### THE MORE HINDU

#### More rice from less water



GAME CHANGER: Although SRI is no longer a voice in the wilderness, pristine science and research establishments still continue to hold out. Picture shows a SRI field at Manakkal village, Lalgudi in Tamil Nadu. — PHOTO: R. ASHOKA truant monsoon is in the offing, with El Niño weather patterns expected to bring about drier conditions. India has the world's largest area devoted to rice, a very water-intensive crop. This is a good time for giving impetus to "more crop per drop" practices, now that the rice-growing *kharif* season is upon us. The System of Rice Intensification (SRI) has demonstrated in several States the ability to save water while raising yields in a cost-effective manner. About 60 per cent of the country's rice area is irrigated, accounting for 75 per cent of production, but also by guzzling disproportionately large volumes of water. A subnormal monsoon accentuates the problem of water scarcity, keeping in view that India supports 16 per cent of the global population with just four per cent of the world's freshwater resources. The SRI is in step with the goal of enhanced food production keeping water availability in mind. With enhanced industrial and domestic demands, the demand for water is increasing and the agriculture sector is expected to adapt to a water discipline without letting up on the demand for increased agricultural produce. For small and marginal farmers, SRI can be a game changer because of reduced input requirement. The SRI method involves

only reorganising the way in which available resources are managed. It was in Madagascar, some 30 years ago, that the SRI technique was developed by a Jesuit priest, Henri de Laulanie. In India, it was first tried out in Tamil Nadu in 2000-01, following which several States have demonstrated higher rice production using less water. SRI has shown an ability to raise rice yields to about eight tonnes per hectare (the current national average is 2.1 tons) without requiring new varieties, and with significantly reduced fertilizers and agrochemicals, while using only about half the water in business-as-usual irrigated rice. With the use of best practices, SRI yields of about 15-20 tonnes per hectare have been achieved.

#### 'Climate-smart'

As pressures mount to ensure that every drop of water counts, SRI is seen today as "climate-smart agriculture." Benefits of SRI include lower costs, improvement in soil health, and the capacity to withstand biotic (pest and disease) and abiotic (climatic) pressures. From being an obscure rice cultivation method of Madagascar, SRI has now grown into a global trend defying the scepticism of the scientific establishment and the resistance of conventional agronomists and rice breeders. Much of the impetus for SRI has come from innovative farmers, civil society, a few universities and academics, and some government professionals. It is estimated that there are now over five million farmers using SRI worldwide. In the 50 plus countries in which the benefits of SRI have already been demonstrated, there has been a 30-50 per cent decrease in water use compared to growing the same varieties on similar soil under flooded conditions. The spirit of SRI — "more from less" — is best expressed by the pithy slogan on a billboard in Tripura: Beej kam, saar kam, jal kam, aushadh kam, kharcha kam, phalan bishi, aay bishi (lesser inputs in seed, fertilizer, water, pesticides, costs, with increased output and incomes).SRI, referred to as the new "green grassroots"

revolution," is not dependent on purchased inputs, but on certain ideas and changes in practice that can be explained and justified in scientific terms. It is an assemblage of good agronomic practices which might vary across different agroecological and cropping system conditions, but earmarked to benefit farmers through higher yields and lower cultivation costs. Under SRI, farmers transplant young, single seedlings, spacing them widely in a grid pattern, while keeping soil moist and fertile, but not flooded. Soil aeration is ensured by regular weeding both manually and by specially designed Cono Weeders. Compost and other sources of organic nutrients are preferred over fertilizers to enrich soil biota.Professor Norman Uphoff of Cornell University, who is credited with spreading the word about Laulanie's work, sees the principles of SRI as being quite different to the first Green Revolution of the mid-1960s, which focused on improving yields through breeding new traits, using agrochemicals to enhance soil nutrients and providing assured irrigation. That resulted in adverse ecological effects. In the 21st Century, with water becoming an important cost and constraint, with soil degradation and shrinking land resources and climate change adverse impacts, SRI offers millions of disadvantaged farming households better opportunities. There are no patents, royalties or licensing fees — only the farmer benefits from SRI.

#### **Across States**

SRI started early in Tamil Nadu. With scientific and extension support from Tamil Nadu State University, the area under SRI management has now reached about half of the State's rice area. In Tripura, from just 44 farmers using the methods in 2002, the number has increased to about 3,50,000 on 1,00,000 hectares, nearing half of that State's rice area. Bihar started it with only a few hundred farmers, in 2007; four years later, the area under SRI was reported to be about 10 per cent of the State's rice area, with a target area of 40 per cent set for 2013-14.Some

SRI results have made headlines. Two years ago, Sumant Kumar from Nalanda in Bihar set a record by claiming a harvest of 22.4 tonnes of rice per hectare. S. Sethumadhavan from Alanganallur in Tamil Nadu reported a yield of nearly 24 tonnes per hectare. While both these claims were verified by the State governments, they have been challenged by agricultural scientists who dismiss them as beyond the biological maximum. A woman farmer, T. Amalarani of Vasudevanallur, who harvested 18 tonnes per hectare, was awarded the "Krishi Karman Award" by the President in January this year. The votaries of SRI tend to play down these super-yields as statistical "outliers," on the premise that it is the averages which are more significant than the extremes.

#### Constraints

SRI is generally considered to be labour-intensive, one of the constraints to its rapid adoption. This characteristic has prompted possibilities of linking it with the Mahatma Gandhi National Rural Employment Guarantee Act. Labour is required for more weeding, on-farm water control, and organic fertilizer application. Under the Employment Guarantee Act, works can be taken up on private farms of small and marginal farmers. SRI methods have also been used in crops like wheat, sugarcane, millets, potato and rapeseed-mustard, with similar benefits as for rice. These are referred to as the System of Crop Intensification (SCI). Wider adoption of SRI/SCI techniques will have implications for institutional arrangements such as canal and tube well irrigation system management, markets for inputs and agricultural commodities. Despite its success in several States, there is no Central official site where the all-India impact of SRI may be found. If SRI is such a winning technique, it would appear that the national agriculture research and education and extension establishments would eagerly embrace it and begin to quantify and document its benefits. Adequate resources would be set aside for it. Its dissemination would be a priority with the Central and State governments. But

that has not happened.Although SRI is no longer a voice in the wilderness, the pristine science and research establishments still continue to hold out. Meanwhile, a dedicated band of innovative farmers, grassroots non-governmental organisations, development professionals, committed academics and researchers valiantly labour on — waiting for the walls of Jericho to finally collapse at the nagging of their persistent trumpet.The rice-growing season is here. The disposition of the rain gods is speculative. Inter-State water wars are getting fiercer. An SRI movement is stirring and beginning to win some battles. Public policy and research must lead from the front in this area and not merely react. The time is ripe to champion the SRI cause.

#### (Rita Sharma is a former Secretary to Government of India and the National Advisory Council.)

#### The labour intensive character of SRI has prompted possibilities of linking it with the Mahatma Gandhi National Rural Employment Guarantee Act.

#### Beneficiaries identified for integrated farming system

The integrated farming system is a boon to farmers, who seek economic support for agriculture and its allied activities. This system has been initially launched in Vilathikulam and Sathankulam blocks, which had been indentified as backward Joint Director of Agriculture, N.K. economically areas. Dhakshinamoorthy, Tuticorin, said here on Sunday.Hundred beneficiaries had been identified at Vilathikulam. About 40 per cent of beneficiaries was provided with inputs at 50 per cent subsidy under this system with the assistance of statebalanced growth fund. The farmers would be exposed to cropping system applications and provided with vermicompost units and sprinklers. Apart from these inputs based on agriculture department, each of the beneficiaries would be given 10 goats and 30 country birds (local poultry) through the Department of Animal Husbandry.Moreover, farm ponds would be facilitated for the identified beneficiaries. In Sathankulam block, "the focus is laid on cultivating coconut plantation.Since sufficient amount of water is required for coconut plantation, coconut seedlings will be distributed to beneficiaries ahead of the northeast monsoon during which a good amount of rainfall is expected in the district", Mr. Dhakshinamoorthy told *The Hindu*.Besides distributing the coconut seedlings, the beneficiaries would also be given subsidies for planting and procuring tree climber equipments.To sort out any depletion of soil nutrient, adequate amount of micro-nutrient mixture would be given to coconut farmers.As many as 34, 000 coconut saplings were expected to be planted in Sathankulam. Around 170 saplings could be raised on 100 hectares.The Joint Director said proposal had been sent to Collector M. Ravikumar to implement the system in five more blocks — Pudur, Kovilpatti, Kayathar, Ottapidaram and Udangudi and approval is awaited.Since Udangudi block is considered as garden land model, distribution of milch cows was likely to be included in this system, he said.

