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# THE HINDU

## Biofortification: Micronutrient-built-in grains



An effective way of supplying micronutrients is to fortify the wheat itself. Photo: Reuters

Mahatma Gandhi was always advocating us to eat hand pound rice and hand ground wheat rather than eating polished rice. Yet we continue using machine-polished cereals because they can be stored longer. But machine-polishing removes the bran (surrounding the seed) containing the pericarp and the ‘aleurone layer’ which have small amounts of essential nutrients such as some vitamins, iron, zinc and other inorganic components. So, Gandhiji was right! Machine-polished grains are thus poorer in such “micronutrients.”

This leads to what is today termed as “hidden hunger.” You may eat stomach full of food everyday and yet miss out on these micro-nutrients essential for the growth and health of the body. UN agencies estimate that hidden hunger affects one in every three children across the world, leading to deficiency in physical growth and development of the brain. Children missing out on vitamin A suffer from vision problems. Missing out on iron leads to blood disorders while deficiency in zinc retards growth, causes diarrhoea, hair loss, lack of appetite and other health issues.

A programme in India, started way back in the 1970s by Dr Ramalingaswami of ICMR, administering large amounts (megadose) of vitamin A every six months to children, has been found serving in helping them come out of “night blindness.” This is because a derivative of vitamin A is essential in the retina of the eye in harvesting light and converting it into electrical signals which aid the process of vision.

Dr Maharaj Kishan Bhan, earlier at the All India Institute of Medical Sciences and was the Secretary of the Department of Biotechnology of the Government of India in New Delhi has come out with a salt mixture containing some of the micronutrients including zinc and iron, to be given to children suffering from diarrhoea and dehydration. The results are strikingly positive; with micronutrient supplementation, particularly zinc, in young children with acute diarrhoea was found to be very useful indeed.

Why is zinc so important to the body? This is because over 300 enzymes in our body use zinc as an essential component in their action. Zinc is essential in supporting our immune system, in synthesising (and degrading) DNA, in wound healing and several other activities. And the amount of zinc we need is not very much. In a human body of, say, 70 kg, there is but 2 to 3 grams of zinc. But if the level falls down to below normal, growth is retarded, diarrhoea sets in, eye and skin lesions appear, and appetite is lost. Thus, addition of zinc in the daily diet becomes essential.

While downing tablets containing vitamins and some of these minerals is fine, this is no solution to billions of children, largely in the developing world.

But what if, rather than supplementing these micro-nutrients separately, they become part and parcel of the rice, wheat and other cereals we eat daily? Are there rice or wheat plants which are inherently rich in some of these micronutrients? Can they be grown, cross-bred or hybridised with other conventional rice or wheat plants?

This has been the dream of agricultural scientists across the country, and the group led by Dr Vemuri Ravindra Babu of the Institute of Rice Research (of the Indian council of Agricultural Research or ICAR) at Hyderabad has succeeded in doing so, after a pursuit that has lasted for over 12 years.

A particular variety, termed DRR Dhan 45 (also termed IET 23832) is a zinc-rich rice plant developed by this group.

It contains as much as 22.18 parts per million of zinc (the highest so far in released rice varieties) It is also moderately resistant to pests that kill rice plant by causing the leaf blast disease.

Arriving at DRR Dhan 45, the high zinc rice was not an easy task. Starting in 2004, it has involved screening several thousands of rice varieties from various parts of India, checking the zinc content in each, choosing as many as 168 of them which looked promising, analyzing the iron and zinc content in them, rigorously screening them and cross-breeding and combining the high yield plant with the high zinc one, and finally getting the variety IET 23832 or DRR Dhan 45.

It has truly been a long haul and this effort of “biofortification” (meaning that the fortification or enrichment is inherent, rather than externally added, as in the Bhan method) succeeded.

It is also important to note that the zinc and other mineral content are not lost upon polishing.

The rice can thus be kept for long and used, and it tastes just as good as the conventional variety.

Also note that this is not a GM (genetically modified) crop, so it bypasses any unnecessary controversy.

An added benefit is that DRR Dhan 45 has a low glycemic index (51 against 75 in conventional rice), so that it is good for diabetic patients.

Dr Babu tells me that it also takes a little longer to digest and thus you feel sated! Their current coordination effort is to develop similar zinc and other nutrient rich varieties of wheat, maize and millets under the ICAR Biofortification. Let us wish them the very best in their endeavors!

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## Farmers told to adopt alternative crops



Minister D.K. Shivakumar after hoisting the national flag at the Independence Day function at Sir M. Visvesvaraya District Stadium in Mandya on Monday.— photo: special arrangement

Citing deficient rainfall in the catchment areas of Cauvery in Kodagu, Energy Minister and district in-charge D.K. Shivakumar on Monday appealed to farmers not to take up paddy and sugarcane cultivation during the ongoing kharif season.

After hoisting the tricolour at the Independence Day celebrations at the Sir M. Visvesvaraya District Stadium here, he said the government wants to restrict paddy and sugarcane cultivation in the areas dependent on Krishnaraja Sagar (KRS) reservoir as the storage level is very low. He encouraged ryots to take up alternative crops instead.

“The State government is committed to repairing all major canals in the district.

We have already modernised 500 km of canals and their distributaries, and we are committed to developing 1,500 km of canals in Mandya district in the coming days,” he said.

He also listed out several schemes for farmers, including Krishi Bhagya and Pashu Bhagya, introduced by the State government.

Earlier, the Energy Minister inspected the guard of honour by various contingents, including the District Armed Reserve (DAR), the National Cadet Corps (NCC) and Scouts and Guides. Students of various educational institutions stole the show with their colourful mass drill and cultural programmes.

Members of the Mandya Youth Group displayed a 70-foot-long national flag at the stadium.

Deputy Commissioner S. Ziyaullah, Superintendent of Police C.H. Sudheer Kumar Reddy, and a few elected representatives and officials took part in the programme.

### **Students' surprise**

Meanwhile, students of a private school displayed posters of D.K. Ravi, Kallappa Handibag and M.K. Ganapathy — senior officers who committed suicide in recent times — during their performance at the Independence Day programme.

However, officials instantly stopped the music for a while and collected the posters from them. According to teachers of the school, Energy Minister D.K. Shivakumar was unhappy with the students' act.

While Education Department officials refused to comment on the issue, school authorities said they did not have any intention to glorify the officers. The suicides of all three officers had created a storm in Assembly sessions, besides prompting associations to hold a series of protests.

## Mango development centre to come up at Chintamani



The plant with unit operations such as storage, pulp extraction and processing will be commissioned by CSIR-CFTRI.

CSIR-Central Food Technological Research Institute (CFTRI), Mysuru, has signed an MoU with the Karnataka State Mango Development and Marketing Corporation Ltd. (KSMD and MCL) under the Department of Horticulture, for establishing a mango development centre (MDC) at Chintamani.

According to the agreement, CFTRI will function as a technical consultant for creating infrastructure for post-harvest handling of mangoes.

The plant with unit operations such as washing, sorting, pre-cooling, cold storage, pulp extraction and processing will be commissioned by CSIR-CFTRI under the agreement.

The institute has developed a number of technologies related to mangoes which include technology protocols for shelf-life extension that enable export of mango; alphonso by ship; fortified mango bar; osmo-air dried mango slices; ready-to-serve fruit beverages, fruit syrups and squashes, pickles and chutneys, jam and jellies, according to a CFTRI release.

A few of these technologies will be transferred to MDC, whose personnel will be trained on processing and quality analysis of products. In turn, MDC will also impart training to farmers and entrepreneurs, the release added.

CSIR-CFTRI has been working with various State government departments for catalysing the growth in nascent sectors such as nutraceuticals with the

Karnataka Biotechnology and Information Technology Services (KBITS); skill development in association with the Karnataka Council for Technological Upgradation (KCTU); Department of Industries and Commerce, ensuring nutritious meal to hostel mates with the Department of Social Justice, providing nutritional supplements to Anganwadis with the Department of Women and Child Development.

These food supplements had been prepared by the premier food research lab to address nutritional deficiencies among the pre-school children.

Besides fortified mango bar, other nutritive products include rice mix, high protein rusk, energy food, nutri chikki with spirulina, nutri sprinkle and sesame paste.

