agriculture Department, told *The Hindu* that no crops were damaged. “Farmers can hope to get a good yield, particularly of green gram, owing to the good spell of rain,” she said and added that farmers should not sow cotton beyond July 15 as there is a huge possibility of a pink bollworm attack in the next couple of days.

## **Deficient rainfall hampers paddy cultivation**

*Agriculture Department sets target of sowing paddy on 1.5 lakh hectares in the district*

Owing to deficient rain in the district, the cultivation of paddy has been taken up in around 9 per cent of the total targeted area. The Department of Agriculture had set the target to undertake cultivation of paddy in 1.5 lakh hectares for the kharif season in the district this year.

So far, the cultivation has been completed only in around 9,400 hectares.

The district has received 813 mm rain upto July 20 this year, against the average rain of 1,071 mm with deficiency at 24 percent.

Sowing has been completed in parts of Sagar and Sorab taluk where the paddy is cultivated under seed drill sowing method.

In Tirthahalli, Hosanagar, Sagar and Sorab taluk, where paddy is cultivated in rain-fed methods locally known as makkigadde, farmers have raised the seedlings in the nurseries.

They are waiting for rain for transplantation of the saplings.

Kuberappa, a farmer from Anavatti village said that, last year, many farmers in the region though had raised paddy nurseries, but could not undertake transplantation owing to scarcity of rain.

They had switched over to maize and pulses that require less water. If dry spell continues for few more days, the farmers will be compelled to give up cultivation of paddy this year also, he said.

The paddy is cultivated in around 25,000 hectare land in command area of Bhadra, Anjanapura and Ambligolla reservoirs where the sowing usually takes place by last week of the month of July when water is released from the reservoir to the canals.

The water level in Bhadra reservoir is at 145 feet against the maximum level of 186 feet. The water level in the reservoir was at 159 feet last year on the same day.

Owing to scarcity of rain, the water level in Anjanapura and Ambligolla reservoirs is also not on expected level.

According to sources, there will be delay in release of water from these reservoirs to the canals that will result in corresponding delay in cultivation of paddy in the command areas.

Madhusudan, Joint Director of Department of Agriculture told *The Hindu* that, the sowing for kharif crops takes place in the month of June and July in the district.

The scarcity of rain in the district during this period was the reason for low progress achieved in sowing. From June 1 to July 20, the district has received 732 mm rain against the average rain of 924 mm during this period.

The deficiency of rain is around 21 per cent during this period. He said that, the target to undertake cultivation in an area of 1,73,450 hectares was set for the kharif season this year that includes paddy in 1.05 lakh hectares and maize in 60,000 hectares.

At present, the sowing of maize has been completed in 57,000 hectares. As paddy is a water-intensive crop, the target set for its cultivation has not been achieved so far owing to scarcity of rain. Mr. Madhusudan added that, according to forecast, the monsoon is likely to become active in the region from last week of July after which the agriculture activities are also expected to gain momentum.

## Seeds distribution centres opened



Agriculture Department officials during the launch of the distribution of certified seeds in Mandya on Wednesday.

Sale of certified seeds at subsidised prices for the current agricultural season began in the district on Wednesday.

The Department of Agriculture has established seeds distribution centres at 109 places across the district and the Assistant Director of the Department, K.C. Sushma, inaugurated the centre by distributing seed bags to farmers at a programme held at 'Raitha Sabhangana'.

The farmers could get the certified seeds of paddy, ragi and maize by submitting documents at the nearby centres, a senior officer told *The Hindu*.

According to him, the seeds are being distributed at 21 centres in the taluk.

The department has opened the centres to protect the farmers from being exploited by middlemen/spurious seeds suppliers, he added. RAPCMS Managing Director D.B. Lingannaiah, president M.D. Jagadeesh and department officials were present.

## Showcasing the goodness of leafy vegetables



Wayanad Collector Kesavendrakumar visiting the ‘Pathilachanda,’ an exhibition of leafy vegetables, at Kalpetta.

‘Pathilachanda,’ an exhibition-cum-sale of 10 locally available leafy vegetables which the people of the State used to consume during the Malayalam month of Karkkidakam, provides a novel experience for the public here. The 10-day programme is being organised by Seed Care, a traditional farmers’ collective under the MS Swaminathan Research Foundation (MSSRF) here, as part of its ‘Good food habits for healthy life’, an awareness campaign.

### Seasonal veggies

“While the State is going through a health crisis owing to the high pesticide residue in vegetables, we have organised the programme to sensitise the public to the significance of consuming locally available pesticide-free seasonal vegetables to ensure nutritional food security and to conserve such vegetables,” T.R. Suma, social scientist, MSSRF, says.

Seventy-five farmers of five clusters of the organisation showcased leafy vegetables such as Ponnankanni (*Alternanthera sessilis*), Thazhuthama (*Boerhavia diffusa*), Thakara (*Senna tora*) and Mullan Cheera (*Amaranthus spinosus*).

“We are selling the products at an affordable rate and we have got a good response,” A. Lakshmi, a tribal farmer at Aneri, said.

The fair will conclude on July 29.

## **“Ensure kuruvai package reaches ryots”**

Ensure that full benefits of the State government’s kuruvai package reached the intended beneficiaries in time, Agricultural Production Commissioner and Secretary Gagandeep Singh Bedi told officials of the Agriculture Department here on Tuesday.

On field visits to Thanjavur and Tiruvarur districts to have a first-hand experience of the farm activities in the delta region, Mr. Bedi visited the kuruvai paddy field of a farmer Senthil Raj in Vaduvor Thenpathy and who had undertaken mechanised planting of paddy saplings and enquired with the farmer on the benefits of the mechanised farming over traditional mode of cultivation.

Mr. Bedi and other officials inspected the mechanised de-weeding operations at a kuruvai paddy field at Kumarapuram near Mannargudi before moving to the Kanchikudikadu State Government Seed Farm and inspected the processes there. The Agriculture Secretary visited the integrated modern farm of progressive farmer Jithan Krishna at Rajappan Chavadi near Nidamangalam.