#### High vegetable prices shock city residents

Scanty rains lead to slump in arrivals at market



Going dearer:Some of the shops at the Central Vegetable Market near Mattuthavani in Madurai on Sunday.— Photo: R. Ashok

For many Madurai residents, vegetable shopping at the Central Vegetable Market near Mattuthavani on Sunday morning burnt a big hole in their pockets. For the last one month, the prices of vegetables have been steadily rising. "Onions, potatoes and tomatoes are sold at Rs.30 a kg today," said S. Shiva who owns a wholesale shop in the market. Selling at Rs.70 a kilo, beans proved to be one of the most expensive vegetables. Drumsticks are sold at Rs.65 a kg and 'avarai' (country beans) and beetroot at Rs.50."We are not expecting the rates of vegetables to come down anytime soon. There has been scanty rainfall everywhere and there haven't been heavy arrivals," said N. Eswaran, a vendor."Customers bargain hard but we are already not making much profit. People who used to buy in kilos buy only 250 grams to 300 grams of these vegetables," he added. Echoing his view, most vendors at the market also said that with the cost of transportation having gone up, they were hardly making money."It costs Rs.5 to transport one kilo. A train ticket to Tenkasi which used to cost us Rs.25 now costs Rs.35," said T. Muthukumar.G. Nagamani, a vendor who sells coriander, said they bought a kilo of the leaves at a whopping Rs.160. "Prices used to be so low that we used to give it for free in the past," he said. With vegetables such as radish, chow chow (chayote) and brinjal costing Rs.35 a kilo, customers have no choice but to go ahead and spend heavily on vegetables."We pack lunch for our children every day and they need some variety. With vegetables such as beans costing Rs.70 a kg, we have been forced to skip preparing extra meals such as evening snacks and tiffin," said G. Balamurugan, a resident of Surya Nagar.T. Bhuvaneshwari, a resident of Kadachanendhal, said the prices of vegetables were not the only ones to hurt, the prices of meat had also doubled. "While chicken cost Rs.170 a kilo, mutton costs Rs.500. Now, our household budget is in disarray," she says.

#### Rs. 128-crore project of Perambalur Sugar Mills launched

It will help the unit crush 3,000 tonnes of sugarcane a day



Work on the modernisation of the Perambalur Sugar Mills Limited at Eraiyur village in Veppanthattai taluk, launched at an outlay of Rs. 128 crore, is progressing at a fast pace and is expected to be completed by the next crushing season.Peramablur Sugar Mills Limited is a subsidiary of Tamil Nadu Sugar Corporation Limited (TASCO), a Government of Tamil Nadu undertaking, and the modernisation project included setting up a 18 MW cogeneration power plant using the bagass and biomass generated by the sugar mill.

#### Capacity expansion

The modernisation proposal of the government of this sugar mill, which is crushing cane for the past 25 years, is to increase its production capacity.District Collector Darez Ahamed inspected the ongoing modernisation works and also the works on the power cogeneration power plant coming up on an area of 20.61 acres of land.The completion of the modernisation work will enable the mill in achieving a crushing target of 3,000 tonnes of cane a day.Dr. Ahamed directed the officials to expedite the works and complete the same by the next crushing season.Indumathi, Chief Executive of the Perambalur Sugar Mills Limited, and Thangavel, its Chief Engineer, explained the details of the works completed and

work in progress. The Collector inspected the work on the construction of the primary health centre at Elambalur village.

#### Rs. 9.19 cr. for Kuruvai package in Thanjavur

The State Government has allocated Rs. 9.19 crore for providing agriculture inputs under the Kuruvai package to farmers in Thanjavur district, said R. Vaithilingam, Housing and Urban Development Minister, here on Sunday.He distributed agriculture inputs to farmers under Kuruvai package at a meeting held at Soil and Water Management Research Institute (SWMRI).

#### Inputs distributed

He said that under the package, Rs. 25,000 is given as subsidy per acre to a farmer for raising community nursery and supply paddy seedlings to other farmers. Micro nutrients, zinc sulphate, gypsum, bio-fertilizers, liquid fertilizers, and pipes are to be given to farmers under the package. It has been planned to raise Kuruvai on 31,000 hectares of land this year in Thanjavur district. Till Sunday, Kuruvai has been raised on 11,371 hectares of land. Out of this System of Rice Intensification method has been followed on 7,391 hectares. Twelve hours three- phase power supply has been given for agriculture pumpsets under Kuruvai package. The Minister distributed cash awards to farmers who have taken maximum yield of paddy per hectare at the meeting.

#### Kuruvai special package to be completed by July 10

The package will cover about one lakh acres of land



GREEN SHOOTS:T.P. Poonachi, Minister of Khadi and Village Industries, checking a sowing machine during the inauguration of distribution of Kuruvai special package at Manachanallur near Tiruchi on Sunday.— PHOTO: B. VELANKANNI RAJ

The Agriculture Department plans to distribute inputs among farmers of six Delta districts as part of the Kuruvai special package announced by the State government before July 10 to help them take up cultivation. The scheme, aimed at motivating farmers to take up Kuruvai cultivation by tapping the groundwater resources because of the delay in the discharge of water from the Mettur reservoir, will cover 1 lakh acres in Tiruchi, Thanjavur, Tiruvarur, Nagapattinam, Cuddalure, and Ariyalur districts. K.P. Srikumar, Additional Director, Agriculture, Chennai, who is the nodal officer for the scheme in Tiruchi district, told *The Hindu* on the sidelines of the launch of distribution of inputs to the farmers at Mannachanallur on Sunday that it had been made it clear to the officials to complete distribution of inputs such as bio-fertilizers, liquid bio-fertilizers, micro nutrients, weeding machines, sowing, and planting machines estimated at Rs. 32.95 crore within a few days to facilitate farmers to raise community nurseries.

#### Subsidy

The government would give subsidy to the tune of Rs. 25,000 an acre for raising community nurseries under the System of Rice Intensification. The Government had appointed nodal officers for six delta districts to monitor distribution of inputs as per the list of beneficiaries, which had already been prepared. Meanwhile, T.P. Poonachi, Minister for Khadi and Village Industries, who inaugurated the distribution at Mannachanallur, said that Rs. 1.47 crore had been allocated for the Kuruvai special package in Tiruchi district. Community nurseries would be raised on 70 acres of land for taking up paddy cultivation under the System of

Rice Intensification method. To increase the productivity, 5 kg of micro nutrients and 10 kg of zinc sulphate each would be supplied to 5,000 acres at 100 per cent subsidy. A total of 4,000 acres had been identified for providing bio-fertilizer and liquid biofertilizers. Paddy planting machines would be given to 20 farm groups at free of cost.R. Manoharan, Chief Whip, and B. Guru Raj Singh, Joint Director of Agriculture, were present.

#### Govt-promoted liquid bio-fertilizer hits market

The State-promoted liquid bio-fertilizer, which is considered as an effective alternative to the lignite-based bio-fertilizer, has hit the markets in different parts of the State. The decision of the State government to supply it to farmers of six Delta districts, including Tiruchi, Thanjavur and Tiruvarur, for raising paddy cultivation in 1 lakh acres under the Kuruvai special package scheme is expected to popularise the usage of liquid bio-fertilizer.

#### Production

The State-owned production units in Salem, Ramanathapuram, Pudukottai, Cuddalore and Sakkottai have been asked to step up the productionas the demand may go beyond 50,000 litres in areas where kuruvai paddy is cultivated."We have already started receiving supplies from our production units and expected to be widely used for raising paddy during the Kuruvai season in Delta district," K. Selvaraj, Deputy Director of Agriculture told *The Hindu* on Sunday.The government had planned to distribute the liquid bio-fertilizer at free of cost to most of the farmers, who had been listed as beneficiaries under the Kuruvai special package scheme.It had been decided to get 2,800 litres of liquid bio-fertilizer for distribution among the farmers in Tiruchi district alone, he said.

Mr. Selvaraj said that the fertilizer was being manufactured with the technical support of the Tamil Nadu Agricultural University. Though many States were yet to commence the production, Tamil Nadu government-owned units had already hit the markets. The micro organisms in the bio-fertilizer would restore the natural nutrients in the soil organism thus enhancing and sustaining the soil health. It could be well utilised for seedlings and foliar applications. The shelf life of the product is 12 to 24 months as against about 6-month of lignite based bio-fertilizer. The dosages were 10-time less than the carrier based power bio-fertilizer. It could be applied through root dipping, direct field and fertigation methods, officials said.

#### Farmers may lose standing crops on 2.13 lakh ha

Agriculture Dept. to suggest alternative cropping if situation does not improve



The total targeted sowing area in the district is 4.19 lakh hectares, of which sowing has been completed in over 2.13 lakh hectares.— FILE PHOTO: M.A. SRIRAM

Standing crops in over 2.13 lakh hectares sown during the Kharif season in Mysore district may wither if there is insufficient rain in the next 15 days. Except for Nanjangud taluk, which received normal rainfall, all six other taluks in the district have received less rainfall. Owing to failure of monsoons, there is a chance that farmers may lose standing crops.Mr. Shivakumar, Deputy Director of

Agriculture, told *The Hindu* that the department would wait another week and if there was no rain by then, the department would take up a drive to motivate farmers to go in for alternative cropping system.

#### Horse gram, ragi

It will educate farmers about the pros in taking up alternative crops such as horse gram, beans and ragi and making good on losses incurred, he said and added that the department had ensured that seeds and fertilizers would be available to the farmers if they go in for alternate crops. The total targeted sowing area in the district is 4.19 lakh hectares, of which sowing has been completed in over 2.13 lakh hectares. Standing crops require good rainfall and at least two or three showers may rejuvenate the standing crops, according to the agriculture officer. The Deputy Director said that the annual normal rainfall of Mysore district was 801.4 mm and average expected rainfall till July 1 was 319.1 mm. This year, only 281.1 mm rain has occurred so far. According to the Karnataka State Natural Disaster Monitoring Centre, Mysore may get rains by July 10. Average rain fall in H.D. Kote taluk till July 4 is 395.1 mm, whereas only 326 mm has occurred. Other taluks have also received less than expected rainfall.Mr. Shivakumar said agricultural operations in the district had come to a halt owing to lack of rain in the past one and a half months. He noted that noted that agricultural operations in most parts of the district which are rain fed might be thrown out of gear if the dry spell continued for one more week.