The products are comprehensive in nutrition profile with requisite macro and micronutrients for pre-school children. The products had been developed for complementing the existing Integrated Child Development Services (ICDS) feeding solution via anganwadis since pre-school children are particularly vulnerable to malnutrition. The MoU documents were exchanged between Ram Rajasekharan, Director, CSIR-CFTRI and Kadrigowda, Managing Director, KSMD and MCL at a function at CFTRI here recently.

### **Drones better than satellites to gauge crop loss, says panel**

A committee tasked by the government's apex planning body with studying how unmanned aerial vehicles (UAVs) can be used in crop insurance schemes has said drones trump satellite technology for the purpose. The committee also maintained that sharing cadastral (land's location, ownership, tenure) details, Aadhaar card and bank account details is "mandatory" for effective crop insurance policies.

"The ideal alternative is to gather data from low heights [i.e., below the cloud] and at very high resolution where aerial photography or UAVs score over all available alternatives," says a draft report of the subcommittee's recommendation, which was viewed by *The Hindu*. "The current satellites which are even better than 10m spatial resolution would not be sufficient due to their non-availability during cloud cover, limited revisit possibility during the crop season and high price," it said.



The sub-committee is expected to submit its report to the National Institution for Transforming India (NITI Aayog) on August 20. It is constituted of experts from the Indian Institute of Space Science and Technology, Indian Agriculture Research Institute, weather technology firm Skymet and international reinsurance company Swiss Re. There are several sub-groups too constituted by the NITI Ayog to look at ways to use technology in agriculture insurance schemes.

“Farmer field coordinates be made mandatory for issuance of insurance policy. This will help in tracking the crop field throughout the crop season without much ground monitoring, and, any kind of loss can readily be verified from satellite data,” the report added.

This year, the government launched the Pradhan Mantri Fasal Bima Yojana (PMFBY), replacing the existing National Agricultural Insurance Scheme, which will allow farmers relatively lower premiums. It also allows them to be insured against post-harvest losses. The States will bear the bulk of the premiums and farmers pay depending on the type of crop.

### **Key objective**

The government’s apparent objective is to increase the number of insured farmers from the current 20 per cent to 50 per cent within three years. “So far, 22 States have come forward to implement the scheme and Rs. 5,500 crore has been earmarked for the scheme for the 2016-17 period,” Agriculture Minister Radha Mohan Singh told reporters on August 5.

Though several crop insurance schemes are available, availing funds and determining the right price is a challenge.

The committee has recommended pilot surveys that can estimate varying risk profiles for different regions of the country, and that for schemes such as PMFBY, drones are a better bet than satellite imagery.

***Sharing cadastral, Aadhaar and bank account details mandatory for crop insurance policies***



## Farmers advised to raise mango, guava and papaya



Khadi and Village Industries Minister G. Baskaran distributing saplings to a farmer in Sivaganga on Saturday.

The Department of Horticulture has proposed to take up high-density mango and guava cultivation and introduce hybrid papaya under National Horticulture Mission this year by offering a total subsidy of Rs. 3 crore to farmers.

Addressing a district-level seminar on fruit cultivation here on Saturday, Minister for Khadi and Village Industries Board G. Baskaran exhorted the farmers to raise fruits by making the best use of red soil and water conditions.

Collector S. Malarvizhi, who chaired the seminar in the presence of Sivaganga MP P.R. Senthilnathan, said the farmers who were roped in for fruit cultivation, need not worry about marketing as they could get good prices for their produce without the intervention of middlemen in 'Amma weekly sandhai' to be established in the district.

J. Rajendran, Deputy Director, Horticulture, said they proposed to cultivate high-density mango on 100 hectares, hybrid papaya, introduced for the first time in the district, on 70 hectares and high-density guava on 20 hectares in S. Pudur, Singampunari, Sivaganga, Kallal and Tirupattur areas.

The department, which organised block-level 'melas' in the first week of August, had selected about 700 farmers, he said adding these farmers were taught canopy management of high-density crops in the seminar. The fruit saplings were ready at State Horticulture Farms at Devakottai and Nemam near Kundrakudi and the cultivation would begin in September ahead of northeast monsoon, he said.

Mr. Rajendran said the department would organise a workshop on hi-tech horticulture at Kalayarkoil on August 18 to train the farmers on cultivation using poly houses, shade nets, plastic mulching (to suppress weeds), anti-bird nets and protected cultivation practices of all crops.

The department also proposed to cultivate hybrid vegetables, especially tomato, brinjal and green chilly, on 120 hectares. The department had kept ready about 40 lakh seedlings and the farmers would be given an insight into the scheme at a seminar to be held at S. Pudur on August 24. The department also proposed to cultivate cashew on about 100 hectares in Sakkottai, Devakottai and Kallal areas this year, he added.



### **US: Soybeans gain as soyoil rallies, pulls corn higher**

The spillover strength, coupled with export hopes allowed the soybean market to shrug off expectations of a record large harvest this fall.

US soybean future surged 2.8 percent on Monday to their highest in more than three weeks, supported by strong export demand and a rally in the soyoil market, traders said.

The gains in soybeans pulled corn higher, but wheat closed lower as traders locked in profits from early gains amid ample global stockpiles. Soybeans notched biggest daily gain in percentage terms since July 12.

“There was a lot of talk of Chinese pricing today and more cargos getting booked, and there just was not much selling in the market,” Charlie Sernatinger, global head of grain futures at ED&F Man Capital, said in a note to clients.

“As a result, beans moved relentlessly higher during the session.” Soyoil futures rallied 3.4 percent to their highest since April 27 after a monthly National Oilseed Processors Association report showed that supplies were tighter than expected.

The spillover strength, coupled with export hopes allowed the soybean market to shrug off expectations of a record large harvest this fall.

“Despite a record bean yield forecast from U.S. Agriculture Department on Friday, record demand has given us a support area on the charts,” CHS Hedging said in a note to clients. Chicago Board of Trade November soybean futures closed up 27-1/2 cents at \$10.09-1/4 a bushel. Prices for the most-active contract hit their highest since July 22.

USDA on Friday boosted its forecast for U.S. soybean exports in the 2015/16 marketing year by 85 million bushels. It also raised its soy export outlook for 2016/17 by 30 million bushels.

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The market also was digesting Friday’s sale of 258,000 tonnes of new-crop U.S. soybeans to China, the 12th largest soybean sale to be confirmed by the USDA in 13 business days. CBOT December corn futures were up 4 cents at \$3.37 a bushel.

The most-active contract hit its highest since July 29. Technical buying added to the gains in corn. Traders said corn’s recovery from a seven-year low on Friday and its higher close to end the week was a bullish signal, indicating that the market had fully accounted for the government’s forecast for a record large U.S. crop in the autumn.

CBOT September soft red winter wheat fell 1/2 cent to close at \$4.22 a bushel. Technical support for the contract was noted at its 30-day moving average.

## **Rice & rights: Judgment day for MP and Punjab in tug-of war for basmati GI tag**

The experts also expressed concerns that inclusion of MP will degrade the quality of Indian basmati, thus handing an advantage to Pakistan which then would claim to be the producer of “authentic aromatic basmati”.



Excluded from GI area, MP appeals in Madras High Court while Punjab wants it kept out. Express Photo by Gurmeet Singh

On Tuesday, Madras High Court will hold its final hearing of a petition seeking the geographical indication (GI) label for basmati grown in parts of Madhya Pradesh. Stakeholders in states that already enjoy the GI tag for basmati in their areas, notably Punjab, have been presenting a case why MP should be kept out of the GI zone.

The tag, granted by Chennai-based GI Registry, conveys an assurance of quality and distinctiveness attributable to the product’s origin in a geographical locality, region or country, and, therefore, commands a premium in the international market. The GI tag is used to identify various kinds of goods including Darjeeling tea, Kanchipuram silk saree and Kolhapuri chappal.

Among those opposing the GI label for MP are political leaders and agriculture scientists in Punjab, which dominates basmati production, as well as All India Rice Exporters Association. Punjab contributes half the 4 million tonnes basmati India exports, the major importers being Iran and Saudi Arabia.

“How can the Gangetic states be included in the GI area? The only rightful claimants are states which are part of erstwhile Greater Punjab, including Haryana, and a small part of Uttarakhand,” said Punjab Agriculture Minister Tota Singh. “We will approach the courts if we have to, in order to stall this.” He added Punjab has written to the Union government objecting to a move to grant the GI tag to MP.

