

29.05.2015

# THE HINDU

## 400 hectares to come under fruit farms in Ramanathapuram district



The Department of Horticulture has proposed to promote vegetable cultivation under mulching technology with drip irrigation system in 100 hectares and set up fruit farms in 400 hectares in Ramanathapuram district during this season under the National Horticulture Mission (NHM) and the National Mission for Sustainable Agriculture (NMSA).

Showcasing the mango farm at Pandiyur near here and guava farm and vegetable cultivation at Koraiyapallam near Kamudhi, during a tour on Thursday, Deputy Director of Horticulture V. Gangadaran said that farmers were offered subsidies and encouraged to cultivate vegetables, establish fruit farms and set up honey bee hives under the NHM.

Vegetable cultivation under mulching technology would help them enhance yield by more than 20 per cent and produce quality vegetables.

The new technology would also help farmers control weed and increase the water efficiency by 60 to 80 per cent, he said.

The farmers would be given subsidy of Rs. 36,000 per hectare, he added.

He said the department had proposed to set up fruit farms in 100 hectares under the NMSA (Horticulture-based farming system) for this year but the government had approved the project for 400 hectares, offering a subsidy of Rs. 25,000 per hectare towards planting materials, cultivation aspects and inputs such as biofertilizer.

Mango farms would be established in Mandapam, Tirupullani and Kamudhi areas and guava, sapota and amla farms in Kamudhi area, Mr. Gangadaran said. Under the on-farm water management, the government offered 100 per cent subsidy for small and marginal farmers and 75 per cent subsidy for big farmers for drip irrigation.

Work orders were issued for drip irrigation in 167 hectares last year and work was in progress, he said.

This year, the government would help farmers set up drip irrigation system in 400 hectares, he added.

Assistant Directors of Horticulture B. Ilangoan and J. Rajendran said that during this season farmers would be encouraged to cultivate shallots in 50 hectares and Bellary onion in 70 hectares in Kamudhi, Kadaladi, Mudukulathur and Paramakudi areas by offering a subsidy of Rs. 12,000 per hectare.

For pollination support, Amma Women Empowerment Groups and other interested parties were being encouraged to set up 300 units of honey bee hives in the district. Each group was given Rs. 1,600 for setting up the units, they said.

### **Special farm loan mela planned in Perambalur**

A special 'farm loan mela' will be held in the district in July for ensuring expeditious and timely sanctioning of loans for agricultural operations during the forthcoming monsoon, said Darez Ahmed, District Collector.

Presiding over the Farmers Grievances Day meeting held here on Thursday, the Collector said that nationalised banks have been advised to accord priority to farm loans. The 'mela' would be held in July so that all the eligible farmers would be able to get their loans on time during monsoon.

The Collector also said that service centres would be started at Kolakkanatham, Maruvathur and Pudhu Vettakudi for guiding farmers on crop protection methods for major crops such as paddy, sugarcane, cotton, maize, tapioca, and onion. He said that farmers who witness sudden pest attacks or diseases in these crops could immediately contact these service centres for remedial measures.

A number of cane farmers demanded that the public sector sugar mills at Eraiyyur give them timely payment for the cane supplied to them.

They also wanted expeditious execution of the co-generation plant and modernisation of the mills.

They also wanted prompt action for dredging the tanks and irrigational sources during summer so that the water received during the monsoon could be well utilised.

In his reply to their demands, the Collector assured that steps would be taken for expeditious sanctioning of power supply to agricultural bore wells.

### **Mulching in tuberose for weed management**

Tuberose is an important traditional flower of India. It is used both as loose flower and cut flower. The major constraint in tuberose cultivation is weed management and about 70-80 per cent of cultivation cost accounts for weeding.

Plastic mulching is recommended for weed management, if planted under drip and fertigation system.

Raised beds should be prepared at a height of four feet and lateral drip laid out along the centre of the raised beds. Plastic mulch sheet of 40 micron thickness top silver and bottom black should be spread on the raised beds.

### **Recommended spacing**

Bulbs are planted in the holes made at recommended spacing. Use of the plastic mulch reduces the weed management cost to a tune of 80 per cent.

It prevents the evaporation of irrigation water which reduces the irrigation water requirement by 30 per cent.

The cost towards plastic mulching per acre is about Rs 20,000. The crop period is for two to three years and the life of mulch sheet almost extends for the period of 15-20 months. If plastic mulching sheet is not used then weeding must be done once in 20-25 days.

The mulch sheet reduces the weeding cost by 80 per cent. The furrows between the raised beds alone need to be weeded. The furrow space is used for daily harvest of the flowers and hence the need for weeding in that area is also lesser.