#### Date extended

The last date for insuring crops had been extended till July end, Dr. Shivakumar said, calling upon farmers to insure their crops immediately. He directed the farmers to contact their nearest Raitha Samparaka Kendras and banks to get

their crops insured so that even if they incur crop losses, a major portion may get reimbursed.

#### Anitha model: an ideal way to boost farmers' income

From cash deficit to surplus and from a state of uncertainty to steady growth, the progress registered by organic vegetable cultivators at Mayasandra in Anekal taluk of Bangalore will soon be replicated in Mysore.

#### Growing group

What began as an exercise in a bid for sustenance by a handful of farmers has evolved into a group of nearly 40 and growing. The brain child of Anitha Reddy, who works and writes on agricultural issues, the alternative model helps reduce input costs and is considered to be ideal for farmers to enhance their income.

#### **Consumer linkage**

Explaining the genesis of the model and evolution of the producer-consumer linkage, Ms. Reddy told *The Hindu* that the emphasis on cereal cultivation did little to encourage organic vegetable cultivation. Hence, the Sahaja Samrudha group — which promotes traditional agricultural methods and popularises indigenous crops — identified Mayasandra to promote vegetable production in a big way."They were into chemically-intensive cultivation, which was expensive, and hence we convinced them to reduce input costs by resorting to organic practices," said Ms. Reddy.The area is renowned for beetroot and carrot but we encouraged them to diversify to meet market demands, she said. "So from two types of vegetables, the farmers widened their produce to include more than 35 varieties that are supplied to six outlets in Bangalore and one in Kerala. Consequently, the farmers turnover has increased from as low as Rs. 500 a day

to more than Rs. 5 lakh a month and the surplus income is increasing," said Ms. Reddy.

#### Middlemen

The model, also called as Anitha Model, has helped farmers eliminate the scourge of middlemen, reduce input costs as there is no use of chemicals, and save on transportation cost as the Sahaja group takes care of transporting the produce to outlets for a nominal rate. The net impact is increase in the income of farmers. The concept has evoked curiosity among farmers in Periyapatana, who are in talks with the Sahaja group for replicating it.

#### Heavy rain lashes Bellary

Heavy rain accompanied by thunder and lightening lashed Bellary and surrounding areas on Sunday evening, inundating low-lying areas. The rain after a long spell of dry weather after the onset of the monsoon has brought smiles on the faces of farmers.According to reports reaching here, heavy rain lashed several villages in Bellary, Sirguppa and Hospet taluks.Bellary city experienced rain for over an hour and many houses in the low-lying areas of Jagruti nagar and other localities were inundated. The residents were seen pumping out the storm water that had entered their house. Ankle to knee-deep water had stagnated at two under bridges in the city affecting the movement of traffic for some time.

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farmers. The concept has evoked curiosity among farmers in Periyapatana, who are in talks with the Sahaja group for replicating it.

#### The sky is clouded over, and so are the hearts of sugarcane farmers

Delay in monsoon might cost them their livelihood



While the skies are covered with angry gray clouds, farmers here are worried about a drought as the land had not seen rain in the month of June. It is the time for the first phase of the farming season where the fields are cleared for cultivation. If the monsoons do not start soon, drought and loss will soon be a reality.As for sugarcane cultivators, drought has already shown its signs and large areas in Kottakulam, Missionvayal and Karsanadu have been affected. In Marayur, sugarcane is harvested through out the year.K.J. Joseph, a farmer at Kottakulam said that his three acres of land has been destroyed in the drought. The production will considerably be affected if the situation did not change soon, he says. This was one of the severe droughts in the area, said Mariappan, a farmer, adding that water sources are being dried up fast. The worst, he said was that the authorities are not aware of their fate."If no counter measures for irrigation are taken, vast areas under cultivation will fall under the grip of drought," he said. An official of the Krishi Bhavan told The Hindu on Sunday that some areas were severely affected and if the situation continued for a month there would be a severe impact on jaggery production." As of now the situation has not gone out of control," he said. He also said that the compensation given to a farmer, who loses one acre of sugarcane cultivation is a paltry sum of Rs 1,000, that, too, only if the cultivation entirely destroyed in the drought. There

is no other fund available other than from the National Calamity Fund for sugarcane farmers, he said. "So far we have not assessed serious damage as sugarcane can survive nearly three months without water," he said. The farmers say that the drought this season is a continuation of the falling level of monsoon in the area over the years. If the situation continued, Marayur sugarcane cultivation is under severe threat. Many farmers have already turned to other plants like areca nut and coconut.

#### Banana farmers reel under 'butterfly' attack

Larva damages the whole leaf save the midrib



Scientists at the Kerala Agricultural University have called for heightened vigil against a new and devastating pest that threatens to blight banana crops in the State. The pest, identified as the Banana Skipper or Palm Redeye (*Erionota thrax*), is a chocolate-brown butterfly belonging to the family Hesperidae. It is also known as Banana Leaf Roller because its larva or caterpillar cuts the leaves at the edges and makes a series of cylindrical rolls before developing into a pupa. A heavy infestation could damage the whole banana leaf, leaving only the midrib intact. According to Dr. Arthur Jacob, Professor and Head of the KAU's instructional farm at Vellayani near here, the pest was reported last year from different locations in the State. He said the damage was now found to be spreading to the southern parts, especially Thiruvananthapuram, a major

producer of banana. The infestation has been found to be heavy in a few banana farms at Kalliyoor, Kakkamoola and Pallichal near Vellayani.Originally reported from Southeast Asia, the banana leaf roller pest is distributed in Northeast India, Sikkim, Nepal, the Andaman islands, Mauritius, Malaysia, China, Vietnam, Hawaii and Papua New Guinea. Measuring 4 to 6 cm in length, the white powder-coated caterpillar prefers banana leaves though it is occasionally found to infest coconut palms also.Citing reports from other countries, Dr. Arthur said natural control was the best remedy. The introduction of natural parasites has been advocated to bring the damage under control.An expert team of the KAU has advised farmers to be vigilant against the spread of the pest. The scientists have called for field scouting and periodic destruction of the rolled leaves by burning to kill the larvae. "Chemical control measures are seldom required, but if the manual removal of the leaf rolls is not possible, treatments timed to control the newly hatched larvae may be attempted with the backing of field studies," Dr. Arthur said.

#### 'School curriculum should have more farm science'

K.K. Ramachandran, Member Secretary, Kerala State Council for Science, Technology and Environment (KSCSTE) has said that agricultural science content in school curriculum should be increased.He was addressing a meeting at the College of Forestry of the Kerala Agricultural University (KAU) here on Saturday to present the Dr. P.K.R. Nair Prize for the Best Post-graduate Research Work in Agricultural Sciences. He called for closer interaction and coordination between researchers in other branches of science and those in agricultural science.He said that identifying thrust areas of research and using advanced technology such as satellite mapping for crop estimation and study of temporal variation should get priority.The prize for the Best Ph.D. (Research) was won by CoF student Samritika from Himachal Pradesh. She undertook research on Below-ground Architecture and Carbon Stock of Silver Oak (Grevillea robusta A. Cunn.) V. Vijayasree of the College of Agriculture, Vellayani, won the prize for the Best M.Sc. Thesis for her work on 'Efficacy and bio-safety of new generation insecticides for the management of fruit borers of cowpea, brinjal and okra, was prepared under the guidance of Prof. Hebsy Bai. The awardees received a plaque, certificate of merit and cash award each.P.K.R. Nair, an alumnus of CoA, Vellayani, who is professor at the University of Florida, has instituted the awards to recognise outstanding academic work of PG students of CoA, Vellayani, and CoF, Vellanikkara.Sverup John, Dean (Agriculture), presided. The other speakers included P. V. Balachandran, Director of Extension; T. R. Gopalakrishnana, Director of Research; K. Sudhakara, Dean (Faculty of Forestry); and K.Vidyasagar.

#### Training in vegetable carving

Agri-Horticultural Society, Public Gardens, is conducting a three-day training programme on Vegetable Carving from July 10 on its premises, a press release said. For details, call 2329-9779/99120-46095.

#### Jobs dry up, agricultural labourers lose crores in wages

Most of them have been unemployed for over a month

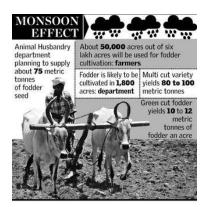


Deserted fields are a common sight in Adilabad, where the continuing dry spell has left agriculture workers jobless.– Photo: Harpal Singh

It is not just the farmers who are feeling the pinch of the prolonged dry spell. A lot many poor agricultural labourers are losing several crores of rupees in wages with there being no work in the fields for about a month. There are over 6 lakh male, and almost an equal number of female job cardholders under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) in Adilabad. While most women are employed at construction sites, the women essentially work as agriculture labourers, and most have had no work following the temporary suspension of the MGNREGS during the monsoon.A woman worker is paid Rs.150 a day during the agriculture season, which means that every labourer who has had no work for the last 30 days has lost a precious Rs.4,500 in wages during the period. This translates to wage losses of running to crores of rupees."Leave alone work, we are facing hardships due to the escalation of prices of essential commodities and other things of daily use," points out Merugu Vijaya, a labourer from New Housing Board Colony."The price of onions, which was Rs.5 for 250 gm in early June, is Rs.7 now," she adds, emphasising the crisis they were facing at the moment."The retail price of rice has also risen from Rs.20 a kg to Rs.24 a kg. It meets part of our requirement as the rice from the fair price shop does not last long. The price of edible oil has also gone up by Rs.10 per kg," complains Badevad Laxmi, who has six children to feed. The labourers are finding it difficult to pay their rentals which is between Rs.500 and Rs.1,000, depending on the size and shape of the house.