Collector M. Mathivanan, Additional Director of Agriculture S. Santhanagopalakrishnan, Joint Director of Agriculture Mayilvahanan and others accompanied Mr. Bedi.

In Thanjavur district, Mr. Bedi, accompanied by Collector N. Subbaiyan, visited Melaveli where he saw the preparation of mat seedling nursery for mechanised planting of kuruvai paddy crop. He also inspected the Marungulam Horticulture Plantation Nursery where hybrid mango, guava and other fruit varieties were being raised.

Mr. Bedi inspected the Eachankottai High Breed Cattle Frozen Semen Bank of the Department of Animal Husbandry.

## Periyar river carries more water to Vaigai dam

*Limited quantum of water being released through channels to raise seedlings*



A view of Mullaperiyar dam in Thekkadi.— FILE PHOTO

Even as Public Works Department officials have increased the discharge from Mullaperiyar dam to 400 cusecs from 300 cusecs to improve storage level in Vaigai dam, very limited quantum of water is being released through supply channels to raise seedlings.

A large quantum of water is being let into Periyar river. Already, water was not released into some channels owing to construction of concrete flooring in them. In view of the precarious situation in Vaigai dam, the officials have reportedly closed a majority of the channels in Cumbum valley.

With no rain in the catchment areas and Vaigai dam site, Periyar dam was the only source for Vaigai dam to improve its storage level. Conducting the entire discharge to Vaigai dam would certainly improve its level to meet the drinking water needs of southern districts, including Madurai city, till the rainy season.

Farmers in Chinnamanur and tail-end areas have not yet received water. The situation will improve only after considerable rise in Vaigai dam level, according to sources.

Illegal tapping of water was rampant along Periyar river.



## Illegal-tapping

Even farmers in distant places used huge underground pipelines to draw water from the river to irrigate horticulture crops with the tacit support of some officials and local politicians. Large-scale illegal tapping affected both ayacutdhars and efforts taken by officials to improve storage in Vaigai dam, the sources said.

## Paddy sowing yet to pick up



*Only 13 per cent of the area has been covered till date*

Sowing for different crops cultivated during kharif is in full swing, but in the case of paddy, jowar, and ragi it is tardy.

Crops have been sown in 13.54 lakh hectares, which is only 33 per cent of the normal sowing area of 40.96 lakh hectares, till July 13, according to the Commissionerate of Agriculture.

However, foodgrains, which include coarse grains and pulses, normally sown in 20.83 lakh hectares, have been sown only in 4.26 lakh hectares, which is only 20 per cent of the normal sowing area.

Sowing of rain-fed crops such as bajra, jowar, maize, ragi, red gram, green gram, black gram, sesamum, sunflower, castor, and chilli is in progress in all the 13 districts.

While paddy is in the nursery stage, the crops sown early such as green gram, black gram, groundnut, sesamum, and cotton are in the vegetative stage.

According to the Commissionerate, the sowing of paddy, jowar, ragi, horse gram, castor, sunflower, soya bean, chilli, onion, and turmeric is slow with less than 25 per cent of the normal area being covered.

While green gram, black gram, and sesamum have been sown in 100 per cent of the normal area, red gram, groundnut, and sugarcane have been sown in 50-75 per cent of the normal area. Bajra, maize, cotton, and mesta have been sown in 25-50 per cent of the area normally covered.

While sowing is nearing completion in Nellore, it is between 50 and 75 per cent of normal the area in Anantapur and Chittoor district, between 25 and 50 per cent in Srikakulam and Kurnool districts, and below 25 per cent in Vizianagaram, Visakhapatnam, East Godavari, West Godavari, Krishna, Guntur, Prakasam, and Kadapa districts.

Rainfall has been normal or excess this season in all districts, except Nellore. Excess rainfall has been recorded in Vizianagaram, Visakhapatnam, East and West Godavari, Krishna, and Guntur districts. Normal rainfall has been recorded in Srikakulam, Prakasam, Chittoor, Kadapa, Anantapur, and Kurnool districts.

Paddy, which is normally sown in 16.03 lakh hectares, has been sown only in 2.13 lakh hectares, which is 13 per cent of the normal area.

Groundnut, which is normally sown in 9.30 lakh hectares, has been sown in 5.88 lakh hectares, which is 63 per cent of the normal sowing area.

Similarly, cotton, which is normally sown in 6.41 lakh acres, has been sown only in 2.03 lakh areas, which is 32 per cent of the normal area.

## **Ants learnt farming 60 million years ago; man 10,000 years ago**

The genes of the ant farmers and their fungal crops revealed a surprisingly ancient history of mutual adaptations.



Ants belonging to a South American group switched from a hunter-gatherer lifestyle to subsistence farming of fungi that grew on decomposing, woody plant matter some 55 to 60 million years ago, shortly after the dinosaurs died out

Ants belonging to a South American group switched from a hunter-gatherer lifestyle to subsistence farming of fungi that grew on decomposing, woody plant matter some 55 to 60 million years ago, shortly after the dinosaurs died out, new research has found.

By contrast, humans began subsistence farming around 10,000 years ago, progressing to industrialised agriculture only in the past century.

The genes of the ant farmers and their fungal crops revealed a surprisingly ancient history of mutual adaptations, said the study published in the journal *Nature Communications*.

This evolutionary give-and-take led to some species — the leafcutter ants, for example — developing industrial-scale farming that surpasses human agriculture in its efficiency, the researchers said.

Much of the research on fungus-farming ants came from scientists working in Panama through the Smithsonian Tropical Research Institute, headquartered in Panama City, during the past 25 years.

The key chapters of the history of ant agriculture were written into the genes of both the insects and their crop fungi.

“The ants lost many genes when they committed to farming fungi,” said Jacobus Boomsma, Research Associate at Smithsonian Tropical Research Institute.