### **Harvesting**

Flowers are harvested daily and about 20 kilograms of flowers can be obtained per acre per day.

The average cost per kg of flower is about Rs.40 which leads to an income of Rs. 24000 per month.

If plastic mulching is not used, about Rs. 6,000 per month will be spent for weeding, which is now saved by the use of plastic mulching.

As a result, the net returns increases by 40 to 60 per cent compared to an unmulched field. The quality of the flowers is also improved since the soil moisture is maintained and the plants are of vigour physiology.

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### **Mango, jackfruit mela begins today**

It is the season to savour the different varieties of mangoes and jackfruits. To help citizens buy organic fruits directly from the farmers, the department of horticulture has organised the annual mango and jackfruit mela.

The mela that will be held at Lalbagh from May 29 to June 26 is set to be inaugurated by Chief Minister Siddaramaiah. The mela, apart from having nearly 100 stalls, will also have an exhibition of varieties of mangoes.

M. Kamalakshi Rajanna, chairperson of Karnataka State Mango Development and Marketing Corporation, said that the aim was to take the

carbide-free fruits directly to consumers without the involvement of middlemen.

Despite the vagaries of weather, the State expects the production of the mangoes to reach around 7 lakh tonnes this year, though the yield has reduced by 20 to 30 per cent compared to the previous year, she said.

“The corporation aims to help growers adopt a scientific approach for cultivation and reduce the risks for traders in export. A specialised team of experts has been formed to explore the opportunities in the global market and improve the standards of the fruits,” Ms. Rajanna added.

### **Mango and Jackfruit Mela**

**When:** From May 29 to June 26

Between 8 a.m. and 7 p.m.

**Where:** Lalbagh

**Varieties of mangoes:** Alphonso, Badami, Baganapalli, Raspuri, Mallika, Sindhura, Malagoa, Thothapuri, Neelam, Amrapali, Kesar

### **An organic vegetable market for Onam**

The Kerala Karshaka Sangam plans to launch a farmers’ market at the grama panchayat level from Onam onwards to make available organic vegetables at a reasonable price.

There will be a farmers’ group at the ward level to engage in organic farming, to be monitored and supported at the block level.

Karshaka Sangam district president C.V. Varghese told *The Hindu* on Thursday that the KKS would act as an umbrella organisation without a political colour and any group or individual could join the initiative for which a format has been drawn up.

Training in organic farming would be imparted at the grassroots to make the initiative a success.

The farmers are, at present, reluctant to turn to organic cultivation as they fear they may incur losses. Their fears have to be addressed and a reasonable price must be ensured.

The initiative will have the support of Krishi Bhavan and non-governmental organisations that have similar approaches.

According to P.S. Prassannan of Parappu local committee, farmers' groups had already been formed in many wards and the movement had their support.

Land considered fallow would also be brought under cultivation and the members of the groups had already identified cultivable areas, he said.

A mechanism would be evolved so that only organic vegetables were sold at the farmers' market, Mr. Prassannan added.

### **Agricultural Marketing committee lends a helping hand to farmers**

The Agricultural Marketing Committee is offering various facilities to the farmers to market the agricultural produce through the 19 regulated markets in the district.

The regulated markets, which have good rapport with the traders, are involved in the activity of helping the farmers to market their produce for reasonable price.

### **Produce**

These regulated markets sell 17 different types of varieties including paddy, cholam, ragi, kambu, groundnut, coconut, copra, cotton, turmeric, chillies and tapioca.

The marketing committee has set up 2,000 tonne capacity godowns on the Regulated Market Committee premises at Uthamacholapuram, Vazhappadi, Gengavalli, Attur, Mecheri and Omalur.

It also runs 25 tonne capacity cold storages at Uthamacholapuram, Vazhappadi, Attur, Gengavalli and Mecheri, a press statement of the District Collector K. Maharabushanam issued here on Thursday said.

In particular, the Regulated Market at Uthamacholapuram accounted for drying yard too.

The agricultural produce will not fetch reasonable price during the harvest period.

The farmers can deposit the farm produce at the godowns and cold storages and market the same when they fetch good price.

Referring to the other benefits of depositing the farm produce in the godowns and cold storages, he said that the micro and small farmers could fetch a loan up to 75 per cent of the value of the goods, up to a maximum of Rs. Two lakh, at five per cent interest rate. Other farmers could collect a loan up to 50 per cent value of the products.

The regulated markets collect minimum rent for the goods deposited at the godowns.

At the Uthamacholapuram Regulated Market, coconut and copra auction takes place every Friday.

The traders from different parts participate in the auction, and this enabled the farmers in getting good price, the release added.

### **Water pits dug for animals**

In a bid to protect farmlands from animals, the Department of Forest has constructed water collection pits in Western Ghats.