They have by now developed a routine of idling under the large neem tree in their locality, awaiting employment that has, well, dried up.

#### Monsoon delay may spur fodder cultivation



With delay in monsoon, farmers are likely to go for cultivation of fodder this year.

The Animal Husbandry department is planning to supply about 75 metric tonnes of fodder seed to farmers, even while the farmers' lobbies are demanding that the State government make fodder cultivation mandatory. The department estimated that the fodder is likely to be cultivated in 1,800 acres, and has made arrangements accordingly. Farmers could opt for green fodder cultivation over the next few months with little water resources available for them. They can earn some money from the effort. "We are there to provide them with best quality said Animal Husbandry department seed." Joint Director Damodara Naidu.Speaking to The Hindu, Mr. Naidu said about 30 metric tonnes of fodder seed would be distributed in the district every year and proposals were sent for another 40 more metric tonnes in view of delayed monsoon this year. The government decided to supply 5 metric tonnes of hybrid variety of fodder seed in the coming days taking the total to 75 metric tonnes, he said. The green cut fodder would yield 10 to 12 metric tonnes of fodder an acre, while multi cut variety would yield 80 metric tonne to 100 metric tonnes. The hybrid seed was being supplied with 75 per cent subsidy, and farmer should pay Rs. 73.30 a kg. The ordinary variety mini kit of five kg would cost Rs. 23, he said. Kisan Services Association district general secretary P.S.R. Das said that farmers, usually, cultivated paddy in as much as six lakh acres in the district. As there were no

rains till date, and if the situation did not improve in a fortnight, they would be forced to opt for less water intensive crops such as pulses, he said, adding farmers were likely to cultivate fodder in 50,000 acres in the district. The department was supplying fodder seed. But, there was not much awareness among farming community. Only a few enthusiastic farmers cultivate fodder to meet their livestock requirements. The government should make it mandatory to cultivate green fodder, he said.

#### Bio-fencing to ward off wild animals



Agave Americana plants grown by the Marayur forest division at its nursery to be planted for bio-fencing to counter wild animals intruding into human-inhabited areas. *Agave saplings to be planted on forest fringes* The Marayur Wildlife Sanctuary plans to plant *Agave Americana*, commonly known as maguey or century plant, on the forest fringes to prevent wild animals from entering human habitations and destroying crops. Spines on sharp edges of the leaves deter wild animals, especially elephants. Last year, saplings were planted on an experimental basis with the participation of local communities and it had been decided to extend it to more areas as it is accepted as an effective bio-fence in some countries, Marayur Wildlife Warden Saby Varghese told *The Hindu* on Friday. Agave is a species of flowering plant in the family Agavaceae and is native to Mexico. It is planted the world over as an ornamental plant and dies after 20 to 30 years. In some African countries, native communities had effectively planted it to prevent intrusion of wild animals. At the nursery of the Forest

Department, 4,000 10-month old saplings were ready for re-planting, said Mr. Varghese.

#### Man-animal conflict

He said recurring instances of man-animal conflict in the area prompted the department to take the initiative.Mr. Varghese said the plants were available in dry forest areas of Marayur, which is a rain shadow area. "Natural fencing is cost-effective and more viable as wild elephants tend to destroy solar fencing and pass even the trenches, which become less deep with the passage of time," he said.Munnar Wildlife Warden M.G. Vinodkumar said the tribal communities of Attappady planted the species on the trenches to effectively prevent elephants from intruding into their hamlets.

#### Crop insurance extended till end of July



The HinduCrop damage through water logging or excess water, is one of the conditions for which farmers can claim insurance. Photo: H.S. Manjunath Paddy growers in Dakshina Kannada can enrol to claim crop insurance for this kharif season under the Rashtriya Krishi Bima Yojana till the end of July.Earlier, the government had fixed June end as the last date for enrolment, an official release said.While the insurance was mandatory to those who have availed a crop loan, farmeres without a loan could also claim insurance, the release said. Farmers under 172 gram panchayats except under Mangalore A hobli (city area) are eligible for enrolment. Agriculture Insurance Company of India implemented

the scheme in Dakshina Kannada with an insurance amount of Rs. 30,909 per hectare. The premium amount is Rs. 618.18 (two per cent) per hectare during registration.Farmers would have to inform the company within 48 hours of crop damage to claim the insurance.

#### Saplings for sale

Meanwhile, a release from the Department of Horticulture said that different varieties of saplings were available in its nurseries for sale to public. In its nursery at Padil in the city, saplings of Ullal-1 variety of cashew, coconut, mango and cocoa were available. In Puttur, saplings of jackfruit, black pepper, papaya, jasmine and drumstick were available in addition to the ones available at Padil.People can visit the department's nurseries at Thumbe, Vitla, Maddakka (Belthangady), Hosagadde (Sullia) and Charmadi to purchase them at the rates fixed by the department, the release added.

#### Dual fruits of pineapple farming



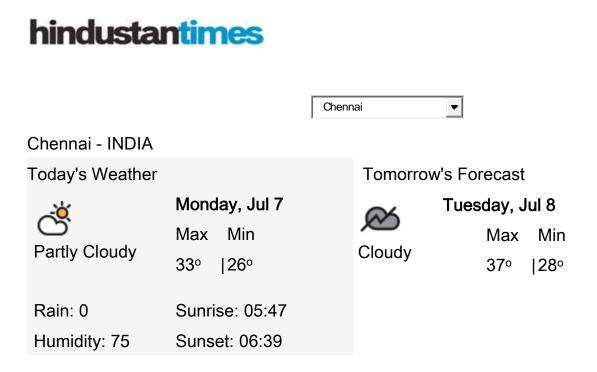
The HinduA rubber plantation at Koodaranji in Kozhikode where pineapple is being cultivated as an intercrop. In the hilly regions of Kozhikode, pineapple cultivation is slowly catching on. At Thiruvambadi, Koodaranji, and Koombara, farmers lease out their land, mostly new rubber plantations, to seasoned pineapple cultivators. Two purposes are served — the fruit, planted as an intercrop, gives reasonable returns to both the landowner and the tenant; and it prevents soil erosion.K. Johnson, a farmer and the leader of a prominent farmers' organisation, says the trend has gained popularity in the past three years in the

region. "Only a few landowners opt to cultivate pineapple. They usually lease out their property," he adds.In rural Kozhikode, landowners get a minimum of Rs.30,000 for leasing out one acre of land for a year for the intercrop cultivation. Young landowners say they enjoy several indirect benefits, other than the revenue they get as lease amount from cultivators. "If pineapple is grown in newly planted rubber estates, the manure used for the fruit crop will speed up the growth of rubber saplings," says Binu Jose, a farmer.

A major benefit, farmers say, is that both landowner and the pineapple grower are equally rewarded. "Whatever be the price of the produce, the landowner is sure to get his lease amount and protection from soil erosion. If the season and demand are favourable, cultivators too enjoy a good harvest," they say.

#### Water level

The water level at the Mettur Dam stood at 47.61 feet on Sunday against its full reservoir level of 120 feet. The inflow was 2,949 cusecs and the discharge 2,000 cusecs.



Wind: normal Barometer: 1005					
Extended Fore	ecast for a we	ek			
Wednesday	Thursday	Friday	Saturday	Sunday	
Jul 9	Jul 10	Jul 11	Jul 12	Jul 13	
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36º   28º	39º   28º	38º   27º	37º   27º	39º   29º	
Cloudy	Cloudy	Overcast	Cloudy	Cloudy	
Airport Weather			Rain: 0 Sunrise: 05:47 Humidity: 75 Sunset: 06:39		
Chennai			Wind: normal Barometer: 1005		

## INDIAN EXPRESS

#### Vegetables Turn Pricey for Veggies in Steel City

ROURKELA: The retail prices of vegetables continue to make steady rise in Sundargarh district and there is no indication of early let-up in the price rise.Most of the vegetables are priced at `40 per kg while some are in the bracket of `80 to `160 per kg in the city. While the drum stick is the most costly vegetable selling at `160 per kg, capsicum costs `80 per kg. Cauliflower is priced between `60 and `80 a kg while tomato and bitter gourd are selling at `50 to `60. Similarly, the prices of pointed gourd, beans, brinjal, strip gourd, cucumber, ladies finger and

carrot have taken quantum jump to sell at `40 per kg. Coriander leaves which were sold at `50 in the past one week per kg, now costs `200. Similarly, garlic and ginger are expensive at `120 and `80 per kg respectively and green leaves remain cheaper at 50 per kg.As a little respite, the potato price has come down by `2 to sell at `18-20 per kg, while onion continues upward swing to sell at `26 per kg. Only cabbage and pumpkin are relatively cheaper at `30 and `20 per kg respectively, while bottle gourd is priced at `20 per piece.A roadside vendor Jagabandhu Sahu attributed the reason of price rise to demand and supply gap. He apprehended that the situation would continue for some more time in the wake of delayed monsoon.A local trader Charan Naik said low vegetable production by the local farmers is one of the reasons for price rise. Besides, high demand for vegetables adds extra cost during procurement and coupled with the profits of middle men, those prove costly for the consumers, he added.Except onion and potato, most of the vegetables are locally grown and supplied by the farmers of Nuagaon block in the district and adjacent rural pockets of Jharkhand, Naik said.