Basmati experts of Punjab Agricultural University, meanwhile, have warned the government of possible international repercussions. “Basmati evolved from here centuries ago and if inferior rice grown in other areas is qualified as basmati, it will be a loss not only for Punjab but for India on the international stage. Other countries can claim the tag citing MP as a precedent, which would end India’s monopoly,” Dr G S Mangat, senior rice breeder from PAU.

The experts also expressed concerns that inclusion of MP will degrade the quality of Indian basmati, thus handing an advantage to Pakistan which then would claim to be the producer of “authentic aromatic basmati”.

In India, the basmati GI area covers Punjab, Haryana, Uttarakhand, Himachal Pradesh, Delhi, western UP and two districts of J&K. PAU experts say “Punjab is still the sole producer of the highest quality basmati and this aromatic rice variety originated from here centuries ago in undivided Punjab”.

“Basmati is a region-specific crop and it is because of a reason,” a basmati expert told The Indian Express. “Even when basmati is in the fields, it gives out a strong aroma in that area. This is because of specific climatic conditions in the foothills of the Himalayas in the Indo-Gangetic plains. Without these conditions the aroma will disappear.”

He expressed a fear of falling prices. With farmers’ prices already down from Rs 3,000-4,000 per quintal to Rs 2,300-2,400 this year, expansion of the GI area would be disastrous for them, he said.

The All India Rice Exporters Association (AIREA), meanwhile, has written to the Prime Minister, commerce and agriculture ministers, and chief ministers of Punjab, Haryana, Uttar Pradesh and Uttarakhand, as also to the Agricultural and Processed Food Products Development Authority (APEDA), saying efforts to expand the area under GI are without justifiable or valid reasons.

Incidentally, when the UPA was in power, Chief Minister Shivraj Singh Chouhan had accused APEDA, which had rejected MP's case, of being on the same side as that of Pakistan.

The AIREA letter read, "Such a move [including MP] will open the advocacy for inclusion of MP, Rajasthan and even Bihar thereby diluting the GI philosophy and premium associated with a GI product. Also, it will be against the economic interests of areas that grow it traditionally and will deal a body blow to farmers from the recognised GI zone. This will weaken our credibility in the world and take away from previous victories against infringements on basmati."

Former AIREA president Vijay Sethia said MP does not qualify for the GI zone because it has started growing it only recently and questioned the quality of its basmati.

A bureaucrat in MP told The Indian Express that Punjab and Haryana are worried about losing a major market share if MP is included in the GI zone.

"In high end markets like the US, MP's basmati will get premium because farmers don't use chemical pesticides and the produce is treated as organic, unlike Punjab and Haryana that use chemicals."

MP had challenged APEDA's decision in the Chennai-based Intellectual Property Appellate Board (IPAB).

In February, IPAB included Punjab, Haryana, UP, Uttarkhand, Himachal and J&K in the GI zone but not MP. The state challenged IPAB's order in court.

## **Combination dose**

A correction in farm prices, along with a bumper crop, is just what the rural economy needs today.

A bumper harvest for farmers is welcome news, especially coming after two years of drought and successive crop failures.

No less important, though, is that it is being accompanied by a recovery of sorts in prices of many agri-commodities, from sugar and milk to cotton and rubber. Besides, farmers have this time significantly ramped up acreages under pulses, where prices were already ruling sky-high and are unlikely to fall beyond a point even with record production, given the country's overall supply deficit position.

In the last two years, Indian agriculture experienced a “perfect storm” from both extreme weather events as well as a global commodity crash. Together, they took a heavy toll on farm incomes that registered an average annual growth of barely 3.5 per cent in 2014-15 and 2015-16, as against an estimated 13.9 per cent in the preceding 10-year period.

That should hopefully change for the better this year, with an excellent monsoon so far and improved global price prospects for most farm commodities. The Food and Agricultural Organisation's Food Price Index has risen by 8.4 per cent this year.

While it is difficult to see prices going back to their pre-crash peaks, there is equal reason to believe that the worst of the bear phase is over.

That matters a great deal for Indian farmers, much more exposed to the vicissitudes of global commodity markets today. When global prices were good, the country's agri-exports soared from \$ 7.5 billion in 2003-04 to over \$ 43 billion in 2013-14. But when they crashed, exports, too, plunged to \$ 32.5 billion in 2015-16. The same farmers — whether growers of cotton in Gujarat, basmati paddy in Haryana, guar in Rajasthan, rubber in Kerala or maize in Bihar — who benefited during the boom suffered a sharp reversal of fortunes in the crash that followed.



Now that prices are showing signs of correction, the least the Centre can do is to allow it to happen. In recent times, there has been a tendency to clamp restrictions — whether on stockholding, exports or futures trading — at the slightest hint of increase in prices of farm produce. The temptation to resort to such measures can be more with the fixing of a 4 per cent annual consumer price inflation target, based on an index where food and beverage items have a 45.86 per cent weight. But that would ultimately not be good either for rural incomes or the broader economy.

### **Look before you dismantle**

Replacing PDS with cash transfers will weaken social protections.



According to the latest large sample National Sample Survey (NSS) data of 2011-12, nearly 47 per cent of the households buy food from PDS shops, costing a central food subsidy of less than Rs 600 per head for 2011-12.

The government and a section of activists and academicians have been insisting that cash transfers replace the provision of subsidised goods and services to reduce government expenditure and to minimise leakages in social welfare programmes. One of the schemes that is sought to be dismantled is the Public Distribution System (PDS), primarily on the ground that its inefficient targeting

does not benefit the needy. The freed subsidy is proposed to be distributed directly to every household.

Is it a good idea to replace the PDS with cash transfers? According to the latest large sample National Sample Survey (NSS) data of 2011-12, nearly 47 per cent of the households buy food from PDS shops, costing a central food subsidy of less than Rs 600 per head for 2011-12.

If these households lose access to PDS, they would incur extra expenditures to buy from the market. Our calculations from household food consumption show that over 63 per cent of PDS beneficiary households' annual extra expenditure will be more than Rs 600 per head and for more than 25 per cent of them, it is over Rs 1,200. Hence, directly distributing the central food subsidy to everybody in cash instead of running the PDS will leave more than 63 per cent of the PDS beneficiaries under-compensated.

Restricting the cash transfer to the bottom 50 per cent of the population would still leave 25 per cent of them under-compensated. Moreover, the problems of targeting that the current PDS suffers from will persist. Even pooling state governments' food subsidies won't be adequate to compensate all the current PDS beneficiaries. Hence, a considerable expansion of public outlay is the only option if cash transfer replaces the PDS.

Another concern is in a country where minimum wages and wages for public work (MGNREGS, for instance) are slow in inflation indexation, upward revision of a welfare allowance of this kind will have considerable time lag. Moreover, mere consumer prices (CPI) indexation of cash would not mean secured food consumption; calorie intake reduction over time at poverty line expenditure despite it being updated by CPI is a pointer to this fact. So cash transfers will require regular Pay Commission-style upscaling if it has to take up the role of basic income providing for basic necessities.

These inferences also stack up with micro-experiments on ground. Cash transfer experiments were successful where the transfers were (a) fairly large, as in a 2011 UNDP-Delhi government experiment where BPL households barred from PDS were compensated with Rs 1,000 monthly in cash or Rs 2,400 per head annually (assuming a five-member family), which is more than four times the

amount that can be distributed per head to everybody from the central food subsidy of 2011-12, and, (b) where cash did not replace any existing social welfare programme as in the 2011-12 UNICEF-SEWA experiment conducted in Madhya Pradesh.

The latter experiment also upwardly revised the cash transfer amount after a year by 50 per cent (from Rs 1,920 to Rs 2,880 per head annually) to compensate for inflation, which clearly shows the necessity of frequent large upward revision of cash transfers. On the other hand, two prominent experiments to replace PDS with cash transfer that did not have these characteristics — the Delhi Annashree Yojana and a similar one in Puducherry — faced many obstacles and were discontinued.

Dismantling of the PDS also has wider macroeconomic repercussions. First, the government will have little control over the country's food security. Second, greater benefits from the PDS ensure higher food consumption, increasing food-sufficiency and hence, higher food demand.

Of those PDS beneficiary households who would require transfers of more than Rs 600 to be fully compensated for withdrawal of the PDS, 45 per cent are food sufficient (defined as per-capita calorie intake of 2,200 and 2,100 calories or more for rural and urban areas respectively) compared to 41 per cent among overall PDS beneficiaries.