Initiated by Chief Minister Jayalalithaa, the scheme has been implemented at a cost of Rs. 75.75 lakh in the Srivilliputtur Forest Division, Alagarkoil, Ammankoil, Pudhupatti- Saptur Forest Division and Mallapuram among other forest areas in the district.

Under the scheme, 5,000 pits measuring 5 metre by 1 metre with a depth of 1 foot have been dug to collect water so that animals would not venture out of the forest in search of water during summer.

Collector V. Rajaraman and officials from the Forest department inspected the pits.

M. Parthiban, a biologist with the forest department, said that Stylo grass, a protein-rich fodder, had been raised near the pits.

“Once the grass is planted, it will keep growing for about 10 years during every monsoon and serve as fodder for the animals in summer,” Mr. Parthiban added.

### **Agricultural Marketing committee lends a helping hand to farmers**



The intricate ecosystem of the Western Ghats has seen the discovery of a new fish species and three types of tadpoles as reported in scientific journals over the past fortnight. The discoveries, say the researchers, point to the rich fauna and the need for conservation measures in the region. Researchers from Ashoka Trust for Research in Ecology and the Environment (ATREE) came across a new fish species, *Pethia striata*, along the streams of the Tunga in the Kudremukh National Park. V.M. Atkore, lead author of the study which was published in the journal *Copeia*, confirmed the discovery of the endemic species from two streams, the Mudba and the Turad, of the Tunga.



*Pethia striata* is described as a small fish, with a length of around 4 cm. The male is reddish in colour and the female, greyish. The species thrive in shallow pools of gently flowing water and are found in small groups of around four. The fish differ from existing species on seven characteristics, including dark outer edges of scales that give them a distinct striped pattern, said Mr. Atkore.

## **Tadpoles**

In the *Journal of Natural History*, a group of scientists from ATREE, Gubbi Labs and Manipal University, reported finding three species of tadpoles for the first time in the narrow streams of the Sharavati. They belong to the species of *Nyctibatrachus* (meaning ‘night frog’) — *N. kumbara* (‘potter frog’), *N. kempholeyensis* (named after the Kempuhole stream) and *N. jog* (named after the waterfall) — which was discovered recently.

“The adults were reported, but the tadpoles were not seen as it is very difficult to spot them. Studying them will give an idea of their habitat requirement. It is clear that if water in the streams drop, the frog species will be wiped out,” said K.V. Gururaja from Gubbi Labs.

## **Conservation**

H. Priti from ATREE, who is the lead author of the study, said tadpole habitats were disappearing as streams were being diverted for irrigation. Similarly, Mr. Atkore said the region had “great potential” for discovery of many new species of fish. “We should protect these biodiverse areas from any kind of damage. Otherwise, we will lose many endemic species,” he said.

# THE HINDU BusinessLine

## Iran may resume basmati imports by July



Iran – the biggest buyer of Indian basmati – is expected to resume imports of the aromatic rice after July, officials said. Iran had banned rice imports mid-November last year to protect the interests of local growers on higher domestic output and stocks.

“We are getting feelers from various stakeholders that imports from Iran are likely to resume after Ramzan. However, there is no written communication from them so far,” said AK Gupta, Advisor, Agricultural and Processed Foods Export Development Authority (Apeda).’

### **Indian shipments**

Iran imported about 9.35 lakh tonnes of basmati in 2014-15, accounting for about a fourth of the Indian shipments. India had exported a total of 11.65 million tonnes (mt) of rice in 2014-15, of which basmati accounted for about 3.78 mt.

In fact, the shipments to Iran declined by 35 per cent in 2014-15 over previous year’s 14.40 mt, largely due to the curbs imposed by the largest buyer of the Indian basmati.

Gupta said demand from other markets – mainly in West Asia, Europe and the US grew by around 20 per cent, which has helped offset the impact of Iran ban on exports.

Also, the domestic consumption of basmati rice is on the rise.

### **Iran market**

Basmati shipments rose marginally to 3.78 mt in volumes during 2014-15 over previous year's 37.57 mt. "We expect the shipments to increase by 10-15 per cent this year," Apeda's Gupta added.

Rice exporters are hopeful that Iran would open up the market for basmati to meet its consumption. The Iranian rice consumption is estimated at around 3 mt a year, of which their domestic production is pegged at around 2 mt.

"Iran has to purchase around one million tonnes of rice to meet their domestic demand and India has a major share in their imports," said Rajen Sundaresan, Executive Director, All India Rice Exporters Association.

Rice exporters expect the basmati acreage to increase at least by about 5 per cent in the upcoming kharif season over previous year's 2.1 million hectares, Sundaresan said.