#### Farmers Waiting for Water Release from Dams

The Cauvery Water Advisory Committee, headed by Housing and Mandya District In-charge Minister M H Ambareesh, has taken a decision to release water from KRS to canals by the end of July if water level touches 100 feet in KRS reservoir by that time. If not, it will be difficult for the farmers depending on crops in the Cauvery belt of Mandya district, Joint Director of the Agriculture Department Mahantheshappa has said. He also told Express that the department has prepared a contingency plan to tackle the drought with the assistance of the University of Agricultural Sciences as the hopes of farmers are fading following failure of pre-monsoon rain. The farmers of Mysore district are hoping for the best

and are expecting a good monsoon from July 10. He said that sowing of cotton, tobacco and pulses is completed in 2,06,089 hectares, about 68 percent of the total rain-fed 3,01,210 hectares completed in the district between June 10 and 15. The total rainfall received in the district is 281 mm as against 319 mm normal rainfall, he added. The shortage of rainfall is 23 percent in June and 66 percent in the first five days of July. If there is no rain in the next 10 days, farmers will face crop loss definitely, he said."In view of this, we have prepared a list of alternative crops to be grown in very short term such as ragi, pulses and oilseeds-sunflower, if the drought situation continues till the end of this month. Scanty rainfall will not help whole farming community which needs widespread rainfall," he said. The poor rain has also affected the farmers in Chamarajanagar district. In the premonsoon period, the district received only 38 per cent rain as against 348 mm during April and May. Hence, the district recorded only four per cent sowing out of total target of 64,000 hectares. The farmers are worried as water is not yet released to canals from Kabini reservoir, from where water is being released to Tamil Nadu.After the inflow to the reservoir increased due to rainfall in Waynad and Kodagu in June-end, the Irrigation Department increased the outflow from the reservoir to Tamil Nadu to comply with the Supreme Court order. According to the farmers, the department is stating that it can release water to the canals as the reservoir has not touched the expected water level. According to sources in the Agriculture Department, authorities have to release water in the month of June or in the first week of July to the canals in Chamarajanagar taluk where farmers are waiting to sow seeds in 12,000 hectares."Out of a target of 64,000 hectares to be taken up sowing in the district, maize will be grown in 26,000 hectares, paddy in 8,500 hectares, groundnut in 3,500 hectares, cotton in 3,000 hectares, sugarcane in 2,000 hectares and ragi will be grown in 10,000 hectares. The delay in monsoon will affect the crop which will give less yield and vulnerable to diseases," an official told Express. Mahantheshappa said they are ready with

seeds and fertilisers to supply to the farmers at anytime. Farmers should get crop insurance to prevent loss. The last date for crop insurance has extended till July 31 from June 30, he added.

#### Get set to Tackle Drought: KRRS

Karnataka Rajya Raitha Sangha (KRRS) and Hasiru Sene have urged Chief Minister Siddaramaiah to be prepared to tackle drought which persists in 175 taluks of the State. KRRS General Secretary Badagalapura Nagendra said leaders, irrespective of their political affiliation, should debate the matter in the ongoing Legislature session. The government should immediately take steps to handle the crisis, he stated. He also urged the government to stop banks from recovering loans from farmers in this condition.

#### Seemandhra Farmers Stage Protest

Tension prevailed at the site of the Rajolibanda diversion project in Manvi taluk on Sunday when Seemandhra farmers objected to increasing the height of the barrage across the Tungabhadra. The farmers, led by Mantralayam MLA Balanagireddy, urged the contractors to stop works. They argued that if the barrage height was increased, the Kurnool Cuddapah(KC canal) command area would be affected. Manvi and Kosgi police who arrived at the spot convinced the farmers that the works were aimed at improving the irrigation canal under the project and not at increasing the height of the barrage. Though the Rajolibanda diversion project is in Raichur, the major share of the irrigation water goes to Seemandhra and Telangana. The project has been a bone of contention since its inception due to water sharing equations. Though it is an interstate project, Tungabhadra project authorities have taken up the works at a cost of `2 crore.

#### Outsiders Involved in Farmers' Riot: M B Patil

Water Resources and Bijapur District Minister M B Patil suspects the involvement of outsiders in Saturday's rioting and firing incident at the National Thermal Power Corporation (NTPC) plant at Kudgi in Bijapur. He told reporters after visiting injured farmers at KLES hospital in Belgaum on Sunday that according to police and intelligence reports, around 80 per cent of the agitators were outsiders. Farmers in the area have been protesting against the setting up of a thermal power plant by the NTPC.Saturday's agitation was held under the leadership of retired atomic scientist M P Patil, who had obtained prior permission from the police. Only five people were allowed to meet the NTPC director, and 83 policemen, including the tahsildar, were at the site. However, thousands gathered at the area leading to the rioting and firing. The minister said a few Japanese nationals are staying near the area and the incident would have become an international issue if they had been harmed in the rioting. The minister said suitable compensation has already been given to the farmers who lost their land for the project, but the issue of giving them jobs in the plant will be discussed after the completion of the project. He requested the farmers not take the law into their hands. Meanwhile, the police firing drew wide condemnation from farmers' organisations and other forums. Representatives of several farmers' organisations from across the state visited Kudgi and the district hospital to enquire about the health of the injured.Karnataka Raita Sangha president Chamaras Malipatil said the firing was a clear case of police atrocity on innocent farmers. He demanded that the state government order a judicial probe. Negotiations about compensation have dragged on for months, and the farmers had also demanded about 5 tmcft from the Almatti Dam. They were angry that the demand was ignored. The Socialist Unity Centre of India (SUCI) said the police action was a clear infringement of the democratic rights of farmers. In a statement, B Bhagwan Reddy of SUCI said the farmers have been opposing the establishment of the plant at Kudgi right from the start. He said the plant was set

up here when farmers in coastal areas opposed it.He said the land here is not completely barren as farmers are cultivating commercial crops like onions and betel leaves. How did the government come to the conclusion that the land in the region is barren? Reddy asked.Bhimasi Kaladagi of the Rait Sangh said the police atrocities are inhuman and people will not tolerate the anti-farmer attitude of the state government.

#### Crop Loan Waiver Ball in KCR's Court

Chief Minister K Chandrasekhar Rao has to find a way out on the contentious crop loan waiver issue. Chief Secretary Rajiv Sharma and secretaries of Finance department who met the Reserve Bank of India (RBI) governor on Friday appraised the Chief Minister on the thinking of RBI. The RBI's reluctance to waive all the crop loans was informed to the Chief Minister on Saturday."The Chief Minister has to take a decision on this," an official said. The RBI wants the Telangana government not to involve bankers in the crop loan waiver scheme and instead expects the government to bear the expenditure to waive the crop loans. There is a provision that crop loans in case of drought could be rescheduled.

#### Veggie Prices Burn People's Pockets

The sharp increase in the prices of vegetables is burning a hole in the pockets of the middle class in the City of Destiny. Lack of monsoon and extended summer has apparently taken a toll on veggie production, owing to which the costs have skyrocketed. The prices of brinjal, tomato, onions, red chilli and other vegetables being sold, even in rythu bazaars, have shot up in the last two months."It has, of late, become a routine for the common man to witness hike in the prices of essential commodities by the day. Petrol, gas, transport charges, education, even the daily bread has practically soared," says M Prakash, a retired professor from the city. Brinjal, which was priced at Rs 10 per kg in the beginning of June, is now being sold for Rs 28. The same is the case with tomatoes, which were priced at Rs 14 per kg last month, before doubling in July. Onion brought fresh tears this month, having increased to Rs 27 from Rs 20 last month."It appears that we should depend more on curry points than buying vegetables and making food at home with equally expensive oil and cooking gas," says G Sreedevi, a homemaker from MVP Colony. Since the middle class people have to plan their monthly expenditure ahead, they need to consider the cost of the food items before purchasing any, she added. Chilli, which was priced at Rs 21 in June is Rs 44 per kg now, while the price of drum sticks doubled from Rs 24 to Rs 50. Cabbage, ladies finger and non-local items like beans, carrot and capsicum too are getting dearer by the day. However, the market authorities are expecting a fall in the prices in the coming days. Giving a boost to local production is the only alternative to bringing down the rates, which nevertheless, is an onerous task due to the unfavourable climatic conditions this year, they added.

#### City Sees Red as Veggie Prices Soar

Don't be surprised if your friendly-neighbourhood-vegetable vendor gives you a dirty look when you ask for a free sprig of coriander - with retail prices reaching an unprecedented Rs 90 per kg, an individual kattu (bunch) of the 'seasoner' will cost you a hefty Rs 25. A week after prices of essential veggies nearly doubled, there appears to be little respite on the horizon - as prices stayed put, or went marginally higher, regardless of which shop in which part of the city you buy veggies at, "With prices rising so much, I decided to buy it from a smaller shop in T Nagar instead of my usual supermarket, but I was shocked to find that even there prices were the same," said Shanthi Nirmal, a homemmaker from Mambalam.Ironically, in most areas, the prices in supermarkets and retail chains such as Pazhamudir Cholai and Reliance Fresh remained slightly cheaper than

vendors on the street. As City Express took a look around, we found that tomatoes were being sold in a Pazhamudir outlet in R A Puram for Rs 32 per kg, while vendors at the busy Mylapore market were having trouble unloading their stock at Rs 40 a kilo.As expected, small-scale vendors blame it on the infrastructure. Says Sathya M, "We have to sell our stock within a day, but retail stores have better storage. Besides that, they buy in higher quantities and one such shop might buy more stock than all of us in the Mylapore market, at one shot," he complained. Cribbing aside, the difference in prices has pushed the crowd towards these upscale outlets, affecting daily sales for street vendors, "Ever since the price rose, I have cut down the amount I am buying from 20 kg of tomatoes to 12 or 15 kg. People aren't buying as much when we tell them its Rs 40-45," quips Shanmugam, who runs a provision store in Saligramam. With the cost of the poriyal staples like cabbage, carrot, capsicum and beetroot increasing gradually since March, it is the sudden spike in essential veggies that has hit the average middle-class budget. Tomatoes have been bullish in this regard - prices for the red, squishy perrennialy necessary vegetable have gone from Rs 22 last month to a mind-blowing Rs 45 this Sunday, "All essential vegetables are much costlier ever for us wholesalers," explains S Kannaiyan, who sells vegetables by the crateload at Koyambedu Market, "The tomatoes that are coming to us are over ripe or extremely raw, but when there is a bad monsoon, this is what happens," he adds. Almost the same refrain exists for onions: prices going from a nominal Rs 16 per kg last month to a whopping Rs 49 this weekend, "It is unlikely that the prices will go down for the next few weeks as this is prime wedding season. Only after that...maybe," says a thoughtful Murugan, who sits close by, waiting for his wares to leave the market. "This is the peak the prices can reach with the only exception being onion which can increase further. If the Vegetables prices increase beyond the current rate then everyone in Chennai will have fish

instead," retorts Koyambedu Vegetable Market Association President V R Soundararajan sardonically.