Those who would require more than Rs 1,200 in transfer, 53 per cent of them are food sufficient. Third, it will expose the agricultural sector to the whims and fancies of the oligopolistic agricultural market. Neither the farmers nor the consumers will benefit. Instead of strengthening institutions and systems to efficiently allocate public resources according to needs, the current discourse seeks an escape route in an evidently less efficient system of redistribution.

However, the most puzzling aspect of this particular approach is its commitment to provide people with cash entitlement yet adhering to the logic of budget neutrality through slashing other social sector expenditures.

Even the liberal opinion within the set which reckons cash transfer to promote economic activity and growth, doesn't call for expansion of public expenditure to finance cash transfers. In India, extremely low social sector expenditure is the main reason for its rotting social protection system. Dismantling the PDS and not demanding an increase in public outlay will neither improve food adequacy nor promote economic growth. This conservative fiscal approach makes this particular cash transfer model logically unconvincing.

## THE HINDU BusinessLine

**Wholesale prices up 3.55% in July on higher food prices**

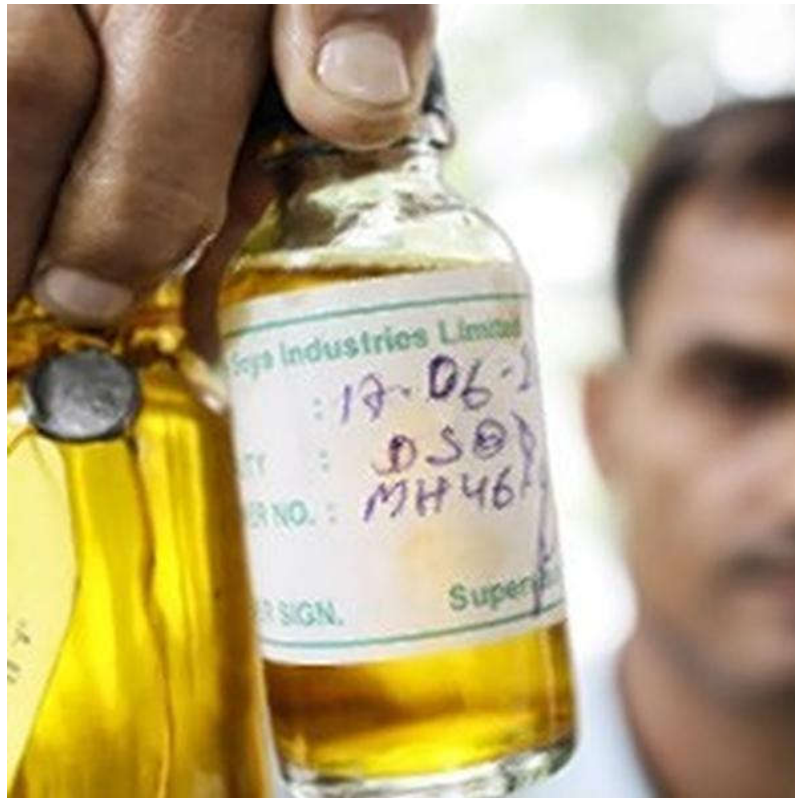


Wholesale prices rose at a faster-than-expected pace in July, gaining 3.55 per cent from a year earlier on higher food prices, government data showed on Tuesday.

The data compared with a 2.55 per cent annual rise forecast by economists in a Reuters poll. In June, prices rose a provisional 1.62 per cent.

Wholesale food prices last month rose 11.82 per cent year-on-year, compared with a provisional 8.18 per cent gain in June.

### **Soya oil rises on higher duty**



Rise in duty on imported oils by the Centre lifted soya oil in Indore mandis. In private trading, soya refined ruled at 635-40, while soya solvent rose to 600-605.

Soyabean remained flat 3,700 on subdued demand, while plant deliveries also ruled steady at 3,750.

Given enthusiastic crop report, rally in soybean appears unlikely in the coming days. Soyameal ruled firm at 33,000-35,000 a quintal on improved domestic demand.

### **95% sale at Coonoor tea auction**

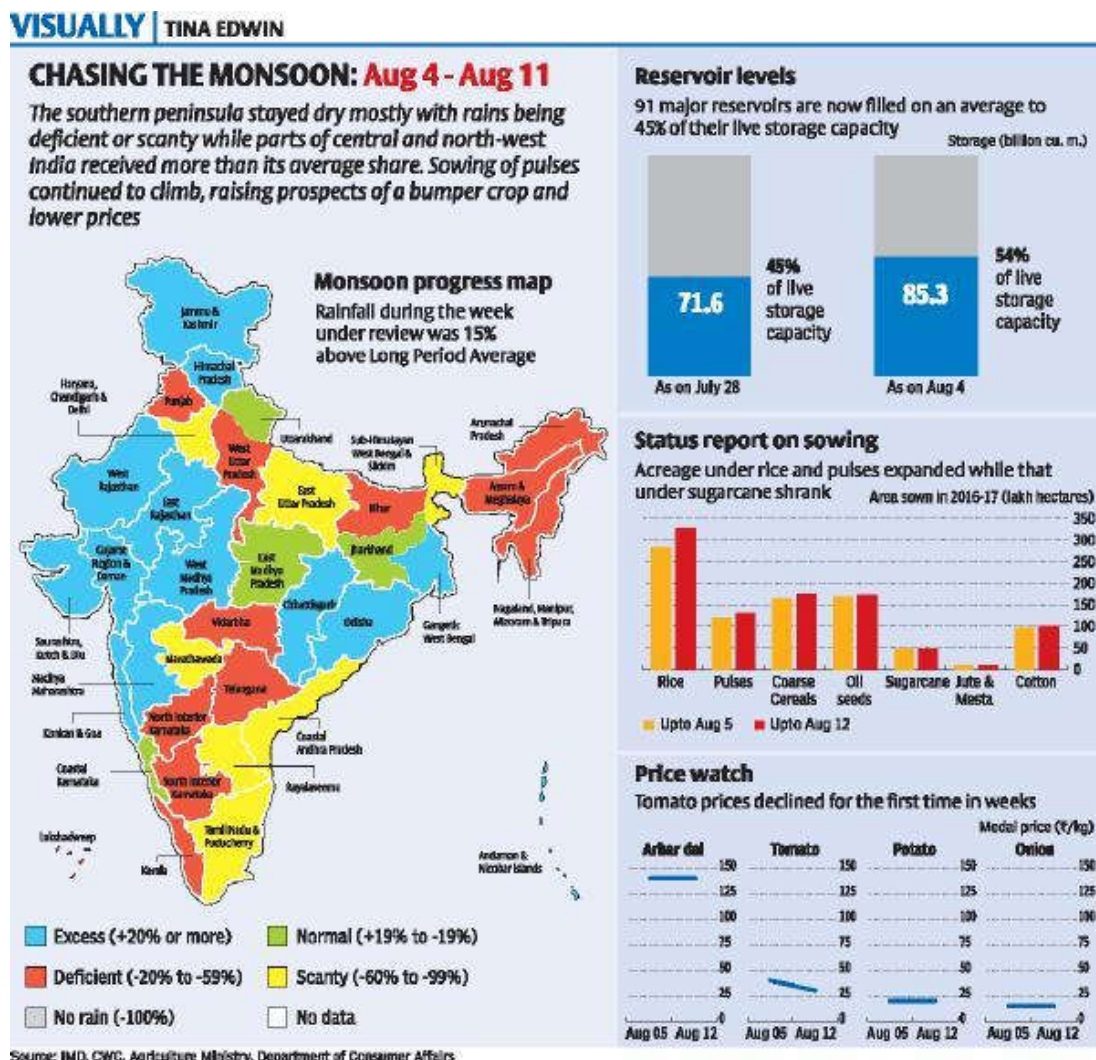
As much as 95 per cent of 15.44 lakh kg offered for Sale No: 32 of Coonoor Tea Trade Association auction was sold despite the average prices rising to 90.33 a kg from previous week's 88.29 due to increased demand.



No CTC grade entered the high-price bracket of 200/kg. The Broken Orange Pekoe Small of Darmona Estate, topped the Leaf auction as also the entire CTC market at 180 a kg.

In the Dust Tea auction, Homedale Estate's Red Dust, auctioned by Global Tea Brokers, topped at 175, closely followed by Darmona Estates' Super Red Dust at 174. In the orthodox market, Chamraj topped at 134 a kg followed by Kairbetta at 218.