### **Acreage may rise**

Farmers in the key basmati growing States of Punjab, Haryana, Uttar Pradesh and Madhya Pradesh are expected to plant more basmati in anticipation of better returns.

Besides, the Punjab Government's move to encourage farmers to plant more basmati, which consumes less water when compared to the normal rice crop, is also expected to help boost the acreage.

## Ample supplies drag sugar



Sugar prices extended loss on Thursday tracking bearish trend at upper mill and *naka* level.

On the Vashi market, spot rates declined by Rs. 5-10 a quintal on need-based demand amid weak futures.

*Naka* and mill tender prices dropped by Rs. 5-10 as mills continued selling with discount.

Arrivals were at 59-60 truck loads and local dispatches were about 57-58 loads.

About 14-15 mills offered tenders and sold about 30,000-35,000 bags at Rs. 2,250-2,380 (2,250-2,390) for S-grade and Rs. 2,370-2,480 (2,370-2,500) for M-grade.

The Bombay Sugar Merchants Association's spot rates: S-grade Rs. 2,412-2,575 (2,422-2,575) and M-grade Rs. 2,542-2,726 (2,550-2,730).

*Naka delivery rates: S-grade Rs. 2,350-2,450 (2,350-2,470) and M-grade Rs. 2,450-2,600 (2,455-2,580).*

### **Only 50% turmeric sold in Erode**

Only 45-50 per cent stocks of turmeric were sold at Erode markets on Thursday.

“The traders have been affected for the past five months for want of upcountry demand. We may get fresh good orders for the yellow spice only in August, till then the price of the turmeric will be in a downtrend,” said RKV Ravishankar, President, Erode Turmeric Merchants Association.

He said the arrival of turmeric was at 4,500 bags and only medium quality turmeric arrived for sale. Regarding the price, the finger turmeric decreased by Rs. 200 a quintal in the Regulated Market Committee, but was up Rs. 150 in the Erode Cooperative Marketing Society. The root variety lost Rs. 300 in the Regulated Market Committee and also in the Erode Turmeric Merchants Association sales yard.

Only 15 bags of Salem Turmeric arrived and all the bags were sold at Rs. 9,200.

At the Erode Turmeric Merchants Association sales yard, the finger turmeric was sold at Rs. 5,134-8,110 a quintal; the root variety Rs. 5,009-7,319. Of the arrival of 1,110 bags, 430 were sold.

### **Short covering boosts rubber**

Spot rubber improved further on Thursday.

The market opened weak but regained strength on covering purchases at lower levels tracking the sustained gains in global trendsetters.

RSS 4 firmed up marginally to Rs. 126.50 ( Rs. 126) a kg, according to traders and the Rubber Board.

The grade closed slightly higher at Rs. 123.50 ( Rs. 123), according to dealers.

June futures weakened to Rs. 126.51 ( Rs. 127.71), July to Rs. 129.70 ( Rs. 130.62) and August to Rs. 130.33 ( Rs. 131.04) on the National Multi Commodity Exchange.

RSS 3 (spot) increased to Rs. 120.76 ( Rs. 119.06) at Bangkok. June futures closed at ¥225.6 ( Rs. 115.99) on the Tokyo Commodity Exchange.

Spot rubber rates Rs. /kg: RSS-4: 126.50 (126); RSS-5: 124 (123.50); Ungraded: 116.50 (116); ISNR 20: 115 (114.50) and Latex (60% drc): 109 (108).

### **Mixed trend in edible oils**

Edible oils market ruled mixed on Thursday. Imported palmolein and soya oil rose by Rs. 2 and Rs. 5 for 10 kg each as local refineries raised their rates tracking firm foreign markets.

Cotton oil was up Rs. 1; sunflower oil declined by Rs. 5. Malaysian palm oil futures closed at 2-week high on fear of El-Nino weather that may be hurting output. In Mumbai, during the day about 450-500 tonnes of palmolein was resold at Rs. 498-503. Hopes of timely arrivals of rain kept indigenous oils under pressure.

Vikram Global Commodities (P) Ltd quoted Rs. 535 for Malaysian super palm May delivery. Liberty was quoting palmolein at Rs. 508 JNPT, super palmolein Rs. 541 and soyabean refined oil Rs. 598.

Ruchi traded palmolein at Rs. 508 JNPT, soyabean refined oil Rs. 591, sunflower refined oil Rs. 695. Allana's rates: palmolein Rs. 509, super palmolein Rs. 542, soyabean refined oil Rs. 591 and sunflower oil Rs. 700.

In Saurashtra-Rajkot, groundnut oil *Telia* tin declined to Rs. 1,430 (1,440) and loose (10 kg) Rs. 920 (920).