# BusinessLine

#### 'Wholesale, retail vegetable price difference widened in Q1'

The gap between the wholesale and retail prices of vegetables increased by 80 per cent, whereas retail prices in 10 centres rose by 30 per cent during April-June 2014, says a survey of 33 'mandis' by Assocham. The survey found a decline in arrivals of vegetable except local tomato, potato fresh and onion (onion prices in 2013-14 have recorded a life-time high).Onion arrivals grew 13 per cent in 2013-14 followed by tomato local, which grew by 7.9 per cent and potato fresh arrivals by 6.2 per cent. Okra and cauliflower arrivals recorded a marginal growth of 0.4 per cent and 1.9 per cent in the period, the survey said.On an average, retail prices of vegetables were 48.8 per cent higher than wholesale prices, with the gap going up to 51 per cent in some centres. DS Rawat, Assocham Secretary General, said the analysis was based on the wholesale and retail prices of vegetables in various markets.

#### Monsoon won't impact agrochemical sales, says Crisil

A weak monsoon will not impact the sale of crop protection chemicals, says Crisil Ratings. Analysing the prospects of the agrochemical industry in its latest report, the ratings major expects pesticide sales to be resilient in the current fiscal. In 2010, despite a weaker than expected rainfall, agrochemical sales grew 7 per cent, the report says.Geographical diversification, large and integrated scale of operations, a healthy product portfolio marked by strong molecules and a strong

brand recall have all helped companies in this space post healthy growth. According to Crisil, the agrochemicals industry will be among the fastest growing sectors in the next five years next only to auto components and commercial vehicles industry. It expects the industry's revenues to grow 12-13 per cent annually during 2014-19 period. Given the need to feed growing population with limited arable land, prevention of crop losses will be key to bridge the demand-supply gap in foodgrains, which augurs well for the industry. While the report is optimistic about the industry's growth prospects, it also highlights the need for agrochemical makers to ensure efficient management of working capital.

#### The pressure builds on rice



World rice supply and consumption (in million ton					
Year	2010-11	2011-12	2012-13	2013-14	
Production	449	467	472	476	
Consumption	445	459	469	476	
Trade	36	39	38	40	
End-Stocks	100	107	110	109	

Source: International Grains Council

For millennia, rice has been an integral part of the cuisine across Asian nations. China (140 million tonnes) and India (105 million tonnes) are two of the world's largest producers of rice followed at a distance by Bangladesh, Indonesia, Vietnam, Thailand, the Philippines and Pakistan. Major exporters include Thailand, India, Vietnam and Pakistan while major importers include China, Iran, Indonesia, the Philippines, Saudi Arabia and several African countries. While rice production and consumption for 2013-14 are expected to be balanced, world rice trade is forecast to be up by 5 per cent to a new high of 40 million tonnes in 2014 as large and competitively-priced supplies boost buying interest among key Asian importers. Market participants believe that traditional importers will step up purchases; the prices of Indica (long-grain non-sticky) varieties have been sliding and buyers need to replenish thinning stocks. Even though overall supplies are expected to tighten ahead of the next harvest, supplies in the top exporting countries (India, Thailand) remain comfortable. One risk to the comfortable supply scenario is the threat of El Nino event in the second half of this year. At this point of time, the timing and intensity of El Nino event is unclear. Importers may scurry to cover their needs for forward positions. In this event, prices will face an upward pressure, although harvests from September onwards may somewhat dampen the sentiment. World production prospects in 2014-15 are currently clouded by the risk of El Nino in Asia, the rice hub.

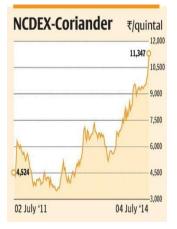
### Impact of policies

Government policies also need to be monitored, especially in Thailand, for government decisions to support the rice sector and the pace of stock disposal.Liquidation of public stocks in Thailand over the last three months has already softened the export market prices; and the country may be able to capture a substantial part of the incremental export trade in 2014. Vietnam may also be able to expand export sales. This can potentially affect the volume of India's rice shipments during the year. In 2012 and 2013, India was the world's top exporter with shipment volumes close to 10 million tonnes. That position may perhaps not be sustained this year. The new Government is concerned about food inflation and has announced a series of measures to contain price, rise including sale of five million tonnes of rice to augment availability and contain food inflation. However, details of pricing and marketing plan are not available as yet. Export of basmati rice is expected to continue unhampered. Looking ahead, global rice production is expected to continue rising over the next five years but at a decreasing rate. While China's share in global production and consumption may decrease, Indian consumption over the next five years is expected to expand robustly, especially in the context of the food security law that envisages sale of rice at highly subsidised rates to a majority of the population. The law is expected to be implemented progressively. In that case, production growth needs to catch up with consumption. Availability for exports may tighten. Land constraints, water shortage and climate change are likely to impact rice cultivation and these negative factors need to be addressed with urgency.For 2014-15, the Ministry of Agriculture has set a production target of 106 million tonnes comprising 92 million tonnes of kharif and the rest rabi rice. Delayed and weak onset of monsoon as well as tardy progress the whole of June this year

may negatively affect paddy cultivation although the shortfall is not quantifiable at the moment.

## Coriander price to spice up





Coriander (dhaniya) prices have surged some 19 per cent since May to record highs on the National Commodity and Derivatives Exchange (NCDEX). Strong domestic demand in the spot market, coupled with weaker supply in recent times, has triggered the rally. Also, the threat of a lower supply this year following the heavy and unseasonal rainfall in Rajasthan, the largest producer in India, has supported prices. The price of the NCDEX-dhaniya futures contract has surged 127 per cent from its August 2013 low of ₹5,000 per quintal to ₹11,347 now.India is the largest producer of coriander in the world, accounting for about 80 per cent of the global production. Export demand for this spice crop has increased

significantly in the last couple of years. Data from the Indian Department of Commerce suggest that coriander exports have picked up since 2011-12 after falling for three consecutive years between 2008-09 and 2010-11. Coriander exports increased about 30 per cent in 2012-13. In 2013-14 (April to December), exports are up 48 per cent compared with the same period a year ago, according to the Spices Board India.Coriander exports in the past have dropped at times when the rupee had strengthened against the dollar. Now, given the unrest in Iraq and surging crude price, the rupee is only expected to remain weak, at least for the short term. Coriander production in 2012-13 is likely to have increased by 3 per cent to 5.27 lakh tonnes, says the agriculture department.This year, with a below normal monsoon and the possibility of an El Nino, production may not be significantly higher; in fact, there is risk of a drop in production. So, coriander prices may rule higher in the short term.

### Outlook

Long-term view: The long-term trend in the NCDEX-dhaniya contract is up. Technically, the price of this contract has entered the uncharted territory. So the upside remains unlimited at the moment. The contract can rise to as high as ₹13,500 per quintal in the long-term. Any corrective fall could find support near ₹8,700 and ₹7,500 which are the key long-term supports for the contract.

Medium-term view: The medium-term outlook is also bullish. The 21-week moving average at ₹9,531 is a key medium-term support for the contract.While above this support level, a rise to ₹12,500 looks likely in this time frame.Only a strong break and close below the 21-week moving average will turn the outlook bearish. The ensuing target on such a break will be ₹8,700 and ₹8,500.

Short-term view: The short-term view is bullish for the NCDEX-dhania contract. The contract has formed a wedge pattern between April and May and has witnessed a bullish break out of this pattern in June. It has also risen above the psychological ₹11,000 level.However, a crucial short-term resistance is coming up for the contract in the ₹11,700-11,800 zone. A reversal from this resistance can take the contract lower to ₹10,500 and ₹10,000 in the short-term. On the other hand, if the contract manages to breach the resistance at ₹11,800 immediately, it can extend the current rally to ₹12,000 and ₹12,300.But given the fact that the contract has risen so sharp and so fast in a short span of time, the probability is high for the contract to take a pause and see an interim reversal from ₹12,700-800 resistance zone.

### Mixed trend at Kochi tea auction

Despite improved arrivals, the Kochi tea auction witnessed a mixed trend this week with prices of many varieties quoting lower.In sale no 27, the quantity on offer in CTC dust category was 14,74,500 kg, showing an increase compared to last week.With an improved upcountry demand, the market for good liquoring teas was steady to sometimes firm and dearer by ₹2 to ₹3. Others were irregular and tended to ease. It also witnessed some withdrawals, according to the auctioneers Forbes, Ewart & Figgis.The quantity on offer in orthodox grades was 10,500 kg. The market was lower and also witnessed some withdrawals. A small quantity of orthodox dust sold was absorbed by exporters.In the best CTC dusts, PD varieties quoted prices at ₹95/115, RD grades fetched ₹95/118, SRD ruled at ₹105/135 and SFD stood at ₹110/154.The leaf sale also witnessed some improved arrivals and the quantity on offer in orthodox grades was 2,62,500 kg. The market for select Best Nilgiri Brokens was steady to sometimes dearer while Whole Leaf witnessed a strong feature. Fannings barely remained steady and others were irregular and tended to ease.The quantity on offer in CTC grades

was 81,500 kg. The market for Good Liquoring Brokens barely remained steady. Smaller Brokens and Fannings witnessed enquiry from exporters and upcountry buyers lent useful support.In the dust category, Injipara (Prm) SFD fetched the best prices of ₹156 followed by both Monica SFD and Injipara (Prm) SRD at ₹155 each. In the leaf varieties, Pascoes Woodlands Hyson Green Tea fetched the best prices of ₹326 followed by Chamraj Green FOP (S) at ₹310.

# **Business Standard**

Agri bio-fertiliser sector seeks 10% of chemical fertiliser's share



The growing agri bio-fertiliser sector has urged the government to divert 10 per cent of funds from the overall budgetary allocations of the chemical fertiliser industry to it."A level-playing field needs to be created between the chemical fertiliser and bio-fertiliser industry. A budgetary allocation of even 10 per cent of the subsidy being provided to chemical fertilisers will provide a huge boost to the bio-fertiliser industry," said Santosh Nair, Chief Executive Officer Biotechnologies Ltd, bio-fertiliser of Camson leading player in sector. Bio-fertiliser is a substitute to chemical fertiliser, which helps to prevent soil deterioration and pollution of the ground water table."Such a step would revolutionise the agricultural landscape in India, as it will reduce the buying cost of bio-inputs by more than 50 per cent. This would empower farmers to gain greater agricultural efficiency and success while improving India's soil health at the same time," said Nair.Excessive use of chemical fertilisers has led to many serious agricultural issues besides dragging down the economy and inflating the

import bill.Currently, India's total subsidy bill for chemical fertilisers stands at Rs 220,000 crore of which, 30 per cent is utilised only for urea import. Total urea requirement in India is estimated at 32 million tonnes. India also imports nearly half of its complex fertiliser requirement of 28 million tonnes a year. A senior industry official said that India's bio-fertiliser industry was in a budding stage. Hence, a helping hand was required to support the industry and create a levelplaying field for equal growth and opportunity. Being 100 per cent natural, biofertiliser should be encouraged through subsidy extension, he said. According to Nair, creating and delivering value to the farmers who switch over to biofertilisers should also be a priority. He added that the Agricultural Produce Marketing Committee (APMC) Act should be extended to mandate testing for chemical residue at APMC mandis . The fresh produce could be labelled according to residue level. This would increase consumer awareness and in turn, enhance the value that organic fresh produce commands. It will also ensure traceability of the produce and create a sense of accountability at every link in the distribution system.

Kitchen costs surge due to spike in vegetable prices: Survey



The study of 33 markets across the country observed that on an average, retailers are selling vegetables at more than 48.8 per cent of wholesale prices. "The analysis is based on the wholesale and retail prices of vegetables in the different markets in India. Wholesale price indicates the price at which retailers are buying from different markets and retail price is the price at which consumers

are buying from retailers," Assocham Secretary General D S Rawat said. The study found that cabbage retail and wholesale price gap has increased from 69.4 per cent to 78.1 per cent, brinjal from 62.4 per cent to 66.7 per cent while cauliflower is 59 per cent higher than the wholesale price, among other vegetables. It further reveals that Surat retail and wholesale price gap has increased from 49.7 per cent to 50.8 per cent, Lucknow 48.5 per cent to 54.8 per cent, Shimla 37.9 per cent to 47.3 per cent, Jammu 37.5 per cent to 42.4 per cent and Chennai 34.6 per cent to 37.3 per cent, among other cities. The study observed that onion arrival grew at a rate of 13 per cent during 2013-14 followed by tomato which grew at a rate of 7.9 per cent and potato fresh arrival grew at a rate of 6.2 per cent. Ladyfinger and Cauliflower arrivals have recorded marginal growth rate of 0.4 per cent and 1.9 per cent during the same period, mentioned the study.Meanwhile, a study conducted by PHD Chamber of Commerce found that deficient South-West monsoon may hit kharif crops yield and stoke food inflation. It further observed that the increase in input costs may impact farmers' earnings and the demand for goods and services. According to the study, the cumulative rainfall for the period between June 1 and July 4 for the country has recorded a deficit of 43 per cent. India's leading foodgrain producing states include Uttar Pradesh, Punjab, Madhya Pradesh, Rajasthan, Andhra Pradesh, West Bengal, Haryana, Bihar, Karnataka and Maharashtra contributed around 82 per cent in India's total foodgrain production in FY'2013. While India's leading commercial crops producing states such as Uttar Pradesh, Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh, Bihar, Madhya Pradesh, Haryana and West Bengal contributed around 87 per cent in India's commercial crops production during the same period.

### Coffee planters want quick nod for 12th Plan proposals



Coffee planters have urged the finance minister to immediately notify the 12th Plan proposals for the coffee sector without reducing the plan expend- iture. The proposals for the sector are before the Cabinet Committee on Economic Affairs for final approval. The approval has been delayed for more than two years and this has caused a lot of hardship to the planters who are interested in making new investments, said D Govindappa Jayaram, Chairman, Karnataka Planters' Association (KPA), in a statement. "Coffee planters are financially in a very unenviable situation, with low yields and high input costs. The only way they can increase their yield is by making capital investments, which requires subsidy," he said. He said, planters have delayed the purchase of pulping equipment such as eco / dry pulpers hoping to get subsidy. Other pollution abatement equipment, which are expensive, are also being postponed. This does not bode well for the ecological balance of the Western Ghats, Jayaram said. With the monsoon playing truant, the possibility of the water table going down and the flow of rivers / streams reduced, there is an urgent need to dig tanks for rainwater harvesting, and for use for irrigation in the following year. The new technology introduced to Indian coffee, that of drip irrigation, will play a very important roll in increasing productivity of Robusta, he said. Due to the terrain of plantations, "pressure compensated" valves are needed which are very expensive and they will become unavoidable to maintain economic viability. These investments are also being delayed, he said."Considering the very high incidence of white stem borer, replanting of Arabica plots is becoming all the more necessary as the older plants

and varieties of Arabica are more susceptible to the pest. Undoubtedly, the research of the Coffee Board will also suffer if funding of projects are delayed," Jayaram added.Meeting on White Stem Borer Jayaram also thanked the Coffee Board Chairman and Director of Research, Coffee Board for convening an interaction meeting to discuss research to be undertaken on white stem borer and reformation of the frequently requested Regional Advisory Committee. The meeting was held on July 2, 2014 at the Coffee Board, which discussed in detail various issues pertaining to tackling white stem borer and steps to be taken in the future.

## **THE FINANCIAL EXPRESS**

Kisan mandis to replace Azadpur, will cater to 5-7% of market initially



With Delhi's Azadpur mandi in the process of consultations to end its monopoly over distribution of fruit and vegetables, the process of setting up replacement markets for farmers is likely to be in place by September. Discussions are on with the Haryana government for similar mandis in that state. The first mandi will come up in the Nafed premises in Delhi's Lawrence road and will have around 25,000 sq ft of space. A total of around 5-7 mandis are planned in Delhi and, of the 15,000 tonne of supplies that Azadpur supplies to the Delhi region, the kisan mandis hope to get a market share of 5-7% soon. Around 60% of Delhi's consumption comprises potatoes, onions and tomatoes.

The mandis are being set up by Small Farmers' Agribusiness Consortium (SFAC), a society under the agriculture ministry, and hope to reduce prices by around 20-25% once farmers get to sell in competitive markets as opposed to ones dominated by cartels.

Parvesh Sharma, managing director, SFAC, says "The Big Bazaars and the Reliance Freshs have told us they will come and buy in these mandis ... with Azadpur's monopoly going, these large buyers have nowhere to buy from, going to the farmgate is not so easy."

Once the mandis work out as an alternative to Azadpurtype mandis, Sharma believes, even the mandis will start changing their practices.

Sharma adds the SFAC, set up in the mid-1990s, has promoted over 300 FPOs across states and more than six lakh farmers are associated with it — of these, around 50 are in the Delhi region. The idea, Sharma says, is to bring direct delivery to large apartment complexes as well. "People can place their orders on phone or email, the SPOs will consolidate them, and deliver them the same or the next day."



Depending on how it works, Sharma says, even the Delhi Milk Scheme's 2,000odd kiosks can be given direct supply, so when you go to buy your milk, you can pick up vegetables.

While farmers will be showcasing their produce in Kisan Mandi, the actual storage of fruit and vegetables would be done in various godowns located in National Capital Region (NCR) and would be transported directly to target consumers by FPOs. The Kisan Mandi will offer basic infrastructure for storage to

the FPOs who set up stalls, which also includes basic godowns, grading, cold store as well as logistics handling facilities.

Despite growth in production, local factors impact prices of onions, potatoes, tomatoes



### Onion

Onion prices have dipped in all the five major cities of India in May this year. But in almost all of them the retail price of the crop has flared. This peculiar difference has arisen because of storage asymmetries for onions, the second largest among India's four major horticultural crops, the others being potato, tomato and brinjal.Out of 55 cities, data from government and those from reporters of The Indian Express show retail prices of onion have risen in almost each of them. In Ahmedabad, prices have risen by Rs 10 to Rs 27 in the two-month period. In Bhubaneswar it has risen even more at Rs 12 a kg to Rs 28 and by Rs 18 to Rs 34 in Kolkata.This is the reason why despite a record production in FY14, on Wednesday the government raised the minimum export price of onions to \$500 per tonne. A week earlier it had raised it to \$300 per tonne. As per Agricultural and Processed Food Products Export Development Authority (APEDA) data, India has exportedRs 3,169.63 crore of the crop during the FY 14. "There is a lot of demand of Indian onion in the world. It is the second largest (producing) country. Indian onions are famous for their pungency and are available around the year," its website reads. Onion has essentially two production cycles, every year. While all states in western India produce the crop, ranging from Haryana to Tamil Nadu, it is Maharashtra that accounts for almost 28 per cent of India's production.

Cities	Arrival* June'13	Model price** Jun'13	Arrival * May'14	Model price ** May'14
Bangalore	3,37,186	1,517	5,91,250	940
Chennai	1,17,600	1,850	1,17,200	1,640
Delhi	3,24,640	1,171	3,11,504	988
Kolkata	1,98,240	1,666	1,86,800	1,350
Mumbai	1,93,050	1,480	2,23,570	1,124

### MONTHLY MARKET ARRIVALS AND MODEL PRICES

ONION PRODUCTION AND EXPORTS

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Year (Apr-Mar)	Area (million hectare)	Production (million tonne)	Export#
2013-14	1.21	19.2	1.3 mt, 2,877
2012-13	1.05	16.6	1.8 mt, 2,294
2011-12	1.08	17.5	1.5 mt, 2,141

\* (in quintal), \*\* (Rs/quintal), # (volume in million tonne & value in Rs crore) Source: NHDRF

But the shortage of onion in the major cities has just no relation with the monsoons or with exports. "It is instead the signalling effect of the rains that has created the spike," says Sunil Sinha, economist with Fitch Ratings.

He is spot on. In FY14, India is on course to record its highest production of the horticultural crop at 19.2 million tonne (MT). Year-on-year this is about a 16 per cent jump and in any case far higher than the annual rise in consumption. Exports too, as the table shows, is soft. It has been less at 1.3 MT against 1.8 MT in FY13.The shortages are because of two factors. There is little facility for warehousing onion crop unlike potato. The truckloads that travel out wards from Nashik and other places have to find a buyer



to control food inflation, has not gone down well with the trading community, which had whole-heartedly supported the Narendra Modi campaign before the Lok Sabha election. The government blames the traders for spiralling up prices by hoarding onions and potatoes, but traders at the Azadpur vegetable market here contend that vegetables are not anything like gold to be 'hoarded'. Azadpur traders say there have been more than 120 raids in the last one month and every dealer with more than 15 sacks of onions and potatoes has been hauled up for 'stocking'. At the Okhla Mandi, Keshopur Mandi and RK Puram, there have been even more raids on godowns, offices of dealers and agents and even carts that were seen filled with onions. In all, raids have been conducted at more than 540 spots against alleged hoarders and over 40 traders have been prosecuted. Some may see these 'bold, proactive steps' as a strong indicator of the government's resolve to address food inflation, but traders and dealers aren't happy. In all, raids have been conducted at more than 540 spots against alleged hoarders and over 40 traders have been prosecuted. Some may see these 'bold, proactive steps' as a strong indicator of the government's resolve to address food inflation, but traders and dealers aren't happy. "What the government is doing is not right. Only three months ago, we went to every dealer, every customer in the area urging them to vote for the BJP as they promised so many good things," said Prahlad Khurana, an agent for onions in the market. With over 200 agents and

3,000 everyday vendors, the Azadpur market, the largest in the country, is seething with anger against the BJP government. "Six months before the elections, we started campaigning for him (Modi). We had his posters everywhere. We would spread his promotional messages to hundreds of people everyday," Khurana added. The mood among the vegetable vendors is sombre. Mohan Chand, a seller of onions from Shahdra, says he was stopped twice last week by officials and asked why he had seven bags of onions. "The problem is that stocks of onions and potatoes have decreased considerably in the last few days. With diesel prices going up, rentals for tempo vans to transport vegetables have also gone up. Now I cannot take extra stock to reduce transport cost because they will catch me for hoarding." "If the government had wished good for us, it could have conducted asurvey and found out if dealers are actually hoarding vegetables here. Their sudden and frequent raids of people have only spread fear and panic in the market which was totally not expected from the government which boasted of bringing down prices," said Rajendra Sharma, general secretary of the Potato and Onion Merchants Association (POMA). "Also with no government in Delhi there is no one we can go and complain to," he added. The prices of onions have shot up to Rs 35 a kg in the last few days, while potatoes are at Rs 30 now, expected to rise in the next few days. The rise has had its effect on other vegetables too. On Sunday, the prices of mushrooms stood atRs 200, almost Rs 100 more than last month. A kilo of beans of beans cost Rs 50 and capsicum Rs 35, almostRs 20 more than the usual. "Unless the potatoes from Punjab come to the market, we have to make to with the Pahadi ones or the ones from South which are not of great quality and don't come in good numbers too. Instead of targetting small fry like us who don't even have facilities to store the stock if we hoard them, they should go behind those stocking them in government godowns or the large hotels," said Vinay Kamdaar, another dealer at the market. "The stock of good onions from Nashik and Indore

are coming in very less quantities and get sold faster. The onions that are coming to Delhi now from Gujarat, Madhya Pradesh, Rajasthan which are all BJP-ruled States which the government should monitor and see how much of it is hoarded, spoiled stuff," said Kamdaar.

# THE TIMES OF INDIA

### Farmers demand Cidco compensation model

Even though a land survey was carried out recently for the construction of the proposed Metro car shed, farmers have expressed their displeasure with the way it was carried out. The farmers claimed that the Mumbai Metropolitan Region Development Authority (MMRDA) carried out the survey without involving them. Farmers from Ovla, on whose land the car shed has been proposed, have requested for the City and Industrial Development Corporation (Cidco) rehabilitation model wherein 22.5% is developed plot as a one time compensation. Cidco had announced a compensation of 22.5% for projectaffected persons (PAPs) in the upcoming Navi Mumbai international airport project. The Ovla farmers want the same deal. Many political parties are cashing in on this topic ahead of the upcoming assembly elections. "We want the same compensation package that the PAPs are being offered by Cidco. We are optimistic that the government will consider our claim. We had a meeting various leaders, including guardian minister Ganesh Naik, who has backed us," said a farmer. Thane guardian minister has assured the farmers that a meeting will be held with the chief minister on Tuesday to discuss the issue. "I have for the farmer and will discuss the proposal with the chief minister and clear the hurdle of any protest planned by the farmers," said Naik. On the other hand, local MLA Pratap Sarnaik, who has been fighting for starting a Metro in the city since years, said, "I will suggest the best possible compensation for the farmers through transfer of development rights (TDR). Moreover, the government should also

think about MMRDA's Versova development model with 25% land and floor space index (FSI) provision for rehabilitation."

#### Vizag cops arrest 3 for duping 2 banks for loans

The city police arrested three persons, including an electrician working with the Visakhapatnam Naval Dockyard, for taking loans worth Rs 10.75 lakh by submitting fake documents. On a tip-off, the police arrested the trio at RTC bus station in the city on Sunday. The trio duped the Saraswathi Park branch of Allahabad Bank to take a loan of Rs 6.25 lakh in 2006 and Santhipuram branch of Karnataka Bank for another Rs 4.5 lakh in 2005 by submitting fake documents as surety. The arrested were identified as Panigrahi Ganapathi Holva (42) and his wife Panigrahi Leela (37), natives of Odisha's Rayagada district, who had shown their current address in Vizianagaram town. The third accused was Mohammad Jakir Hussain (50), hailing from Bhimavaram town in the West Godavari district, but with current address mentioned in Visakhapatnam Naval Dockyard. While the Odisha natives were the actual beneficiaries of the loans, the electrician stood as guarantor for the loans, the police said. Cases under 120-B, 465, 467, 468 and 471 IPC were registered against the trio. Speaking to reporters here on Sunday, assistant commissioner of police (ACP) for Vizag East, DN Mahesh, said that the couple from Odisha migrated to the city in 2002 for work and used to stay in Marripalem falling under Kancharapalem police station limits. It was at that time that they befriended Jakir. On January 24, 2006, the couple took a loan of Rs 6.25 lakh from Allahabad Bank by mortgaging the rented house they lived in through a fake registered sale deed document number 2290/2005. Jakir stood as guarantor for the loan. After paying some installments, the couple stopped repaying the loan from the first quarter of 2013. The suspicious bank authorities then made inquiries about the whereabouts of the couple and their properties only to find that the documents submitted were fake.

The Allahabad bankers then lodged a police complaint with the Maharanipeta police on January 6, 2014. Based on the complaint, the police investigated the case and found that the couple had also cheated the Santhipuram branch of Karnataka Bank by taking a loan of Rs 4.5 lakh on December 12, 2005, by submitting the same fake documents. A case was also registered at the Fourth Town police station based on the complaint by Karnataka bank, the ACP added. The ACP urged bankers to thoroughly verify the title deeds of property mortgaged with registration officials before sanctioning loans to prevent such frauds.