This tied the fate of the ants to their food — with the insects depending on the fungi for nutrients, and the fungi increasing their likelihood of survival if they produced more nutritious crop.

“It led to an evolutionary cascade of changes, unmatched by any other animal lineage studied so far,” Boomsma, who is also a biology professor at the University of Copenhagen in Denmark.

The researchers found that leafcutter ant species cut and sow their underground farms daily with fresh, green plant matter, cultivating a fully domesticated species of fungus on an industrial scale that can sustain colonies with up to millions of ants.

Put in human terms, Boomsma said, the leafcutter ants’ success is akin to people figuring out how to grow a single, all-purpose, disease-, pest- and drought-resistant superfood at an industrial scale, “by the time of the ancient Greek civilisation.”

## **Dryland Farming: Bringing watershed management back to the policy agenda**

Price and technology-led incentives alone will not help boost pulses and oilseeds production in the country.



Almost 65 per cent of India’s arable land area of around 140 million hectares is classified as rainfed.

Indian agriculture is governed by an impossible trinity or “trilemma” that requires it to meet three simultaneous objectives — global competitiveness, social inclusiveness and environmental sustainability — each often at odds with the other two.

Official policy has largely tilted towards supporting the first two goals, with token, if not grudging, acknowledgement of the importance of the third one. Thus, while there are watershed management projects aimed at moisture conservation and improvement of soil health, the budgetary provisions towards these lag far behind expenditures on subsidies for fertilisers, power, water or seeds.

Almost 65 per cent of India’s arable land area of around 140 million hectares is classified as rainfed. Farming operations in such lands are mostly characterised by low productivity, high risk and poor adoption of modern

technology/agronomic practices. Yet, they are home to some 61 per cent of our farmers, and account for 88 per cent of the country's gross cropped area under pulses, 69 per cent under oilseeds and 42 per cent under paddy (Agriculture Census 2011).

Production of pulses, in particular, is concentrated in the rainfed tracts of central, southern and western India, where the soils are thin with little organic matter to retain moisture for extended periods.

These areas are also characterised by undulating terrains, low hill ranges bearing forests, narrow valleys, plateaus with hard sub-strata and – most important — the absence of snow-fed rivers that make them unsuitable for extensive canal-based irrigation.

Even in regions blessed with plentiful rainfall, the precipitation is typically delivered in barely 40 days during the southwest monsoon season, causing heavy run-offs, soil erosion and poor groundwater recharge.

The same region, then, also tend to experience acute water scarcity in the summer months.

The Centre and the Planning Commission, had back in the 1960s realised that it wasn't possible to support agriculture growth in the rainfed regions by replicating the input-intensive strategy adopted in the better-endowed Green Revolution belt of north-western India or even the larger Indo-Gangetic plains.

Thus, a series of initiatives were launched to take a natural resource management (NRM) based approach for promoting farm growth in rainfed areas.

Schemes such as the Drought Prone Areas Programme and the Desert Development Programme were implemented in select watersheds to demonstrate the benefits of a holistic and integrated NRM-based approach.

Following the twin drought of 1986 and 1987 — similar to the ones in the last two years — the Centre intensified its efforts at agricultural improvement in rainfed regions through the National Watershed Development Project for

Rainfed Areas, which was directly funded by the agriculture ministry. In parallel, the ministries of rural development and environment & forests launched their own watershed development schemes.

The NABARD, too, set up a special Watershed Development Fund in 1990, to support projects in 100 key districts. Many of these projects even received liberal funding from bilateral donors and multilateral lenders.

Everyone seemed convinced of the NRM-based approach for rainfed areas.

The watershed management schemes had a simple objective: to capture rainfall and runoff on and near the farmer's field, thereby extending the period of water availability.

This would lower the risks in agriculture, while also creating opportunities for crop diversification. Critical to the success of the schemes was people's participation through watershed committees and self-help groups, facilitated through collaboration between local communities, civil society organisations and government agencies.

NGOs were involved extensively during the 1980s and 1990s in planning and implementation of watershed projects in many states.

Several studies, whether by official and multilateral agencies or academic institutions, gave a broad thumbs-up to the NRM/watershed-based projects undertaken in rainfed areas.

While the performance on technical parameters —number of farm ponds and check dams built, groundwater recharge levels achieved, etc — was noteworthy, the real success story of watershed management was captured in the rising production of pulses and oilseeds through the first decade of the new millennium. That was no less the cumulative result of the investments made over the previous two decades.

Sadly, from around 2004-05 onwards, watershed management got pushed to the back row of the overall agricultural development strategy.

The UPA government that came to power decided to integrate all the various watershed schemes under a single umbrella programme.

But more significant was the bureaucratic turf war that erupted between the agriculture and rural development ministries, over who had a better claim on the subject.

It lasted for more than a year, at the end of which the rural development ministry carried away the prize.

A miffed agriculture ministry promptly turned its back on watershed management.

That “watershed” moment, in my view, is the root cause of the present crisis in production of pulses and oilseeds, both of which are largely grown in rainfed regions.

The current government at the Centre has ostensibly brought all watershed management programmes under the ambit of the Pradhan Mantri Krishi Sinchai Yojana (PMKSY). But the PMKSY itself has sub-schemes controlled by the rural development, agriculture and water resources ministries, each with their own management structures and separate budgets.

This is unworkable; the mistake again is to divorce watershed development from agriculture.

The PMO and Niti Aayog must take a view on what is the central goal of improving soil moisture availability. It cannot be anything but achieving higher farm production, productivity and food security, especially in rainfed regions.

In the specific case of pulses — where a committee has been set up under chief economic adviser Arvind Subramanian to recommend ways for boosting domestic cultivation — price and technology-led incentives cannot work in isolation.



A practical solution needs to be worked out to target agricultural development efforts, in tandem with watershed management interventions. Only this can bring about sustainable gains in pulses and even oilseeds production.

### Agri-market reforms: The direct selling challenge

Opinion is mixed over the benefits to farmers from the Maharashtra government’s move to de-list fruits & vegetables from the APMC Act.