BCE spot rates ( Rs. /10 kg): groundnut oil 930 (930), soya ref. oil 590 (585), sunflower exp. ref. 630 (635), sunflower ref. 695 (700), rapeseed ref. oil 840 (840), rapeseed exp. ref. 810 (810), cottonseed ref. oil 596 (595) and palmolein 500 (498).

### **Traders can go short on MCX crude oil and natural gas**

The short-term outlook for the crude oil futures contract traded on the Multi Commodity Exchange (MCX) has turned bearish. The contract has broken the Rs. 3,700-4,000 per barrel sideways range on the downside. It is currently trading at Rs. 3,685. Key resistances are at Rs. 3,720 and then at Rs. 3,800. As long as the contract trades below these hurdles, there is a strong likelihood for it to witness a corrective fall in the coming days. The next support for the contract is at Rs. 3,475 – the 38.2 per cent Fibonacci retracement level which is likely to be tested now. A break below this support level can drag the contract to the targets of Rs. 3,400 or even Rs. 3,350 in the short-term.

Traders can go short. Stop-loss can be kept at Rs. 3,820 for the target of Rs. 3,520. Intermediate bounce to Rs.3,800 can be used to accumulate short positions.

**MCX-Natural gas:** The reversal from the high of Rs. 188 per mmBtu recorded on Wednesday is negative for the contract. It suggests lack of further buying interest for the contract. It is currently trading at Rs. 181. A fall to Rs. 177 – the 50 per cent Fibonacci retracement support level is possible in the coming days. The price action on the chart suggests that this support is likely to be breached. Such a break can drag the contract further lower to Rs. 174 and Rs. 172 there after.

Short-term traders with high-risk appetite can go short at current levels. Stop-loss can be placed at Rs.184 for the target of Rs. 175.

## Production of pulses down 64%, cereals 30% in state



The state's production of pulses during 2014-15 is set to fall by as much as 64% and cereals by 30% on account of the drought and unseasonal rains over the last year which wrecked the kharif crop. Yields for the rabi or winter crop have also plummeted, raising concerns about the impact on prices.

Maharashtra produces about 10% of the country's foodgrains. However, sowing over the last year fell by roughly 35% because of the poor rains, according to figures revealed during a review meeting conducted by the state government on Wednesday .

Cash crop yields have also been hit. The production of oil-seeds was estimated to have fallen by 54% and cotton by 58% during last year's kharif season. The only crop that did well was sugarcane, which saw a 17% rise.

The kharif or monsoon crop is the main crop in the state. However, the rabi



crop was also impacted by the constant spells of unseasonal rain. As a result, the yield of rabi pulses is expected to fall by 45% and cereals by 23%, the figures showed.

When asked how the government will combat a likely food price spiral, chief minister Devendra Fadnavis said the state was hopeful of a better crop this year. "The Indian Meteorological Department has predicted that the monsoon will be 93% of the average. A private agency has predicted the monsoon will be 103% of the average. In any case, we are well prepared for the kharif season ahead," he said.

Fadnavis said the state's farmers had received Rs 1,600 crore worth of crop insurance. Banks have been instructed to reschedule loans and allow farmers fresh crop loans for the new kharif season this year. The state government also plans to inform farmers about weather forecasts through text messages on their mobile phones so they can plan their crops accordingly. "We provide the service to 10 lakh farmers. We hope to increase this to 50 lakh farmers," said Fadnavis.

India's longest e-way tells a story of land acquisition feat

Even as the debate over the land acquisition bill threatens to boil over across India, the Samajwadi Party-led government in Uttar Pradesh has acquired nearly 3,000 hectares of fertile, multi-cropped land for its sixlane Agra-Lucknow greenfield expressway project without a murmur of dissent.

At a time when farmer groups were registering their protests against the alleged dilution of the consent clause in the NDA government's land ordinance, 30,074 farmers in UP were giving up fertile tracts of the Indo-Gangetic plain, willingly, and, in many cases, in record time.

**So how did this speedy acquisition for the Rs 15,000 crore project happen?**

By keeping farmers happy, Uttar Pradesh Chief Minister Akhilesh Yadav told TOI. When UP Expressway Industrial Development Authority (UPEIDA), the nodal agency for implementing the project, set out to acquire land for the developers of the expressway project, it decided to avoid the contentious "acquisition" process almost entirely. **"Instead of acquiring land**

as is usually done, it was decided to purchase land from farmers through a mutual agreement. To make the transaction more lucrative, land owners were offered four times the circle rates (CR) in rural areas, and twice the CR in urban parts, as purchase cost. Acquisition was only considered in cases where mutual agreement failed," said Navneet Sehgal, chief executive, UPEIDA. The government's flagship 302-km expressway is a six-lane (expandable to eight) access controlled greenfield project, the longest in the country till date.