## Chasing the monsoon



The southern peninsula stayed dry mostly with rains being deficient or scanty while parts of central and north-west India received more than its average share. Sowing of pulses continued to climb, raising prospects of a bumper crop and lower prices.

## **GEAC pulled up again for suppressing GM mustard data**

The Genetic Engineering Appraisal Committee (GEAC) has once again been pulled up for withholding information from the public by the Central Information Commission (CIC). The CIC has further issued a show cause notice against two public information officers with the Ministry for violating Right to Information.

The Commission, on Friday, once again took up the case against the GEAC, which falls under the aegis of the Ministry of Environment, Forests and Climate Change and called the committee out for making ‘excuses’ and being ‘unreasonable’.

The CIC had earlier ordered the committee to disclose all the relevant information, including the bio-safety data and detailed minutes of meetings, by April 30 this year. The Ministry, however, has only uploaded gist of the minutes of the meetings that have been held, and in this also the latest minutes has not been uploaded. The GEAC has repeatedly sought extension of deadline for uploading the data.

“Instead of furnishing information as ordered by April 30, 2016, the public authority requested for two more months. The public authority did not honour its own commitment to furnish in that time and on June 28, 2016, they sought another extension this time for 90 days. To furnish a copy of a report or to place the agenda and minutes of GEAC meeting, they need no time at all. They are just asking for time though they do not require it,” CIC noted.

A case was filed by anti-GM activist Kavitha Kuruganti against the Ministry after her application for the bio-safety dossier on GM mustard was rejected on the grounds that a final decision had not been taken, and the information could not be shared because it had intellectual property implications.

“The excuses forwarded by the respondents appear to be not based on any reasoning or exceptions under RTI Act,” the CIC order on Friday said.



## Dairy industry breathes easy as Moscow signs export protocol



Eyes a big market with Russia continuing sanctions on items from West

Ending several months of uncertainty for the Indian dairy industry, Russia has finally signed the protocol which will allow exports of dairy products from India to begin.

“The Russian agency for ensuring food quality and safety, FSVPS, has now signed the protocol and will upload on its website the names of the dairies that meet the strict conditions laid down by it to qualify for exports,” a government official told *BusinessLine*. With Russia continuing its ban on import of food items from Western countries, including the European Union, India has been eyeing the \$40-billion market for food and agricultural items, which includes dairy products.

Although only a handful of dairy plants may meet the given norms to begin with, the Indian dairy industry is hopeful that soon Russia will start sourcing from other companies as well when it is satisfied by the high quality of Indian products. “We are ready to meet all conditions laid down by the Russians. We

just want them to give us an opportunity to begin exporting. Once they realise that our items, such as hard cheese, are of premium quality, they would hopefully be open to exports from more companies,” said Devendra Shah, Chairman & Managing Director, Parag Milk Foods.

Parag Milk Foods and Shreiber Dynamix Diaries were the first two plants that were approved by the FSVPS last year in April, when Russia was insisting that dairies should have their captive cattle farms with at least 1,000 cattle to qualify for exports.

### **Captive cattle farms**

India, however, had not signed the export protocol at that time as it wanted the requirement for a captive cattle farm to be dropped from the list of mandatory requirements as most dairy companies in India — including Amul — do not have such farms.

Russia finally agreed to drop the captive farm condition earlier this year, but decided to retain the one requiring exporters to collect milk directly from farms and not from collection centres.

“The Export Inspection Council has given a detailed brief to FSVPS on the veterinary inspection process followed by dairies in the country to ensure that cows are disease-free. On the basis of this information and the field inspection it carried out in the country, the Indian dairies would be selected,” the official said.

### **Select pulses slide on muted demand, adequate stocks**

Select pulses led by moth fell by up to 400 per quintal at the wholesale pulses market today owing to slackened demand from retailers against sufficient stocks position.

Trade said besides fall in demand from retailers at prevailing levels, adequate stocks position on improved supplies from growing regions mainly pulled down moth and other pulses prices.

In the national capital, moth drifted lower by 400 to 4,800—5,200 per quintal.

Arhar and its dal dara variety fell by 250 and 300 to 7,000 and 9,800—11,500 per quintal respectively.

Moong and its dal chilka local declined by 300 each to 5,000—5,500 and 5550—5950 per quintal respectively. Its dal dhoya local and best quality enquired lower by a similar margin to 5950—6450 and 6450—6,650 per quintal respectively.

In line with overall trend, peas white and green were down by 100 each to 3,600—3,625 and 3,800—3,900 per quintal respectively.

Following are today's pulses rates (in per quintal):

Urad 9,300—10,700, Urad Chilka (local) 9,500—9,600, Urad best 9,600—10,100, Dhoya 10,000—10,300, Moong 5,000—5,500, Dal Moong Chilka local 5,550—5,950, Moong Dhoya local 5,950—6,450 and best quality 6,450—6,650.

Masoor small 6,000—6,200, bold 6,050—6,250, Dal Masoor local 6,450—6,950, best quality 6,550—7,050, Malka local 7,000—7,300, best 7,100—7,400, Moth 4,800—5,200, Arhar 7,000, Dal Arhar Dara 9,800—11,500.

Gram 8,000—8,200, Gram dal (local) 8,400—8,600, best quality 8,700—8,800, Besan (35 kg), Shakti Bhog 3,680, Rajdhani 3,680, Rajma Chitra 5,300—6,350, Kabuli Gram small 9,500—9,900, Dabra 2,700—2,800, Imported 4,700—5,100, Lobia 5,400—5,600, Peas white 3,600—3,625 and green 3,800—3,900.

## Monsoon cheer: tractor industry eyes higher growth this fiscal



Tractor sales have grown steadily this fiscal, aided by better than forecast Rabi production and improved foodgrain prices

Players projecting strong sales with improved Rabi production and foodgrain prices

Thanks to a good monsoon, the tractor sector, which has seen a recovery in demand after two consecutive years of sluggishness, is optimistic of achieving higher-than-expected growth this fiscal.

Tractor firms and industry analysts are projecting a strong double-digit growth in sales, against the low double-digit they had projected in the beginning of this fiscal.

Tractor sales have grown steadily this fiscal, aided by better-than-expected Rabi production and improved foodgrain prices.

In Q1, tractor volumes grew about 15 per cent to 1.64 lakh units against the year-ago period. This was also significantly higher than the 1.05 lakh units registered in the March quarter.

In FY15 and FY16, volumes had fallen 13.1 per cent (at 5.51 lakh units) and 10.5 per cent (at 4.93 lakh units) respectively on the back of erratic monsoon and lower crop prices.

“With prospects of normal monsoon for the season and its positive impact on production, farmers’ income will get a boost and that will eventually lead to increased demand,” Rajesh Jejurikar, President & Chief Executive – Farm Equipment, Mahindra & Mahindra, told BusinessLine.

“Given the healthy monsoon and rural demand for tractors, we can say the industry outlook for FY17 can be at 15 per cent rather than the 10 per cent we had communicated during the start of this fiscal,” he added. M&M, which has a 44 per cent market share, saw its domestic tractor sales grow 20 per cent at 88,101 units during April-July 2016 when compared with the year ago period.

Escorts’ tractor volumes increased 13 per cent at 20,143 units. “Tractor industry growth for 2016-17 is expected to increase 12-15 per cent and we are also likely to grow in line with the industry,” said Bharat Madan, Group Chief Financial Controller, Escorts.

### **South leads**

According to rating agency Icria, the South is leading the growth, while the North is facing challenges.

“After being the best performing region during FY15 and FY16, the southern region has continued its robust growth trend in the current fiscal, led by continued strong demand in States like Andhra Pradesh and Tamil Nadu, on account of improved monsoon as well as winter rainfall (select districts) and government support programmes,” it added.

However, Jejurikar said States such as Maharashtra, Madhya Pradesh, Rajasthan, Gujarat, Andhra Pradesh and Uttar Pradesh have started showing signs of growth. “Going forward, the month-on-month trend will only help understand which States will take the leap,” he added.



# Business Standard

## India's WPI inflation up 3.55% y-o-y in July

Wholesale food prices last month rose 11.82% year-on-year, compared with a provisional 8.18% gain in June



India's wholesale prices rose at a faster-than-expected pace in July, gaining 3.55% from a year earlier on higher food prices, government data showed on Tuesday.