The Navi Mumbai APMC market at Vashi. (Express Photo: Narendra Vaskar)

THE Maharashtra government’s recent move to “de-list” fruits and vegetables (F&V) from the Agricultural Produce Marketing Committee’s (APMC’s) schedule has generated lot of hope, but questions remain over how it would actually help the farmer — the ostensible beneficiary of what is being billed as a “big reform” move.

To start with, what exactly has changed? The previous Congress-NCP regime in Maharashtra had already, in 2006, amended its APMC Act to allow private traders and corporates to buy not just F&V, but all farm produce, under a so-called direct marketing licence (DML) system.

Under it, the government offered such licences to those wanting to buy directly from farmers, by-passing the regulated APMC mandis. The DMLs were against furnishing of bank guarantees of up to Rs 15 lakh, primarily intended to ensure farmers got their payments in case of trader defaults.

About 200 DMLs have been issued so far under the 2006 amendment, but most of them are dormant. By the state government's own admission, only 75-odd licences issued are "active" and the value of purchases undertaken against them is a fraction of the trades happening in mandis under APMC jurisdiction.

The current BJP-Shiv Sena government has "de-listed" F&V, but there is no de-licensing yet.

The bank guarantee also continues to be the same, though Sunil Porwal, additional chief secretary (Agriculture) in the state government, says that the Rs 15 lakh amount is being planned to be brought down to Rs 1 lakh.

Besides, traders have been exempted from paying licence fee of up to Rs 50,000 and the 1 per cent cess now imposed even on purchases made outside of APMC mandis.

"These (bank guarantee, licence fee and cess) were not big issues anyway. If you still need to procure licences for buying F&V outside APMC mandis, what really has changed?", asks an expert who does not want to be named.

The current "active" DML buyers include the Tatas, Aditya Birla, Reliance, Big Bazaar, ITC, ADM Agro, Mahindra & Mahindra and other such big corporates.

But their aggregate purchases from farmers in Maharashtra are estimated at not more than Rs 1,000 crore annually, as against trades of Rs 60,000-75,000 crore inside APMC mandis (depending on drought/no-drought years) and another Rs 25,000 crore in village and other informal markets.

"The question really is: Why have the big players not latched on to the 2006 offer in a big way so far? Why should we expect things to change now, when all that has been done is to de-list, but not de-licence F&V purchases, which

account for about 15 per cent of total APMC trades?”, the earlier quoted expert points out.

Farmers, moreover, were always free to sell to anyone, even outside the APMC areas. But that alone hasn't enabled them to take their produce directly for selling in urban centres or city markets.

“This was not possible for individual farmers earlier and will not be possible even with the latest reform,” the expert adds, while citing the examples of Delhi (where de-listing of F&V happened two years ago), Bihar (which did away with the APMC Act 10 years ago) and Kerala (which never had an APMC law): “No one can claim that farmers in those states are better off than those in Maharashtra?”.

Farm activist Vijay Jawandhiya goes a step further, by noting that states like Andhra Pradesh, Tamil Nadu, Punjab and Haryana have in the past set up ‘apni mandis’ and ‘rythu bazars’ for farmers to sell produce directly to city consumers.

But these have hardly brought any relief, as few farmers can afford to take their produce to sell in these so-called farmers’ markets.

Aniruddha Deshpande and Anil Bothe, both progressive farmers from Mahalgaon village in Umred tehsil of Nagpur district, concur with Jawandhiya:

“Neither we nor most other farmers have the time to sell directly to consumers. We simply load our produce on a vehicle that comes to our village and send it to traders at the Mahatma Phule vegetable mandi in Nagpur.

It is easier for us to pay the middleman who facilitates the sale”. Shridhar Thakre, who heads an orange farmers’ cooperative called Mahaorange, is somewhat more optimistic.

De-listing of F&V, he believes, can potentially bring new buyers for the produce of farmers, and help fetch good prices in the future.

But farmers can take advantage of this only if they are able to aggregate their own produce through producer organisations. That would help improve their overall bargaining power with the buyers.

Mahaorange has about 500 orange farmers from the Vidarbha region attached to it. The cooperative did business of about 1,400 tonnes in 2015-16, including selling in places like Bengaluru, Hyderabad and Kolhapur. But compared to Vidarbha's annual production of roughly seven lakh tonnes, this is a pittance.

The Maharashtra government's Sunil Porwal admits that most farmers are in no position to directly reach consumers due to transport and time factors.

“The farmer needs some middleman today. But we expect more farmer producer organisations (FPOs), self-help groups and private companies to come in, which will bring about the desired effect in due course.

What we have done is to make available an additional sale option for farmers other than middlemen, so that the latter don't take complete control of the system as is the case now,” he observes.

Sunil Pote, president of Yuvamitra Sanstha Nashik, a NGO working with 12 FPOs as a backward and forward integration facilitator in pomegranate and onions, welcomes the Maharashtra government's ordinance that de-lists F&V from the state's APMC Act.

But he feels that the government should simultaneously create more market yards in all districts, to enable farmers bring and sell their produce themselves:

“If this is not done, you will see the same APMC traders taking over purchases outside the mandis as well, bringing the situation back to square one”.

Right now, there are a few shining examples of non-APMC private markets, such as the Perfect Krishi Market Yard at Nashik that deals in pomegranate.

Run by a former APMC agent-trader Bapu Pingle, the yard has all modern facilities, from lodging and sanitation to packaging and grading for farmers, and does an annual turnover of around Rs 500 crore.

“I get anywhere from 2 to 5 lakh growers every year and they come from as far as Gujarat, Madhya Pradesh and Karnataka. There are middlemen here, but we ensure payments are made within an hour of sale,” he claims.

The ultimate solution, most agree, is to have big private players investing in value chains.

But that’s easier said than done, since such investments would bear fruit only in the long run. It also explains why banks, too, aren’t really interested in extending credit to these projects, despite their qualifying for priority sector lending.