To build it by October 2016, as the chief minister has promised to do, the UP government needs a total of 3,368.60 hectares of land cutting across 232 revenue villages from Agra to Lucknow, and passing through the districts of Mainpuri, Etawah, Kannauj, Auraiyya and Unnao. In the 270 days between June 2014 and January this year, UPEIDA completed about 27,000 registries at the rate of about 10 a day, arguably the fastest yet, for a government-run expressway project of this magnitude.

To achieve this, UPEIDA paid, till May 15, 2015, Rs 2,844.55 crore to make an outright purchase of 2,824.16 hectares of land from individual land owners, and 303.29 hectares from government departments, almost 93% of the total land it needed. Assistant CEO UPEIDA, Ashutosh Dubey said, "The government set up rate fixation committees under the chairmanship of the district magistrate to arrive at a mutually agreeable rate. After the approval of the CEO, land owners were given four times, or twice the CR depending on the location of their land. Apart from their land holdings, owners were also compensated for permanent structures built on their land, and for unharvested crops."

When TOI contacted land owners who gave up their land through a mutual agreement with the state government, reactions were mixed. In Unnao, which falls under segment 5 of the expressway project and is being developed by Larsen & Toubro Limited, Jagdamba Singh, a resident of Matariya village, confirmed he had received four times the circle rate. "My village was on the Unnao-Lucknow border, but on the Unnao side. My compensation, as a result, was paid according to the prevailing DM circle rates in Unnao. The neighbouring village that falls in Lucknow, however, received a higher compensation. So even though I got four times, I felt cheated," Singh said.

In Etawah's Takha tehsil, Bakridan begum walked away with a compensation of Rs 8.91 lakh for selling 2.5 bighas of land held in her name. Her son, Naseem Khan told TOI, "We used about Rs 98,000 for a wedding in the family. We are also in advanced stages of talks over the purchase of additional agriculture land with the compensation money we received." In both cases, Singh and Khan said their families will remain invested in farming and did not plan to use the surplus funds to diversify their businesses.

Not all land holders, however, were agreeable to selling their land to the government. In such cases, UP opted for the land acquisition process as prescribed under the Land Acquisition, Rehabilitation and Resettlement Act of 2013, and acquired 160.28 hectares of land. Here, while the rate of compensation remained the same, beneficiaries were offered an extra payment at an interest rate prescribed within the state's rules.

The benefits of the dual model -acquisition plus purchase -were many . "This model allowed UP to facilitate land transfer to developers in record time, Dubey said. Since the state's purchase-acquisition process started in June last year, UPEIDA now has a land pool of 3,287.73 hectares of the 3,368.60 hectares it needed; that's 97.6% of the land it needed, organized in less than one year.

The success of the Agra-Lucknow "expressway" model of acquiring land through mutual agreements and through the acquisition route has now been extended to other construction projects as well.

"It is a smoother, faster process. More significantly, though, farmers and land holders get a much better deal for their land than they would if we went the acquisition way . That would have been also much more time-consuming,Dubey added."

Politically , too, the Lucknow-Agra expressway project is expected to yield big benefits for the Samajwadi Party .With chief minister Akhilesh Yadav FOCUSING on "doubling the speed to triple the economy", the project not

only reduces travel time between Delhi and Lucknow, but also promises to become a hub around which industrial activity can flourish. More significantly, at a time when the land acquisition legislation remains a controversial, hot button issue, UP has charted its own course with the expressway.

### **PAU scientists prepare clones of historic ber trees in Golden Temple complex**

Scientists from Punjab Agricultural University (PAU) have successfully prepared clones of historical ber (jube) trees situated on the Golden Temple complex in case health of the existing trees fails.

Talking to TOI on Thursday, PAU assistant professor Karanbir Singh Gill said that they had successfully prepared clones of Dukh Bhanjan Ber to standardize the technology and see the plant's response. He said all three trees Ber Baba Budha Sahib, Lachhi Ber and Dukh Bhanjan Ber situated on the parkarma (sanctum sanctorum) of the Golden Temple were in good health due to regular protective measures taken by a team of scientists from PAU.

A six-member team of PAU, including two production specialists Karanbir Singh Gill and Jaswinder Singh Brar, two entomologists D R Sharma and Sandeep Singh and two plant pathologists Amita Arora and Sarabjit Kaur, regularly visits the Golden Temple for taking protective measures to prevent the ber trees from insects and fungus and for pruning. Giving details of the process, Gill said a bud from the historical ber tree was taken and grafted in another tree called root stock. "We only allowed the bud to grow and not the root stock. As a result, the clone plant will have characteristics of the parent plant," he said, adding that they had prepared few clones of Dukh Bhanjan Ber.