The data compared with a 2.55% annual rise forecast by economists in a Reuters poll. In June, prices rose a provisional 1.62%.

Wholesale food prices last month rose 11.82% year-on-year, compared with a provisional 8.18% gain in June.

## Getting markets to the farmer

That's both stock and financial ones, and goes well beyond what Modi mentioned from Red Fort. Read on for how ongoing projects and regulation changes will transform the way produce is stored, financed and traded



The prime minister's Independence Day address referred to the hope placed on e-NAM, the electronic project to create a national agricultural market for farm produce. The aim here is to, in two to three years, link the 600-odd major wholesale markets (mandis) in the country.

More than this, though, what will revolutionise the way farmers sell commodities is the way these are traded and also financed by banks. For this, the Warehousing Development and Regulatory Authority (WDRA) is trying to make warehousing receipts (WRs) a negotiable instrument.

And, for trading in these, the Securities and Exchange Board of India (Sebi) is changing its regulations.



## **Making receipts tradable**

WDRA is increasing warehouses' accountability for the goods they store. There will be a rating mechanism for warehouses and norms for commodity repositories. That would set the stage for making WRs negotiable. These would then be traded on exchanges, with banks willing to provide financing, with a higher degree of safety.

The agri-centric National Commodities and Derivatives Exchange (NCDEX) has started moving in this direction, using technology to make WRs tradable.

"The warehousing regulator wants sector reforms to be implemented as soon as possible, to make WRs issued against deposited commodities a negotiable instrument," said a source. For this, a sound regulatory mechanism and ecosystem are needed, "which all stakeholders have to ensure".

With negotiable WRS, financing by banks is safer, for it becomes easier to dispose of goods in case of default. Hedging of commodities and trading on an exchange platform, whether a derivatives exchange or e-mandis would become seamless. The national mandi-linking e-platform is ongoing and a company set up by NCDEX has already linked mandis in Karnataka and is doing similar linkages for other states. States independently linking their mandis will then link their markets with the national e-market.

## **Tight tracking**

As for Sebi, it is finalising tighter regulations for warehouses, to ensure they recognise only those registered with WDRA. Those yet to do so would get six months to fall in line, beside other new norms.

And, WDRA is working on registering the repositories for commodities. Unlike securities, commodities cannot be dematerialised because even after converting into electronic form, it retains an underlying asset in the same form. An entity keeping an electronic record of commodity transactions at a centralised place is a repository; NCDEX has an in-house one, Comtrack, which keeps e-records of goods in exchange-approved warehouses.

WDRA is in the process of finalising the Warehousing (Development and Regulation) Repository and Participants Rules, 2016. It is also working on giving ratings for registered warehouses. Although registration with WDRA for all warehouses is not mandatory, registered warehouses have larger acceptance for business. Eventually, depositories like NSDL and CDSL can apply for becoming commodity repositories.

All these measures are aimed at making WRs a negotiable instrument. Tighter regulations and technology, and a system of grading and assaying agencies, repositories, and inspection and auditing by outside agencies for warehouses, will be aimed to check potential scams.

### **Bringing in banks**

For exchange-traded commodities, there is a separate set of warehousing regulations. Banks are ready to finance goods that are hedged on commodity exchanges (comexes). According to a research paper published by the Indian Institute of Banking and Finance, non-performing assets (NPAs) in the agricultural sector have been showing a rising trend since 2010, up from 1.9 per cent of the total in March 2009 to 4.7 per cent in March 2015.

NCDEX has proposed an action plan for banks till they are allowed to hedge risk on behalf of borrowers on comexes. Banks could mandate borrowers to list their risk exposure and on a risk mitigation strategy. The Reserve Bank had, two years earlier, advised banks to do so. They could also provide guidance and advisory services on borrower risk exposure

NCDEX has also introduced a 'Hedge Passport' programme to help enable banks to assess their borrowers' risks vis-a-vis commodity price risks. And, to facilitate reduction of those risks. Hedging will help lower the probability of credit default. Hedged collateral on exchanges will enable a bank to lower the collateral requirement and lend at reduced rates, increase the loan to value ratio and so on.

## **Innovation**

However, financing for agri products entails several risks - on prices, quality and those associated with the warehouses where the commodities have been stored. Banks would have a lien on the commodities financed but, explains Aditya Gandhi, director (technology), Sapiient Global Markets (a global derivatives advisory): "A challenge in the physical commodity space is the need to verify because of lack of tight control over inventory, its quality or authenticity of title."

WDRA had only a few days earlier issued a proposed set of rules for inspection of registered warehouses, warehousemen, and oversight inspection agencies. For WR trading, which provides real negotiability, Gandhi advises use of block chain technology, which made bitcoins possible. The latter hasn't got government approval but RBI has endorsed block chain.

Says Gandhi, "Using block chain, the physical or digital proof of ownership of a commodity can be captured in a block. Whenever ownership changes, this is reflected in the new block created and the chain passes on to the next owner. The transaction can itself be governed by rules that are embedded in a smart contract in the block. Since this chain is secured and the history cannot be altered, there is no risk of tampering or duplication ensuring proof of ownership and right to transact. This eliminates risk of fraud and reduces the cost of reconciliation and eliminates need for a number of intermediaries."

How does this arrangement work? A note by Sapiient explains how block chain technology can be used for making trading in WRs tamper-proof. "Let's say each bale of cotton is given a RFID tag and based off the tag and information like location of origin, grading, etc, a block is created. As it moves through its value chain e.g loaded on a ship, sold to a trader, etc, a full history of each transaction and change of ownership is tracked. As these enter warehouses, these can be linked to WRs, ensuring tight coupling and tracking. If a bank needs to give loans based on WRs, enter into repurchase agreements, etc, they are ensured of authenticity. If traded or unloaded from the warehouse, then again the link to the physical commodity is maintained. As no one can duplicate

this, tamper it and it is available for all to verify, it creates full traceability and transparency, ensuring quality while reducing risk of fraud."

## **Ahead**

However, to get this implemented is a big challenge. The first is governance of warehouses, under process, with both WDRA and Sebi working on this. The next is giving RFID tags to all consignments of commodities by an exchange, ensuring these aren't stored or moved without their knowledge. Then, the issue of maintaining quality of the stored goods and generating trust in the WR issued against such stored goods, which would be freely transferable - the receipt holder becomes owner and, hence, that receipt has to be electronic and secure. This is a long process. And, dispute resolution and addressing investors' grievances has to be ensured.

NCDEX recently became the first comex to introduce RFID tagging in its warehouses, integrated with its Comtrack repository.

"This is a milestone development in the storage and management of agri commodities in warehouses. Our efforts are directed towards bringing high-technology solutions to the warehousing space, that will bring in higher efficiency and trust to the entire agri eco-system," says Samir Shah, managing director of NCDEX.

Adding: "We have also developed a warehouse and warehouse service provider rating system. This will give a competitive business edge to warehouses with higher ratings and banks can also provide finance for goods stored in warehouses, with higher ratings at easier terms. Adopting technologies like block chain when they become mature for WR trading will possibly follow."

## **NATIONAL AGRIMARKET**

- A project of linking major national mandis through an electronic platform is being tested. Similar projects are already being implemented at state levels.

- The aim is wider market choice to farmers, making warehousing receipts issued against the deposited commodities a negotiable instrument, and tradable. This will smoothen financing for traders and farmers

### **And, related eco-system**

\* Warehousing regulator is finalising regulations for commodity repositories, a rating mechanism for warehouses and norms for independent inspection agencies

\* Sebi is strengthening the warehousing regulations to be recognised by commodity exchanges

\* NCDEX has started a project under which commodities in its recognised warehouses will be provided identification tags and record all transactions in that commodity. Setting the stage for trade in negotiable warehousing receipts

### **Modi commends farmers for planting record pulses this kharif**

Pulses acreage in the current Kharif season is almost 40 per cent more than last year and is even more than the average area covered in last five years



The stupendous increase in sowing of pulses during the ongoing kharif season didn't escape Prime Minister Narendra Modi's eye. During his Independence Day speech, the PM commended farmers for raising the area under pulses this season to almost 1.5 times more than last year.

Pulses prices have been one of the main concerns of the Modi government as the retail prices had dropped below Rs 100 a kg. However, farmers seem to be responding to the price signals this year. Aided by strong monsoon, pulses have been planted on 12 million hectares, the highest in more than five years.