“Unless the non-APMC share of F&V purchases grows to 25 per cent, as it is today in the dairy sector, the dream of farmers getting better prices will not be realised.

The current share of below 1 per cent simply isn’t enough to build pressure on traders to give farmers their due,” states Sudhir Kumar Goel, former additional chief secretary (Agriculture).

Maharashtra, at present, has some 800 FPOs reaching out to three lakh-odd farmers. Corporates, on the other hand, have a few thousand farmers each attached to them.

Clearly, these are not adequate to address the “direct marketing” needs of the millions of farmers in the state.

However, Kishor Toshniwal, director of marketing in the Maharashtra government, argues that the lack of infrastructure for direct marketing by farmers now has been largely due to the absence of reforms.

The latest move will pave the way for investments, more so “when we already have some big players in this sector”.

Kishore Biyani, who heads the country’s largest retail chain Future Group, is supportive of the Maharashtra government’s decision. “My company is already

working with a few thousand farmers to help them get better prices for their produce. We have our own supply chain, but more of these will now come up,” he says.

Ashok Sharma, agri-business head of M&M, is equally optimistic about increased private investment following the decision to de-list F&Vs. His company claims to have created one of the largest value chain infrastructure for grapes and “we are working with 1,000 farmers.”

### **Chhattisgarh launches IVF technology to boost milk production from indigenous cows**

Chhattisgarh Chief Minister Raman Singh, who inaugurated the programme, praised the “scientific advancement” and said that more states should join the project.



The programme is aimed at boosting milk production from cow breeds, like Gir, Sahiwal, Ongole and Tharparkar.

In a breakthrough move geared towards protection and propagation of indigenous cow breeds, a research and training institute on animal husbandry, run by the JK Group, has launched a first-of-its-kind initiative to produce IVF (in-vitro fertilisation) embryos of indigenous cow breeds on a large scale.

The programme is aimed at boosting milk production from cow breeds, like Gir, Sahiwal, Ongole and Tharparkar, by creating IVF embryos that can either be planted in surrogate females or be frozen for future use, a first in the country.

Developed at the Vijaypat Singhanian Centre of Excellence for Assisted Reproductive Technologies in Livestock, the programme allows scientists to create an embryo outside the womb by a complex system of in-vitro fertilisation.

“In the case of in-vitro fertilisation that we work with, as opposed to in-vivo fertilisation that is natural fertilisation inside the mother, the ova is aspirated manually from the donor mother’s ovary.

This is then combined with male semen to develop an ova into an embryo.

Depending on the physical condition and growth stage of the animal, large number of ova can be recovered every year.

This quantity is far in excess of what the donor cow is capable of producing under natural conditions. These embryos are transplanted into the recipient mothers to produce calves.

You will observe that by this process we can produce a large number of high-pedigree cattle that is impossible under normal, natural conditions,” said JK Trust Chairman Vijaypat Singhanian.

Dr Shyam Zawat, CEO of the Trust, said, “JK Bovagenix (the name of the programme) has established 14 pregnancies through fresh embryos and 14 through frozen embryos in the last three months since its inception. The first batch of IVF calves are expected to be born this year.”

Wednesday also saw the launch of a mobile ET(embryo transfer) and IVF van, that will take this technology to farmers throughout the country.

“There are several advantages to indigenous breeds such as their resistance to the harsh weather, ticks and disease resistance.

However, in places like Brazil, the Gir has been known to produce 2.5 times the amount of milk than in India.

We are seeking to change that and in line with the centre's Rashtriya Gokul mission, we are targeting a thousand pregnancies by the end of this year, and ten thousand high-quality calves by the end of five years," added Zavar.

Chhattisgarh Chief Minister Raman Singh, who inaugurated the programme, praised the "scientific advancement" and said that more states should join the project. State Cabinet minister Brijohan Agarwal added that an increased production in milk would help fight problems like malnutrition.

### **Low prices hit onion cultivation**

Around 1 lakh Ha of farm land is taken up in Maharashtra for Kharif onions.



Farmers reluctant to go for onion crop this Kharif season. (File)

The slump in onion prices seems to have discouraged several farmers from going for the crop this kharif season. If early reports from both the directorate of horticulture as well as the Nashik-based National Horticulture Research and Development Foundation (NHRDF) are indicative, the kharif crop of onion seems to be heading south, which would result in a shortage in the market later on.



# THE HINDU BusinessLine

**RBI to cut rates by 25 bps on Aug 9 if rains cool pulses prices: Report**



The Reserve Bank is expected to cut key interest rates by 25 basis points in its policy review meet on August 9, if good rains damp pulse price inflation, says a Bank of America Merrill Lynch (BofA-ML) report.

Pulses inflation is running at 27 per cent on a poor summer rabi crop.

“With good rains, pulses’ sowing for the kharif season has jumped 39 per cent above last year’s sowing. This should pull down pulses prices by 20 per cent and cool CPI inflation to 5.1 per cent by March,” BofA-ML said in a research note.

According to the global brokerage firm, the Reserve Bank could slash policy rates for three reasons — first a good monsoon would douse agflation; second, June core-CPI inflation has softened; and finally, high lending rates continue to constrain May industrial growth.

“If good rains damp pulses prices inflation, as we expect, CPI inflation should be well on track to the RBI’s 5 per cent March 2017 target,” the report noted.

BofA-ML has cut its March CPI inflation forecast to 5.1 per cent from 5.7 per cent, in line with the RBI’s 5 per cent target, with rains likely to pull down pulses prices. Rains are currently running a surplus of 102 per cent of normal.

Meanwhile, the wholesale inflation accelerated for the third straight month in June hitting 1.62 per cent on costlier food and manufactured items.

The hardening of the WPI index follows an uptick in retail inflation, which hit a 22-month high of 5.77 per cent in June.

In the June policy review meet, RBI Governor Raghuram Rajan kept interest rates intact, citing rising inflationary pressure, but hinted at a reduction later this year if a good monsoon helps ease inflation.

### **Poultry sector cries foul as US chicken legs loom large**



India has eased entry barriers after losing WTO case to the US

As dumping of chicken legs by the US becomes imminent after India lost the case at the World Trade Organisation (WTO), the 50,000-crore domestic poultry industry proposes to approach the Centre seeking protection of its interests.

“There is no level playing field. We are planning to ask the government to either ban import of chicken produced by using genetically modified (GM) corn and soya as feed or allow import of GM feed (which is cheaper) to cut down our production costs,” said K Singaraj, President of the All India Poultry Export Association. Poultry feed accounts for almost 30 per cent of the total production cost for domestic farms and this makes it more expensive than the potential imports, says the industry.

Singaraj, who is the Chairman of Namakkal-based Ponni Feeds, feels that institutional buyers will prefer the imported frozen legs because of cheaper bulk rates. The chicken legs market in India is pegged at just 2.2 per cent of the overall industry size.

Sources said that the landed cost of frozen legs at Indian ports is estimated to be at 60-70 a kg — almost half of the domestic price of 150-175.

“Though the frozen market is still at a nascent stage, there is a 3-5 per cent growth per annum due to changing lifestyle and rapid pace of urbanisation. Eventually, the domestic industry will lose out in the long-term,” he added.

India agreed to change rules facilitating import of chicken legs following a WTO ruling in the favour of the United States. This created a flutter in the fragile Indian poultry industry, which feels that the eating habits of people in the country were in its favour.

### **Fresh vs frozen**

“We love eating fresh chicken, while what is going to come is only frozen legs,” said KG Anand, General Manager of Venkateshwara Hatcheries.

Of the 30 crore broiler birds that are consumed in the country every month, the share of processed chicken is just under 5 per cent.

“It is only a perception issue that the inflow of chicken legs from the US would flood the market and local players will face a serious threat. Our market is not ready for frozen or processed chicken yet,” Anand feels.

There, however, are some fears at one level of the industry. They feel that institutional buyers could go for the imported legs for more than one reason. “The market that has developed a taste for the meaty American chicken legs would quickly shift to the US legs. It is a high-value market,” an executive at a retail chain said on condition of anonymity. Anand, however, allayed the fears. “We are predominantly a ‘live’ market. There is a huge market out there in India that is yet to be tapped. The per capita chicken consumption in the country is very low at 3 kg as against the global average of 9 kg,” he said.

### **Untapped demand**

The industry is looking to open up States such as Bihar, which are relatively untapped for chicken products. Rural areas, too, hold huge potential.

“The government can’t do anything now. We will have to live with the imports. We are not worried. But it is unfortunate that we are allowing them to sell what they don’t want to consume there (in the exporter’s country). We are okay if they export the whole bird, not just the legs,” an industry executive said.

Though the big players are feeling relatively safe for now, small farms are a worried lot. “Small farms sell to roadside eateries and hotels in towns and cities. If the eateries and hotels get legs at a cheaper rate, they would rather go for the US products. No one knows whether it is fresh or stacked,” said Prakash, who runs a poultry farm in Hyderabad.

### **Now, follow Rubber Board on Facebook, Twitter**

Rubber Board Chairman A. Ajithkumar has launched the official Twitter and Facebook accounts of the Board. These pages can be accessed through Facebook <https://www.facebook.com/rubberboard> and Twitter: <https://twitter.com/rubberboard>.

The sites provide updates on various activities of the Board and would serve as a platform for interaction with the Board on rubber related matters. Information regarding important meetings, cultural practices, and alerts on occurrence of pests and diseases, training programmes, information on radio and television programmes will also be available through these social networking sites.

### **Volume rises at Coonoor tea sale**

For Sale No: 29 of the auction of Coonoor Tea Trade Association to be held on Thursday and Friday, a volume of 17.23 lakh kg has been catalogued. Of this, 11.27 lakh kg belongs to leaf grades and 5.96 lakh kg, dust grade. As much as 15.54 lakh kg belongs to CTC variety and only 1.69 lakh kg, orthodox variety.

In the leaf counter, only 1.09 lakh kg belongs to orthodox while 10.18 lakh kg, CTC. Among the dusts, only 60,000 kg belongs to orthodox while 5.36 lakh kg, CTC. Quotations held by brokers last week indicated bids ranging 78-81 a kg for plain leaf grades and 100-130 for brighter liquoring sorts. They ranged 80- 83 for plain dusts and 110-145 for brighter liquoring dusts.

# **Business Standard**

### **Insecticides India ties up with US-based Momentive to launch silicone additives**

Momentive's AgroSpreed Max adjuvant, when mixed with agrochemicals during spray as tank-mix additive, can increase the efficacy of crop protection chemicals



Insecticides India Ltd (IIL), the Delhi headquartered agrochemicals manufacturer, has tied up with Momentive Performance Materials India Private Ltd, a part of the US-based Momentive group, to introduce Momentive's new generation silicone based super spreader AgroSpred Max adjuvant in India.

Momentive has authorised IIL to exclusively use the brand name AgroSpred Max for marketing the superspreader in India, further strengthening Insecticides India's Tractor brand range of products to help farmers improve efficacy of agrochemicals.

AgroSpred Max is a silicone-based superspreader that acts as an adjuvant to help increase the bio efficacy of crop protection chemicals, growth promoters and micronutrients. AgroSpred Max adjuvant can be used with a broad range of agrochemicals as an assistive agent to improve the spreading, wetting, coverage and penetration of agrochemicals through stomatal infiltration, thereby offering a huge potential to reduce costs and drastically improve spray efficacy.

“We are very pleased to collaborate with Momentive in bringing this unique product to India for the benefit of Indian farmers. AgroSpred Max adjuvant is a research product developed by Momentive Performance Materials Inc, USA. With a little addition to their spray cost, farmers can increase the effectiveness of the spray multiple times. We are optimistic that farmers will find this technology extremely useful in their quest to improve crop protection efficacy,” said Rajesh Agarwal, managing director, Insecticides India Limited.

V P Nalian, vice president, IMEA, Momentive, added, “Momentive has a long history of developing silicone additives that enhance spreading and coverage while helping to decrease costs and increase yields. AgroSpreed adjuvants were developed in response to specific needs by global growers, and can help farmers in India to achieve better crop protection by maximising the wetting, spreading and penetration of agrochemical treatments. We are very happy to associate with one of India’s leading agrochemical manufacturing companies, Insecticides India Ltd, to launch AgroSpreed Max in India.”



**THE TIMES OF INDIA**

**Punjab Agricultural University NSS cell conducts white fly awareness campaign**

The NSS Cell of Punjab Agricultural University (PAU), carried out a four day mass awareness campaign against white fly attack on cotton crop in the villages.

The villages they visited included Kotshamir, Nasibpura, Gahri Bhagi and Shergarh of district Bathinda, Khiala Khurd, Bhai Desa, Burj Rathi, Ubha and Tamkot villages of district Mansa and four villages of district Abohar.

PAU authorities said that the volunteers met 82 farmers and made them aware about the monitoring and management of white fly.

They added that the villagers were also provided literature on white fly management developed by PAU through door to door visits.

Forty eight NSS volunteers and six Programme Officers participated in this campaign.

## **Jamui farmers to get Bihar's first solar cold storage in Bihar**



*Over 40% of farm produce gets wasted due to a lack of storage space in India*

To enhance negotiating power of farmers on their produce in a remote Maoist-infested Kedia village in Jamui district, Greenpeace India is crowdfunding for a first ever solar-powered cold storage system which costs around Rs 12 lakh and other installation related costs. This kind of cold storage will be first for Bihar. Supporters across the country are contributing to get the solar cold storage installed in Kedia.

Kedia is a small village of Jamui where farmers have adopted ecological farming practices in the last two years. The farmers have started preparing their own organic fertilisers and pest management solutions to make the food healthy and chemical free. They have received good support from various schemes of Bihar government in this endeavour.

In the last two years, the farmers of the village have also diversified their crops and have started growing good amount of vegetables. Though there is a good demand for Kedia vegetables in the local market but in absence of cold storage facility the farmers have to sell their products at the throwaway prices, said a local farmer.



Greenpeace has been working with Kedia farmers in a facilitator's capacity to make the shift from chemical to ecological farming and from market-controlled to a self-dependent agriculture system.

According to a recent study, over 40% of farm produce gets wasted due to a lack of storage space in India. A majority of farmers are small and marginal, who cannot afford storage or water harvesting structures, even with subsidies.

With a solar-powered cold storage system, Kedia farmers will be able to extend the shelf life of their produce and cope with market-rate fluctuations. No more exploitative prices, no more rotting vegetables!

They will receive higher returns on the ecologically produced food, adding to their financial security. These farmers will be able to save their own seeds (of crops like potato). As a big plus, being a solar-powered unit dependent on clean energy, the cold storage will be a truly sustainable solution to Kedia's storage crisis.

Sunita Devi, a woman farmer from Kedia says, "we are very excited because now we will be able to reduce rotting of vegetables by this system. We also feel very encouraged to know that people from across the country are donating to make us independent."

Greenpeace India's Food For Life campaigner Ishteyaque expressed his gratitude to the supporters, "It is heartening to see the way people are expressing their concerns for our farmers through supporting this cause".

"We are sure that we will be able to install the unit sometime in August. This trend will definitely create an enabling atmosphere for the farmers in India to move towards safe food production by adopting ecological farming practices", he told TOI.

### **Cotton prices may not decline till arrival of new crop: Ind-Ra**

Cotton prices, which have shot up by over 35 per cent since May 2016, are unlikely to come down sharply till the arrival of new crop from October despite state-run CCI's efforts to offload its stock in the market to contain prices, says India Ratings and Research (Ind-Ra).

The fall in domestic production has spiked cotton prices, which are likely to remain at a high level of Rs 120-127/kg till the cotton season ending September, it said.

The rise in prices is expected to squeeze profits of ginners and spinners by over 15 per cent in the current fiscal, it noted.

"The recent government directive to Cotton Corporation of India (CCI) to sell its entire cotton stock to micro, small, medium scale spinning units will help contain the price rise of cotton. However, Ind-Ra believes that cotton prices will not see any steep decrease, till the arrival of the next cotton crop," the Ind-Ra said in a report.

There may not be any sharp fall since prices already factor in the release of stock from inventory, it said.

Cotton prices are expected to be under pressure on likely fall in acreage.

"Fear of losses from pest attacks and due to the lack of alternatives to biotech cotton hybrids, acreage (of cotton) is likely to decline. This may push up cotton prices further, however increasing demand for manmade fibre, will contain the price rise," Ind-Ra noted.

Stating that increase in prices will impact small textile players the most, the report said ginners and spinners are most likely to be affected. However, some organised spinning units with interchangeability from cotton to blended yarn will be able to adapt.

"Profitability of pure cotton ginners and spinners will be lower by at least 15 per cent, on account of their inability to pass on this steep increase in cotton prices to their customers due to decreasing cotton demand and increased competitiveness of manmade fibre," it said.

However, players which have stocked up cotton at lower prices in March-April 2016 are better placed. Further, fabric manufacturers are likely to be affected the least, on account of their better interchangeable use of looms, it added.

According to Ind-Ra, lower cotton output in India is due to two consecutive bad monsoons and damaged cotton crop, caused by the pink bollworm pest in central and southern belt in and due to whitefly pest attacks in northern India.

As per Cotton Advisory Board, domestic cotton production is estimated to go down by 7.4 per cent to 35.2 million bales (of 170 kg) in the 2015-16 season (October-September).

Globally too, cotton output is estimated to be lower by 18 per cent to 98.1 million bales in the 2016 calendar year, as per the United States Department of Agriculture. LUX ANU

## THE ECONOMIC TIMES

### **Cotton prices may not decline till arrival of new crop: India Ratings**



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NEW DELHI: Cotton prices, which have shot up by over 35 per cent since May 2016, are unlikely to come down sharply till the arrival of new crop from October despite state-run CCI's efforts to offload its stock in the market to contain prices, says India Ratings and Research (Ind-Ra).

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### **Nabard sanctions about Rs 177 crore for Punjab**



Installation of 555 reverse osmosis plants will provide safe drinking water, thereby reducing incidence of serious diseases resulting from underground water with contaminants

CHANDIGARH: National Bank for Agriculture and Rural Development (Nabard) has sanctioned a loan of Rs176.68 crore for reconstruction of 843.75 km main branches of watercourses in Sri Muktsar Sahib district and installation of 555 reverse osmosis plants in 546 villages for providing potable water.

Officials said that reconstruction of watercourses will facilitate delivery of full entitlement of supply of water to each holding in the entire 'chak' of outlet, especially to tail end farmers on unlined channels resulting in increase in cropping intensity from 177 to 199% and production of paddy from 28.63 quintals per acre to 33.70 quintals per acre. Wheat production is likely to increase from 12.74 quintals per acre to 17.04 quintals per acre. In all, 46,420 hectares of area will be benefited, they said.

Installation of 555 reverse osmosis plants will provide safe drinking water, thereby reducing incidence of serious diseases resulting from underground water with high contaminants such as uranium, cadmium, selenium, lead and combination of two to three heavy metals. Treated water will be provided at the doorsteps for lonely elderly people of 70 years and above, without any extra cost, officials said.

### **Competition Commission of India kicks off probe into rise in pulses prices**



High prices of pulses have fuelled consumer inflation.

NEW DELHI: The Competition Commission of India (CCI) has initiated an inquiry into the alleged anti-competitive practices behind the surging prices of pulses. The competition watchdog has formed an internal panel to study the market forces controlling the prices of pulses as the commodity has experienced a significant price rise in the last one year.

"We have initiated a study to find out various factors controlling the price, so that we could get to know the structure of this market," a senior CCI official told ET. "Steady rise in price of pulses in the past few months had raised doubts that it can't be only seasonal variation in demand and supply.

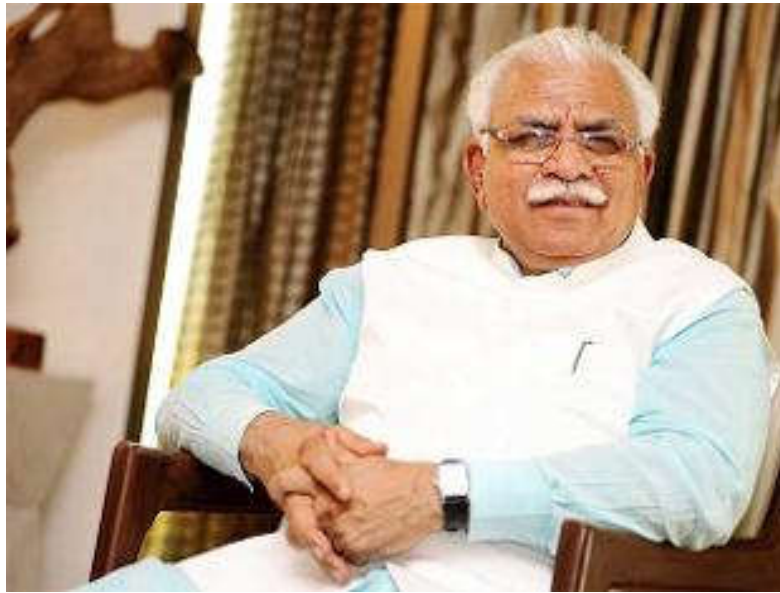
Some anticompetitive forces could also drive the prices north." Retail prices of various varieties of pulses have been hovering around Rs 200 per kg. The government has set up a panel under chief economic adviser Arvind Subramaniam to suggest ways to cool the prices and to boost the supply.

High prices of pulses have fuelled consumer inflation. India is expected to produce around 17 million tonne pulses this year against a consumption of over 25 mt, leaving a gap that is met with imports.

The competition regulator will study the nationwide structure of the market starting from farm to wholesale dealers and retailers, keeping in mind the seasonal supply and demand of various pulses. The panel will give its report within two months.

"The study is a part of our overall effort to understand unfair business practices in the agriculture sector," the official added. "The primary objective of the baseline study is to collect information and credible evidences on competition issues in the concerned sector and present the same in an analytical manner," he said.

## **Haryana to launch loan scheme for vegetable, fruit growers**



Chief Minister Manohar Lal has approved a proposal to this effect, an official spokesperson said on Tuesday.

CHANDIGARH: The Haryana government is set to launch a programme to provide loans to groups formed by vegetable and fruit growers to help them increase production as well as improve the storage, processing and marketing of their produce to generate better returns.

Chief Minister Manohar Lal has approved a proposal to this effect, an official spokesperson said on Tuesday. The scheme seeks to help farmers add value to their produce by processing them so that they get higher prices. It aims to provide financial assistance to create infrastructure for marketing, processing and storage of horticulture produce in the cooperative sector and finance for proper post-harvest operations.

It envisages the formation of clusters consisting of vegetable and fruit growers through societies, the spokesperson said. All the registered societies engaged in the cultivation, post-harvest management, processing and marketing of vegetables and fruits would be eligible for the loan.



The societies would have to invest the loan amount and would be responsible for the distribution of ingredients to the members as per their requirement. The produce would be sorted and sold collectively by the societies and the profit would be distributed among the members.

For loans up to Rs 5 lakh, the societies don't have to provide any collateral, the spokesperson said. For amounts beyond that, security equivalent to at least one-and-half times the loan amount would be required.

These loans would be for three years to seven years, and would be recoverable on a half-yearly basis.