He said that for now, there was no need to prepare clones of other ber trees but they had successfully standardized the technology and would prepare clone trees only if the historical ber trees' health declined.

The scientists test physical health of the plant, remove deadwood which is more prone to insect attacks and spray the trees with insecticides to prevent attack of lac insects besides advising devotees to not touch the ber trees with

ghee-smudged hands and not to put flowers and garlands around trees since these attract insects that can cause further damage.

### **Met dept to send alerts to farmers across the country**

The India Meteorological Department (IMD) plans to reach out to farmers across the country by providing them one-on-one advisories on weather.

The met office, which currently issues weather-based advisories at the district level, will provide block-level alerts soon so that farmers could prepare themselves in advance for extreme weather conditions. The met office has also taken steps to collate the database of farmers across the country — over 1.30 crore approximately — so that it could send alerts to all of them instead of sending them to only 10 lakh farmers, as it does now.

The IMD's decision follows a recent meeting between chief minister Devendra Fadnavis and met department authorities in the backdrop of extreme weather conditions experienced on an increasing scale since 2014.

"The chief minister wants the IMD to focus on block-level forecast and advisories because as of now, district levels forecasts and advisories are issued covering as many as 640 districts in the country. He wants such alerts to come to the gram panchayat level and we are working on that," said N Chattopadhyay, deputy director general of meteorology (agriculture), agricultural meteorology division, India Meteorological Department.

The met department also plans to synergize state agriculture department's weather monitoring systems with their own, so that alerts could be given accurately and on time.

Another question discussed was how the met office could disseminate forecasts and advisories to all farmers in the country. "We have requested the state agriculture department to provide us with the database of all farmers in the country so that we could integrate it in our system and issue weather-based alerts to all of them via SMS," Chattopadhyay said.

Fadnavis also asked for more number of automatic weather stations and other weather monitoring observatories to be set up in the state to increase the accuracy and scope of weather forecasts. "This could also be achieved if the agriculture department's observatories are roped in by the IMD to issue

alerts. The synergy between IMD and state agricultural department observatories could ensure that alerts are given in time to prevent damage to crops," he said.

The met office will also attempt to rope in Marathi channels to disseminate more farmer-specific crop and weather-related information. "DD Kisan, which is a 24-hour-channel telecasting programmes related to agriculture and weather, is primarily a Hindi channel. The chief minister wanted such programmes to go to farmers in their language, i.e. Marathi. We will therefore endeavor to rope in Marathi channels to telecast such programmes," he said.

### **Veggie output dips in state**

The officials and chief ministers may have been visiting Israel and other countries since 2006 to learn the best practices in horticulture but the figures released by the ministry of agriculture paint a dismal picture of this sector in Rajasthan.

The production of spices of which the state is one of the leading producers in the country fell by 0.22% in 2013-14 over the previous year despite increase in the cultivation area.

In 2013-14, spices were grown over 8.19-lakh hectare area and the total production was 6.74 lakh metric tonnes (MT). Against this in 2012-13, both production (8.60 lakh MT) and acreage (7.2-lakh hectare) were higher than that. In production of loose flowers, Rajasthan ranks among the states having lowest productivity.

Area under cultivation dropped from 3.4 thousand hectares to 2.5 thousand hectares and production from 3.72 thousand MT to 2.73 thousand MT from 2011-12 to 2012-13. However, the biggest worry that Rajasthan confronts is in the production of vegetables. Not only the area under cultivation has reduced, even the production of vegetables, in which state was self-sufficient earlier, has fallen.

This situation has led to over dependence on supply from other states. This makes the vegetables expensive.

The production of brinjal reduced by 18.18%, cabbage 26.19%, okra 4.74%, while the production of beans fell by 31.30% from 2012-13 to 2013-14. Among fruits, the production of mandarin orange (kinnow) increased only by 1.10% last year after registering a growth of 27.03% in 2012-13. Similarly, sweet orange (mosambi) which saw exponential growth of 138% in 2012-13 over 2011-12 witnessed a negative growth of 56.87% last year. Moreover, the drop is not just restricted to a period of one year. From 2011-12 to 2012-13, there has been a significant fall in each segment of spices, vegetables and fruits. "All the states in the red productivity band (low productivity) should have a cause of concern as such a low productivity cannot be economically sustainable. They are advised to look into the reasons for the low productivity," noted the report.

# Business Standard

## **D S Kolamkar & Arvind Subramanian: A common Indian agricultural market?**

The "idea of India" presupposes that there is one India. In agriculture, that is, alas, emphatically not the case.

How fragmented are agricultural markets in India? How should they be unified? Consider each in turn.

### **1. Characteristics of agricultural markets: Three key features characterise agricultural markets.**

A. *Thousands of markets*: India is one country, comprising 29 states. But in agriculture, it has 2,477 principal regulated markets and 4,843 sub-markets, created by the [agricultural produce market committees](#) (APMCs). This fragmentation, reflected in wide inter-state and intra-state farm-price differences, is illustrated in table 1.

B. *Restrictive regulations and broad scope:* [APMCs](#) make the first sale of agriculture produce outside the notified market yards illegal. Many state governments have brought within the purview of these Acts, not only to cereal, pulses and edible oilseeds, but also fruits and vegetables and so on.

C. *Many, non-transparent levies and charges:* APMCs allow the imposition of levies and other market charges on every first sale of the commodity produced. Being statutory levies/fees, these are treated akin to the taxes, rather than the fees charged for the services provided. However, they are not credited to the consolidated funds of the respective states, escaping the audit and scrutiny of regular expenditure.

In addition to these levies charged by the states, commission agents appointed by the APMCs charge a market fee. Though the APMC Acts in most states bar commission agents from deducting this market fee/commission from the seller, their incidence falls on the farmers since buyers incorporate that in their bids. Thus, farmers have benefited little from the APMC. In fact, the law has tended to help commission agents. The Act has also triggered distortions in the price-discovery process at the national level.

Commission or *adat* payable to licensed commission agents constitutes a major transaction cost, which is generally around 6 per cent of the sale price for fruits, vegetables and other perishables and about 2 per cent for non-perishables. The commission charged is, unlike direct taxes, levied not on net income, but on the entire value of produce.

## **2. Model APMC Act**

In 2003, recognising the importance of removing trade barriers and creating a common market, the union Ministry of Agriculture formulated a [model APMC Act](#) for adoption by the states. The model APMC Act provides some freedom to the farmers to sell their produce directly to the contract-sponsors or in the market set up by private entities. But it has two serious limitations. First, the contract sponsors or the private entities setting up markets are required to pay the market fee to the notified APMCs, even if they provide no services. This is akin to the tax charged by the APMC.



Second, though the model APMC Act provides for the creation of markets by private sector, it is inadequate to create competition.

The owner of the private market still collects the APMC fees/taxes, for and on behalf of the APMC, in addition to the fee that he might charge for providing trading platform and other services, like loading, unloading, grading, weighing and so on.

### **3.Karnataka model**

Karnataka has taken steps to provide for the common registration of the market intermediaries. Out of the 155 main market yards and 354 sub-yards, 51 yards/sub-yards have been integrated with the single-licensing system. [Rashtriya e-market Services](#) Ltd (ReMS), a joint venture created by the state government and NCDEX Spot Exchange, offer modern facilities for grading, dissemination of prices for different grades of the commodities in different market yards/sub-yards, weighing, loading, unloading and scientific warehousing. Electronic auction platform and scientific grading and warehousing facilitate warehouse-based sale of produce and commodity funding based on warehouse receipts. The wider geographical scope has enabled private sector investment in marketing infrastructure and has certainly provided the farmers more choices to sell their produce. However, there is scope for further reducing intra-state price differences by extending common registration to the remaining market yards/sub-yards.

### **4. Road map for creating national market for agricultural commodities**

The Union Budget of 2014 recognises the need for setting up a national market and stated that the central government will work closely with the state governments to reorient their respective APMC Acts to provide for the establishment of private market yards/markets.

One possibility would be to incentivise the states (via, say, NITI Aayog transfers) to drop fruits and vegetables from the APMC schedule of regulated commodities. This could be followed by cereals and then other commodities. Similarly, they could be incentivised to create state-wide common markets by providing for common registration of market intermediaries across market-yards/sub-yards within the state on the lines of the Karnataka model. They could also be exhorted to provide policy support

for setting up infrastructure, making available land and so on for alternative or special markets in private sector, since the players in the private sector cannot viably compete with the APMCs in which the initial investment was made by the government. Foreign direct investment in retail could also be part of the policy mix to address supply-chain inefficiencies.

Alas, it is easy to say what states must do but much more difficult to ensure that states do so. After all, there is some underlying political economy that has prevented individual states from achieving unified markets in the first place.

In Indian lore, the farmer has been romanticised, while the money-lender as the iconic middle-man has been pilloried. The middle-men responsible for fragmenting agricultural markets and victimising the farmer have largely escaped scrutiny. That may explain the travesty, 68 years after independence, of many agricultural Indias.