Forecast if favourable monsoon has raised hopes that India might harvest a record 20 million tonnes of pulses in 2016-17. India might have one of the smallest gaps between pulses production and consumption in recent times, lowering the burden on imports.

Though Modi gave credit to higher minimum support price (MSP), bonus and assured procurement as being the reasons for higher acreage, a closer look at historical evidence showed that the security of assured procurement was the clincher.

The Centre had decided to buy pulses directly from farmers to create a buffer stock of around 2 million tonnes. The purchases seems to have given some semblance of assured income to farmers.

Modi also said some people have told him that use of soil health cards (SHCs) overtime had brought down cost of production by 25 per cent and improved production by 30 per cent through judicious use of fertilisers and plant chemicals.

However, most experts said that there was no scientific evidence to such claims and the Centre should conduct surveys and studies on 1,000-3,000 farmers through an independent agency to find out the exact quantum of benefit that farmer could have through SHCs.

# THE TIMES OF INDIA

## **Dharwad farmers embrace state's afforestation scheme**



The Krishi Aranya Protsaha Yojane (KAPY), which was launched in the state in 2011, with the objective of encouraging farmers to actively participate in afforestation, has received an overwhelming response in Dharwad district.

Under the scheme, farmers can purchase various plants from forest department's nurseries at concessional prices and also avail financial assistance for nourishment and nurture of the plants up to three years.

Launched by the then BJP government, farmers across various taluks in Dharwad have evinced interest in the initiative. Between January and June this year, as many as 1,447 farmers in the district have submitted applications to the department seeking saplings this year, while the number stands at two for Gadag. Forest department has been actively encouraging farmers to embrace the afforestation initiative in Dharwad.

Assistant conservator of forest (ACF) S Anjanappa opined that KAPY was 'one of the best' schemes that had been launched to increase afforestation. "Depending on the size of the plant, farmers get saplings from the department's

nursery for Rs 5 to Rs 10. We are trying to popularise the scheme by distributing pamphlets and through the media," he added.

Explaining the guidelines governing the disbursement of financial assistance to farmers, Anjanappa said, "Farmers receive Rs 10 one year after they have purchased the plant, Rs 15 in the second year and Rs 20 in the third, provided the plants survive. Farmers can avail this facility for plants such as teakwood, honne, matti, etc., but they cannot receive financial assistance for horticulture crops such as mango, coconut and silver oak."

Anjanappa was quick to point out that there were restrictions on the financial aid doled out to farmers. "Government will not provide assistance if a farmer decides to take up cultivation of 400 plants in one acre. We will provide aid in accordance with government guidelines," he said.

A farmer from Byahatti village said, "Across two acres, I have taken up cultivation of 300 plants and received Rs 15 for each plant that has survived into its second year. It is a good scheme to increase forest cover, and also helps farmers." He appealed to the government to extend the facility to horticulture crops such as mango and coconut.



# THE ECONOMIC TIMES

## Poor rains may hit coffee, spices crops this year



The situation in Karnataka is not that worse and could be made up if it rains in the next few weeks. "Rains are just 9% deficient at 516 mm.

KOCHI|NEW DELHI: It's been more than two months into the monsoon but both Kerala and Karnataka are showing deficient rainfall.

The situation seems to be worse in Kerala, which had 28% deficient rainfall between June 1 vest, the pepper crop was down 25% from a year ago to below 40,000 tonne.

The situation in Karnataka is not that worse and could be made up if it Rains in the next few weeks. "Rains are just 9% deficient at 516 mm.

Lack of rains has affected the districts of Shimoga, Chikmagalur, Kodagu and Dakshin Kannada. Reservoirs in Dakshin Kannada are not full yet," said Gokul Prasad, assistant director of statistics, Department of Agriculture in Karnataka.

But the slight drop in rains seems to have been a blessing for the coffee crop. "Following a drought, we thought robusta coffee crop will be down by 25% to 30%. But now we think the decline will be 15%. Had there been heavy rains,

there would have been increased dropping of coffee berries," said Baba BS Bedi, chairman of Karnataka Planters' Association. and August 12. Some key plantation growing districts like Wayanad and Idukki have been hit badly. In Wayanad, the rainfall is lower by 59%.

Most of the coffee in Kerala is grown in Wayanad apart from spices. Idukki is another hub for spices in the state. "We had a long summer without sufficient rains. And now, after the monsoon started, Idukki hasn't got much rain. Cardamom production may come down sharply. Already, harvest has been delayed," said KS Mathew, a major cardamom grower.

It was a bumper crop last year at a record 30,000 tonne. Similarly, in coastal Karnataka, where rain deficit for the region is close to 17%, coffee and pepper planters are worried.

"Rains in the three main coffee growing districts of Chikkamagalur, Hassan and Coorg are 50% less than the previous year. The region produces more than 80% of India's coffee, and we expect a production fall," said GR Gopinath, founder of Air Deccan, who is now involved in farming. He said the deficit monsoon impact was also seen on coarse grain and millets grown in the plains.

The India Meteorological Department said the light spell of rains will occur in some parts of Kerala and Tamil Nadu in the next 2-3 days, followed by heavy rains in the rest of south India by the last week of August.

Pepper is another crop which will be affected. Growers feel the crop will decline at the time of harvest by December. Even during last har

## Trouble in the Valley to make apples costlier



Protests in Kashmir Valley and more than a month of curfew may impact the Rs 7,000-crore industry as growers are unsure of how to go ahead with the harvest.

NEW DELHI, SRINAGAR & CHANDIGARH: Apple prices are 25%-30% higher than last year and may climb further if arrivals of the crop from Jammu & Kashmir, which produces about 70% of the country's apples, is delayed due to curfew and protests. Apples in New Delhi's wholesale market cost Rs 800 to Rs 2,000 for a 25-kg box. Currently, apples at all major markets come from the lower and middle heights of Himachal Pradesh, where the crop was damaged by hail and poor snowfall.

Major trading and procurement companies such as Adani Agrifresh, Concor, Dev Bhumi Cold Chain, Suri Agro Fresh, Mahindra & Mahindra and global players from the US, Australia, New Zealand, China and Chile are monitoring the situation, said MR Kriplani, president of the Chamber of Azadpur Fruit & Vegetable Traders and an apple trader.

"Compared to daily arrivals of 350 trucks of 12 tonnes of apples, we are now getting only 200 trucks. Prices are in range of Rs 800-2,000 for a 25 kg box," said Kriplani.

"Output is expected to be 1.5 crore boxes (20-22 kg) -- almost half of last year in Himachal," said Prakash Thakur, vice chairman of HP Horticultural Produce Marketing & Processing Corporation.

"Increase in rates is expected to hold out till Kashmir apples arrive. Long-term storage and trading margins will be affected as farmers will demand a higher rate due to lack of abundant supply throughout Himachal," said Rajiv Malhotra, CEO of National Agri Food Consultants. Kumar Dhruva Aggarwal, vice-chairman of Dev Bhumi said prices will be 10-20% higher.

Protests in Kashmir Valley and more than a month of curfew may impact the Rs 7,000-crore industry as growers are unsure of how to go ahead with the harvest. Curfew has prevented traders from other states from visiting the Valley and thus rates are yet to be fixed.

"We are also part of this society and want peace. Harvest is going to be tough and may not be possible if this situation continues. Our mandi is closed for a month now," Mir Mohammad Amin, president of the fruit mandi in Shopian, told ET.

"Only political resolution would strengthen and stabilise business here. We are ready to sacrifice this year's crop if there would be some resolution," said Bashir Ahmad Bashir, president of the Kashmir Valley Fruit Growers' Association.

### **131 new agricultural seeds invented by scientists: PM Modi**

Addressing the nation on the the 70th Independence Day, he said that agricultural seeds had helped in increasing foodgrain production.

NEW DELHI: Prime Minister Narendra Modi on Monday congratulated Indian scientists for inventing 131 new agricultural seeds.



Addressing the nation on the the 70th Independence Day, he said this had helped in increasing foodgrain production.

### **Industry expects UP to raise state advised price of sugar**



The state advised price, which is usually higher than the fair and remunerative price fixed by the Central government, was last revised in 2012-13.



PUNE: The sugar industry in Uttar Pradesh expects the Akhilesh Yadav government to increase the state advised price of sugarcane ahead of next year's assembly election, in the first revision in three years. The state advised price, which is usually higher than the fair and remunerative price fixed by the Central government, was last revised in 2012-13.

"Increase in sugar recovery of the state by almost 1%, improvement in sugar prices and an election year mean that the state government will definitely increase sugar prices," said an industry executive, who did not wish to be identified. At the same time, the central government, trying to present its pro-farmer policies to rural voters, has been trying hard to contain any increase in retail sugar prices as retail inflation hit a 23-month high of 6.07% in July.

The governments will have to balance all the concerns, executives said. "UP will be the country's largest sugar producer in 2016-17 as production in other states is likely to decline. Introduction of a new sugarcane variety with higher yield and recovery as well as well distributed rainfall will help UP become top sugar producer," said Tarun Sawhney, president of Indian Sugar Mills Association. "At this time, I hope the policies of the central and the state government balance all the concerns," he said.

## Holding The Rates

Central govt has been trying to keep retail prices of sugar at ₹40 per kg

**Policies**

- The centre is trying to contain rise in sugar rate as retail inflation hit a 23-month

**₹4,000 cr**

- Arrears that sugar mills have to pay farmers

**₹2,100 cr**

- Outstanding arrears government is expected to clear soon

**The outstanding cane price arrears in Uttar Pradesh will decline fast provided sugar prices continue to be good and remain at the current level of ₹35.50 per kg at the mill gate**

**ABINASH VERMA**  
director general,  
Indian Sugar Mills  
Association



Prime Minister Modi addressed a huge rally in May in Saharanpur, part of the cane belt of UP, where he highlighted that his government had given a soft loan of Rs 6,000 crore and increased the ethanol price and its blending in motor spirit from 5% to 10% so that mills could clear cane price arrears. However, analysts said it will be a tough task for the central government as it has been trying to keep retail sugar prices under control. The Centre has been trying to keep retail prices at Rs 40 per kg with policies such as discouraging exports and imposing a stock limit on traders, which the industry said may not help in clearing farmers' dues.

Though cane price arrears have come down significantly compared to that a year ago, sugar mills have to yet pay Rs 4,000 crore to the farmers across the country, more than half of it to farmers from UP.

Most of the dues of UP farmers involve some big but sick sugar mills and there is government pressure to clear the outstanding arrears of Rs 2,100 crore. "The outstanding cane price arrears in UP will decline fast provided the sugar prices continue to be good and remain at the current level of Rs 35.50 per kg at the mill gate," said Abinash Verma, director general, Indian Sugar Mills Association.

However, millers said if the government does not allow sugar prices to move up, they will not be able to clear the cane price dues.

"Unless price of sugar is maintained at Rs 37 a kg in the north and Rs 35 a kg in Maharashtra and Karnataka, mills will not be able to pay the fair price to the farmers.

Due to continuous losses of last threefour years, sugar industry's bank account is out of order to pay cane price," said OP Dhanuka, chairman of Riga Sugar.

## Centre looks to Karnataka to tame pulse prices



Karnataka considered the dal bowl of the country — has sown about 2 lakh hectares more than average for tur (arhar) and other pulses.

BENGALURU: After Rahul Gandhi's recent jibe at PM Modi over the sky-high prices of arhar and other dal, it may sound ironic that the Centre can bet on Congress-ruled Karnataka to bring down prices and fight inflation.

The state -- considered the dal bowl of the country -- has sown about 2 lakh hectares more than average for tur (arhar) and other pulses, and is expecting a bumper crop that could push down prices of dal. "It will bring down food inflation to a great extent and benefit the middle classes which are upset about paying Rs 130/kg for tur," state agriculture minister Krishna Byre Gowda told ET. "Our worry is that prices should not plummet and hit farmers badly," he said.

The state went into an overdrive over the last two years to increase the area under pulse cultivation, both in traditional regions like Kalaburagi and in newer areas such as Chikballapur. In the last two years, however, Karnataka faced severe drought and could not register any significant gains in dal production.

This year, farmers have been getting about Rs 9,000 a quintal in the local markets itself, making pulses production a highly profitable venture. Rains have been plentiful and hold out the promise of being a regular monsoon, leading to sowing continuing into August, Gowda said.

Farmers completed sowing the target of 15.36 lakh hectares that was expected for the entire season and the agriculture department expects production of 15.9 lakh tonnes of pulses against the original 8.42 lakh tonnes. State agriculture price commission chairperson TN Prakash Kammardi said this could mean a flood in the market in November, December and January, leading to prices falling.

"It will harm the farmers if prices tank," Kammardi said. "I have recommended the state government to set up a pulses federation that will purchase pulses at a fixed price from farmers and redistribute these through PDS. That is the only way to ensure both production through support for the farmers and distribution at reasonable rates to the consumers," he said.

### **Temporary workers in demand on good rains**



Analysts put the demand for temporary workers at around 1.5-1.6 lakh this year, almost double of the drought-hit 2015

KOLKATA: Plentiful rains this monsoon have boosted the requirement of temporary workers in the country's agriculture and allied sectors.

Analysts put the demand for temporary workers at around 1.5-1.6 lakh this year, almost double of the drought-hit 2015. At topnotch companies in the sector, the demand has increased to 7,500-8,000 temp staff, compared with 2,000-2,500 in the past two years.

Companies such as Advanta Seeds, Coromandel International BSE 1.08 %, Rallis India BSE 0.58 % and others are roping in temporary staff more this year with an average salary of 12,000-14,000 a month. Most of the requirement has emerged from Andhra Pradesh, Tamil Nadu, Telangana, Karnataka and Odisha that are major producers of kharif paddy.

"After two long years of deficit rains, monsoon seems to be back in India with full vigour. It is expected that yield of kharif crop will be better this year if monsoon behaves properly in the coming months. The better monsoon has given rise to higher requirement of temp staff from agriculture and allied sectors," Sudeep Sen, assistant vice president of staffing firm TeamLease Services, told ET.

The need for the temp staff in the agri and allied sectors is for six months, starting from June when sowing of crops happens and until November when harvesting is completed.

"The requirement will be more during the harvesting period," said SP Shukla, an agricultural sector analyst.

The temporary staff work as field assistants in most of the cases. There are some set of temporary staff who help in logistics and in administrative activities. Those who work as field assistants are generally graduates in agriculture science. "Companies generally want temporary staff from local areas so that they can communicate in the local language," said Sen, who manages temp staff for a number of companies.

GV Radhakrishna, global HR business partner at AdvantaBSE 0.82 % Seeds, expects this year to be a better one compared with the past two years for agri business.

"But companies are assessing the manpower needs with microscope and moving very carefully with the new additions ... We are also taking a cautious approach," he said.

Advanta Seeds procures temp staff from TeamLease.

"Fluent local language communication skills, ability to convince farmers and the channel partners, learning ability, adaptability and mobility are some of the qualities that we look at while hiring temp staff. During drought situations, most of the companies have optimised the headcount in both full time and temp. It has not gone up at a high scale, it is picking up slowly now," said Radhakrishna.

### **Scheme to help farmers shift from tobacco extended to 10 states**



Production of flue cured virginia (FCV) tobacco, used for manufacturing of cigarettes, has been going down in the past few years and stood at 52.29 million kgs approximately in 2015-16.

NEW DELHI: Crop diversification programme has been extended to 10 states to encourage tobacco growing farmers to shift to alternative crops, the Lok Sabha was informed today.

Production of flue cured virginia (FCV) tobacco, used for manufacturing of cigarettes, has been going down in the past few years and stood at 52.29 million kgs approximately in 2015-16.

Health Minister JP Nadda, in written reply to a question, said that as per the information received from Tobacco Board, Department of Commerce, FCV tobacco production stood at 60.97 million kgs in 2013-14, 57.60 million kgs in 2014-15 and 52.29 million kgs in 2015-16.

He said the government has issued regulations under the Food Safety and Standards Act, 2006, which lay down that tobacco or nicotine cannot be used as ingredients in food products.

"As per the information received from the department of agriculture, cooperation and farmers welfare, the Ministry of Agriculture, crop diversification programme, an ongoing sub-scheme of Rashtriya Krishi Vikas Yojna has been extended to 10 tobacco growing states with effect from 2015-16 to encourage tobacco growing farmers to shift to alternative crops or cropping systems," Nadda said.

He said allocations of Rs 2,500 lakh and Rs 3,000 lakh as central share have been made during 2015-16 and 2016-17, respectively, to diversify tobacco farming in Andhra Pradesh, Bihar, Gujarat, Karnataka, Maharashtra, Odisha, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal.