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THE HINDU

“Farmers must get right to fix price for their produce”



Include farmers as equity partners in industrial projects if their farm lands were to be acquired for industrial development, former President A.P.J. Abdul Kalam said here on Sunday.

Addressing farmers and students at the Periyar Maniammai University on the “Factors for development of agriculture,” Dr. Kalam observed that if the nation were to develop, then farmers were to develop.

If that was to be achieved, then farmers must get the right to fix a remunerative price for their produce, just like any other producer does.

Exhorting the farmers to market their value-added produce all over the globe for a better and remunerative venture, Dr. Kalam stressed the need for them to adopt recent scientific technologies and advancements for ensuring that agriculture remained economically viable through sustainable means.

Concentrate on strategic marketing through value addition for the agricultural produce and adopt integrated farming techniques co-opting governmental agencies, he counselled the farmers.

Advising the administrators to conserve water sources and take urgent steps to retrieve encroached water bodies, Dr. Kalam opined that linking of major rivers was the only source to provide adequate water for irrigation requirements of farmers in all corners of the nation.

A national water grid could solve the problem and aid sustainable growth economic of the nation, he emphasised.

Stating that he was pained to find many water bodies getting erased from the surface of the earth, the former President wanted the farmers, public, academicians and administrators to join hands in ensuring that the water sources were conserved and the lost ones retrieved for the benefit of future generations.

Dr. Kalam passionately called upon the State Government and the political parties to implement the intra state river linking plan by 2020, a pet dream of his, through the private-public partnership mode for overall growth of the State.

PMU Chancellor K. Veeramani, Pro Chancellor V.K.N. Kannappan, Vice-Chancellor N. Ramachandran, and others spoke. Dr. Kalam later interacted with farmers.

‘Grazing rights necessary for propagation of Bargur breed cattle’

Rearers of indigenous Bargur breed on the hills say their predicament is no different from pastoralists elsewhere in the country.

Denial of traditional grazing rights in the forest area has meant downward spiral of socio-economic condition of several hundreds of families belonging to Kannada-speaking Lingayat community on the Bargur hills.

Many have given up tending to the cattle, and have been migrating to the plains for livelihood over the decades, but the trend also signifies threat to animal biodiversity as the indigenous Bargur breed would gradually fade away leading to their extinction, the pastoralists apprehend.

Representatives of tribal communities lament that they are being viewed as the cause for depletion of forest cover, and say they want the Forest Department to do its part for sustainable pasture management by utilising their knowledge of the forest eco system.

Be it in Bargur, Kadambur or Hassanur, the farmers depend on rainfall for cultivation, and hence rely on cattle rearing for sustenance during the lean seasons. Citing the success of Joint Forest Management (JFM) in forest areas elsewhere in the country, including Jharkhand, the farmers say there are net social benefits, since, alongside increasing green cover, the activity also addresses the poverty of tribals living in forests.

According to a Bargur farmer, cultivators on the hills now have an alienated feeling, without any scope for playing active role in

conservation of biodiversity. The Forest Department's approach, according to the farmer, was compelling them to abandon their traditional lifestyle.

The cattle-rearers wanted the State Government to form a committee of Agriculture and Forest Department officials in every district to ensure compliance with the national policy to secure pastoralists forest grazing rights, including in areas declared as wildlife sanctuaries and national parks.

The Forest Department officials said, they were only adopting a persuasive approach to prevail upon the cattle rearers to scale down the number of animals, since the forest cover has a direct bearing on local rainfall pattern well beyond the forest limits.

Turmeric auction

Turmeric worth Rs. 1.90 crore was auctioned at the Tiruchengode Agricultural Producers Cooperative Society here on Saturday.

While 'virali' variety fetched a price ranging between Rs. 7,901 and Rs. 10,719 per quintal; the 'kizhangu' variety fetched a price between Rs. 6,489 and Rs. 8,369 per quintal and 'panangali' variety between Rs. 6,598 and Rs. 17,199.

A total of 3,600 quintal of turmeric was auctioned for Rs. 1.90 crore, according to society sources.

The farmers were happy that they fetched Rs. 350 more per quintal here, compared to the auctioning at other societies.

Farmers happy as turmeric harvest season begins



The commencement of turmeric harvesting season in different parts of the district has gladdened farmers.

Turmeric crop has been raised on hundreds of acres in Gengavalli and Thammampatti areas. 'Virali', 'Kizhangu' and 'Panangali' are the three major varieties of turmeric and a majority of the farmers preferred 'Virali' variety. The harvest of the 10-month crop had already commenced.

The farmers are happy that the crop this season has been good. They have got six bags more than last year in the crop raised on an acre.

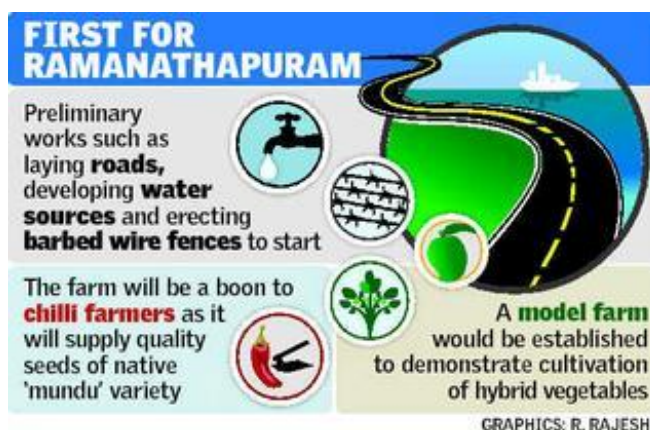
The harvested raw turmeric is boiled in big boilers. Following the harvest period, the specially designed carts with boilers with a capacity to boil about 100 kg of turmeric at a time have arrived in the turmeric grown areas.

The boiled turmeric will be dried in hot sun for about a fortnight and the weight of the turmeric will get reduced considerably.

The 100 kg well dried turmeric at present is priced at Rs. 10,500. The price of the same ranged between Rs. 7,500 and Rs. 9,500 last year, according to S. Jaganathan, a progressive farmer of Naduvalur near Thammampatti.

The Tiruchengode Agricultural Cooperative Producers Cooperative Society is a major turmeric auction centre in the western districts, where auction is held once a week.

First State horticulture farm at Oriyur in Ramnad



This arid and drought-prone district, which is making strides in paddy production, is all set to get its first State horticultural farm.

The farm is coming up on 35 acres at Oriyur, a small coastal village about 70 km from here, at a cost of Rs. 1.18 crore. V. Gangadharan, Deputy Director, Horticulture, said the government had issued the G.O. recently and sanctioned Rs. 60 lakh for taking up preliminary works in the first phase.

The farm, to be developed by the Tamil Nadu Horticulture Development Agency, would soon float tenders for taking up preliminary works such as laying roads, developing water sources and erecting barbed wire fences, he said.

“We expect these works to be completed by August,” he told *The Hindu*. Once they were completed, planting work would start in September and the production will begin during 2016-17. The farm would produce pedigree planting materials for distribution to farmers under various schemes, he said.

Oriyur with sandy loam and good water source was selected by the agency for establishing the park, J. Rajendran, Assistant Director of Horticulture (Headquarters), said.

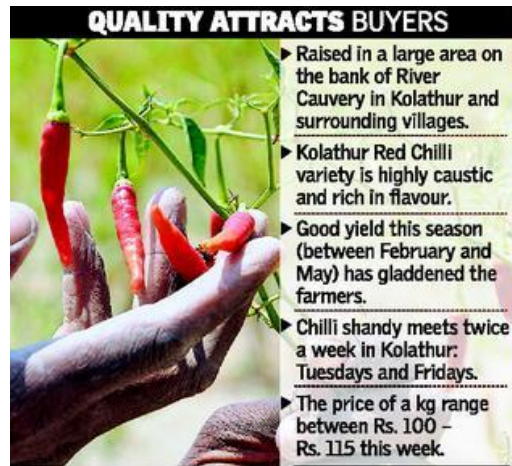
The farm would be a boon to chilli farmers as it would supply quality seeds of native ‘mundu’ variety, the major cash crop in the district.

Presently, farmers were using seeds of their own. Supply of quality seeds would help them get better yields, he said.

A model farm would be established to demonstrate cultivation of hybrid vegetables and chillies. A high-density mango farm with five-metre spacing, by adopting pruning and canopy management, would be an added attraction at the farm, he said.

Four hectares would be set apart for hi-tech nursery activities of mango, guava and other fruits and jasmine with special focus as the district was exporting nearly two crore jasmine saplings every year, Mr. Rajendran added.

Rich yield, good price cheer red chilli farmers



The good yield of red chilli *milagai vathal* variety in the Kolathur area near Mettur has brought much cheer to farmers and traders alike.

Kolathur area is a major *milagai vathal* production centre in the State.

A large number of farmers of the Kolathur and the surrounding villages of Govindapadi, Kottaiyuyr, Kathiripatti, Karungallur, Moolakkadu, Vellakarattur, Sethukuli, Sathyanagar and Thanamoorthikadu have raised this variety on hundreds of acres on the banks of River Cauvery.

Speciality

The speciality of the red chilli *milagai vathal* variety is that it is highly caustic and rich in flavour; and it fetches prospective price in the market for the farmers.

The crop, which can be harvested for four months between February and May every year, has registered higher productivity this season.

The farmers allow the chillies to ripen in the field itself without harvesting them immediately.

After full growth, the farmers dry it before marketing them as *vathal*, for which the demand has always been on the rise.

The red chilli shandy meets twice a week – Tuesdays and Fridays – in Kolathur.

The shandy has evoked overwhelming response since last month and the traders of Salem and the neighbouring districts of Coimbatore, Erode and

Tirupur vie with each other in visiting the Kolathur shandy to procure the high quality *milagai vathal* .

What has brought much delight to the farmers, apart from the good yield this season, is the prospective price in the market.

A kg of *milagai vathal* ranged between Rs. 110 and Rs. 115 this week, compared to Rs. 85 and Rs. 95 it fetched during the third week of March. S. Krishnasamy, a red chilli farmer of Kolathur, expects the price to go up further in the weeks to come.

Paddy procurement nears completion in Alappuzha



The process of paddy procurement for the ‘puncha’ crop in the district has entered its final stages. With the season nearing its end, several paddy farmers have been facing several hurdles, many being systemic challenges.

According to official statistics, paddy cultivation was undertaken in nearly 28,918 hectares coming under 633 paddy polders across the district. Paddy procurement has been completed in around 70 to 80 per cent of the total area. The total paddy production is expected to be around 1.5 lakh tonnes, an official at the Paddy Marketing Office at Mankombu said.

The procurement efforts were yet to commence in the far-flung ‘kayal’ padasekharams and other areas including Thakazhi, Thalavady, Kainakary, Champakulam, Kavalam, Neelamperoor and Veeyapuram, where harvest has not been completed. While it has been targeted to wind the procurement in Kuttanad by April 20, the completion of the entire process in the district could go on for nearly a month.

Paddy farmers are in the midst of testing times with the heavy summer rain threatening to bring down the yield in paddy fields during the last

stages of the crop season in areas, particularly Veeyapuram and the adjoining areas in Upper Kuttanad. Even while a Supplyco official claimed that the requirement of moisture content below 17 per cent in the paddy was relaxed in a fair manner, concern was rife among farmers that they would receive lesser returns than what they would have received under normal conditions.

The occurrence of the summer rain has resulted in increased demand for combine harvesters from private parties, mainly owing to need of farmers to minimise crop damage. Making the most of the farmers' plight, the private agents have demanded Rs. 2,000 to Rs. 2,100 per hour, instead of Rs. 1,700 charged earlier. Despite such disadvantages, there are very few takers for machines that were provided by the government. A farmer claimed that the operators of such harvesters usually work only from 10 a.m. to 5 p.m., i.e., the work hours of a government office.

Protecting the small farmer



Data from the recently held National Sample Survey Organisation (NSSO) survey show that close to 60 per cent of rural households are dependent on agriculture for their livelihood. More than half of them are at risk of defaulting on their debts with either banks or informal moneylenders. Many reports have pointed towards the debt burden and its resulting vulnerability at the household level as the primary factor for farmer suicides.

In a recent case of farmer suicide, a rubber farmer from Kerala blamed falling rubber prices and the lack of government support in his suicide note. The unfortunate incident is not an isolated one in India. Many small and marginal farmers are getting low prices for their produce because of increased global production and lower demand for various commodities.

Recent reports from the Food and Agriculture Organization (FAO) show the declining food price index in most common commodities such as sugar, cereals and meat. The NSSO report also highlights the increasing input costs in agriculture and the alarming increase in consumption expenditure vis-à-vis income, especially among households with less than two hectares of land holdings.

While minimum support prices (MSPs), announced by various State governments, have traditionally been the instrument used to fight declining prices, they have scarcely been effective at the farm level. For example, among rice and wheat farmers, more than half the produce is consumed at the household level and the rest mostly sold to traders at much lower prices. Other challenges such as the impact of climate change on agriculture and the World Trade Organization's anti-MSP stress on reforms underline the need for a reliable mechanism to improve the resilience of small farm holders.

Reform agricultural insurance

The recent attempt by the Gujarat government to reintroduce the Farm Income Insurance Scheme (FIIS) can reform agricultural insurance and prevent farm-level distress. The government's present National Crop Insurance Programme covers prevented/ failed sowing, post-harvest losses, and losses from natural calamities on an individual basis. It is an area-based approach that covers a wide variety of food, oilseed and horticulture crops. However, low literacy, the absence of infrastructure to measure data accurately at the farm level, and the limited penetration of formal financial credit have made the scheme inefficient, leading to reduced trust among farmers. Additionally, in the current globalised market with widely varying market prices, the scheme is unable to protect farmers against price fluctuations. In a true market economy, the government must resist from distorting market prices through instruments like MSP, and rely instead on other financial instruments to protect farmers.

The FIIS, originally introduced in 2003 and withdrawn the next year, has been revived in Gujarat. The scheme's main thrust is that it tries to ensure guaranteed income by insuring the difference between the farmer's predicted income and the actual income. It calculates the predicted income by using the product of unit area yields and prices at the district level. Any decrease in the predicted income due to yield fluctuations or market fluctuations is insured under the scheme. By only considering yield losses from natural perils, it also ensures that farmers are

incentivised to produce more, and that inefficiency in farming is not rewarded. The success of FIIS will depend on whether the government is willing to move away from the current mundane system of manual inspection and data gathering to the new era of big data and technology. When the FIIS pilot was tried a decade ago, it proved to be premature, but the time is right now to correct some of the errors in the previous scheme and move ahead.

The concerns over reliable yield and price data in the earlier attempts can be largely eradicated using present technologies. The maturing of satellite-based yield monitoring systems, integrating agricultural markets in India, and ensuring the efficiency of commodity exchanges will remove most of the concerns that arise over the large amounts of data needed for such a revolutionary scheme. Additionally, leveraging mobile phone penetration levels and mobile-enabled technologies can ensure the availability of real time data, and reduce the moral hazard problems that afflict current insurance schemes.

Streamlining initiatives

FIIS also provides the government an opportunity to streamline some recently announced initiatives such as assessing soil health through soil health cards, and rationalising fertilizer and water usage by insuring only the efficient cost of production. It also incentivises farmers to use the available agriculture markets and engage with formal markets to take advantage of insurance in case of income dips. This will also bring in much-needed transparency in agriculture prices and bridge the gap between price discovery and realisation for the smallholding farmer.

FIIS might be the right instrument to integrate farm-level subsidies and remove leakages in the system. If implemented with the right intentions and rigour, it could act as a credible instrument to prevent farmer suicides and contribute to national food security.

(Ananth Gudipati is a consultant with the World Food Programme. The views expressed are personal.)

Mega food park to benefit farmers

The mega food park sanctioned by the Union Ministry of Food Processing Industry (MoFPI) at Kanjikode in Palakkad district is likely to benefit farmers, food processors, retailers and exporters in north and central Kerala regions. The Ministry last week approved a request in this

regard by the Kerala Industrial Infrastructure Development Corporation (Kinfra). The park is estimated to cost Rs.121.92 crore. The Union Ministry will invest Rs.50 crore.

Hybrid grape seedlings ready for distribution among growers

The Grape Research Station here has developed a pest-tolerant and high-yielding grape variety meant for table purpose, and is set to distribute seedlings to grape growers this season. It has kept 12,000 seedlings ready for distribution to the grape growers at its research station at Anamalayanpatti village near Royappanpatti in Cumbum valley.

When contacted, research station Professor and Head S. Parthiban said farmers had to buy seedlings that were developed in other places for cultivation in Cumbum valley. Climatic and soil conditions varied from place to place and it would have some impact during cultivation. Hence, the farmers might face some difficulties in growing plants.

But this variety had been developed at the research station in Cumbum itself. It was tested and successful field trial was conducted in one of the grape production centres in the valley. It was accustomed to soil and climatic conditions prevalent in the valley. The farmers would not face much difficulty in raising this variety.

Even as the research station had developed seven varieties in the station, most of the seedlings available were Red Globe variety.

The grape growers needed a heat and pest-tolerant variety as availability of water was very limited in the valley, he added.

“The bunch weight of the new variety varies from 550 grams to 750 grams. It has field-tolerance against berry cracking. It has longer shelf life. Yield will be around 25 to 30 tonnes per hectare and it will be suitable for commercial cultivation. It will also bring better price to farmers,” he said.

Initially, the Grapes Research Station had identified 17 varieties of grapes, mostly high-yielding hybrid varieties, including Christmas Rose, Italia, 2-A clone, Fantasy seedless, Jumbo Nath, Manik Chaman, Tas-A-Ganesh, ManjariNaveen, A-18-3, Red globe, A 27-5(1), Medika, Chrimson seedless, Sharad seedless, Sonaka seedless, Krishna seedless and Thompson seedless, for research and distribution to farmers to meet domestic and global demand for better yield and profit, he added.

Selective breeding

Among the initiatives in the State Budget to salvage the declining stock of indigenous cattle is the use of ‘sexed semen’.

Through high-speed cell sorters that checks for X-chromosome (for female livestock) and Y-chromosome (for males), sexed semen (which is more expensive than conventional livestock sperm) can be used to produce offspring of the desired sex. The budget proposed provides sexed semen tubes at 50 per cent subsidy under the Central assistance programme.

At a recent national seminar here, agriculturists and scientists stressed the need for importing or adapting this technology for indigenous cattle and buffaloes. They pressed for using the technology for marginal cattle farmers, who will need a way to sustain the dwindling numbers of their stock. “Due to increasing farm mechanisation, it is becoming clear that males of livestock species are unwanted.

Instead, sexed semen technology will allow for increasing the desired sex — females — to aid milk productivity of the farmer,” said K.P. Ramesha, Principal Scientist, National Dairy Research Institute of India.

Used in the West nearly 50 years ago, selective breeding has seen the average yield of exotic breeds such as Jersey cows increase from 2,000 kg of milk a year to 8,000 kg of milk.

Farm fresh outlet achieves Rs. 3-crore sale in 220 days



The overwhelming response from consumers to the farm fresh vegetable market (Pannai Pasumai Nugarvor Kadai) near the new bus stand here

contributed to its record sale. Fresh vegetables available at low prices at the outlet attract a large number of people from all walks of life.

Since the launch of the outlet, managed by the Cooperative Department, different types of farm fresh vegetables had been sold for Rs. 3 crore – just in 220 days. To celebrate this sale achievement, the district administration organised a programme here on Sunday. Tourism Minister S.P. Shanmuganathan, who presided over the programme, said though similar farm fresh outlets were being functional in various districts, sale of vegetables continued to rise in Tuticorin.

To ensure reasonable prices for various farm products and prevent the involvement of middlemen, such outlets were opened. Thirteen varieties of vegetables were being procured directly from farmers of Tuticorin district to cater to the needs of consumers, he noted.

Initially, a farm fresh vegetable outlet was opened in Chennai, which now had 50 such outlets. Then, the farm fresh vegetable outlet was set up in Coimbatore, which now had 10 such outlets, he added.

Collector M. Ravikumar said within 75 days after its launch, this outlet saw sale of vegetables for Rs. 1 crore, and the sale volume touched Rs. 2 crore in 145 days. On an average, 900 consumers had been visiting this outlet every day. This air-conditioned outlet which was set up on 600 square feet was expanded to cover 1,600 square feet.

Two vegetable storage rooms had also been set up. With eight computer billing devices, the consumers were finding it easy to buy vegetables here, he added.

Use organic grains for mid-day meals

In Puducherry, the Education Department provides mid-day meals for the students.

The World Health Day to be celebrated on April 7 this year focuses on 'Food Safety.'

As food safety is crucial for student's health and well being, it is requested that the Government of Puducherry procure organic materials for making the mid-day meals though the cost may be slightly higher.

This would besides ensuring health of children encourage the farmers following good farming practices and avoid chemical fertilizers or pesticides for cultivation.

Water level at Mettur

The water level at the Mettur Dam stood at 72.38 feet on Sunday against its full level of 120 feet. The inflow was 255 cusecs and the discharge was 1,500 cusecs.

Organic vegetable market on wheels woos city dwellers

Every Wednesday, a motley crowd milling in front of a van selling vegetables is almost a regular sight at Vyttila.

After creating a revolution of sorts by enlisting people for mass scale community farming, the Kanjikuzhi Panchayat Primary Development Society from Alappuzha district is winning hearts in the city.

“We have been coming to the city with our produce on Wednesdays for the last four months and the response has been quite good, which has prompted us to think of more selling points,” said V.V. Vikraman, secretary of the society. Apart from regulars, who even keep in touch with the society over phone over their requirements, more people are turning up for the weekly sales by word of mouth.

The society has been clocking sales between Rs. 15,000 and Rs. 18,000 during its once in a week sales in the city. It operates from a van and the variety of organic vegetables they bring get sold off in less than five hours.

Spinach, cucumber, bitter gourd, ladies finger, pumpkin, snake gourd are some of the most sought after vegetables. “Our prices are less than the open market price for some commodities and higher in the case of some others. For instance, we price bitter gourd at Rs. 60 per kilogram while it is available for Rs. 40 to Rs. 45 in the open market with the difference in price more than made up by quality,” Mr. Vikraman said.

KPPDS started off with supplying seeds and fertilizers to attract majority of 12,000-odd families in the panchayat into farming. Now the panchayat distributes partially grown saplings.

People bring their produce to the society outlet in front of S.N. College, Cherthala, every day. Vegetables procured on Tuesdays and Wednesdays are brought to the city for sale.



In a first, state plans 2000 weather stations



Amid the agrarian crisis intensified by spells of drought, hailstorm and unseasonal rain, the Maharashtra government is working on an ambitious plan to install over 2,000 weather stations, one each for small clusters of about 20-30 villages, to make detailed micro-level weather forecasts available.

The automatic weather stations will have sensors to record several weather parameters important for agriculture such as temperature, relative humidity, wind speed and direction, rainfall, solar radiation, leaf wetness, soil moisture and temperature and atmospheric pressure. The sensors will also give details on evapotranspiration – the process by which water is transferred from the land to the atmosphere by evaporation of soil and other surfaces. Information on most factors will be available every 10 minutes.

State government officials say that while other states and private companies too have automatic weather stations, this would be the first

time in the country that this kind of exhaustive weather data will be made available at the level of every revenue circle. Two companies have qualified on technical grounds to set up the 2,065 automatic weather stations on a public-private partnership.

A senior official from the state agriculture department said, “Currently, this kind of localized data is not available anywhere for the government to plan. The machinery of the two companies that have technically qualified is currently being actually tested on field. After that, we will open financial bids. The project is total expected to cost Rs 220 crore, of which the government will provide about Rs 100 crore in installments.”

He, however, did not disclose the names of the companies that have been technically qualified for the project. A total of seven firms, namely Skymet Pvt Ltd, SPA Instruments, Sutron Corporation, TCS, Atra Microwave Ltd, Obel Pvt Ltd and NCML, had evinced interest in the project and had attended the pre-bid conference.

The private company, which will be responsible for financing, procurement of the technology, installation, operation and its maintenance for a concession agreement of 10 years will be bound to provide the weather data collected to the state government free of cost. To earn revenue and cover operational expenses, the private company can sell the weather data and trends to third parties.

A senior executive from a company that had evinced interest in the project said, “Other states too have automatic weather stations but this kind of multi-dimensional local data will probably be available in India for the very first time with this project. The revenue model of selling the data to other parties is very much feasible. There are many entities other than the government who would be interested such as manufacturers of pesticides and fertilizers, insurers for their crop insurance schemes, consultants, power companies and so on.”

For the state government, the automatic weather stations will help in preparing location-specific agriculture advisories, better disaster

management, design crop insurance schemes and establish a weather database bank.

Following damage to the rabi crop due to the recent untimely rains and hailstorms, state's Agriculture Minister Eknath Khadse had called for a thorough study of the change in climatic conditions and shifting of cropping patters, for which too this circle-level data will be useful.

As per the conditions of the public-private partnership model, the company that wins the contract will also have to establish a central receiving station in Pune with all the relevant IT infrastructure to receive the data from the weather stations, validate and process it. The company will also have to provide a web-based dashboard for live streaming of the weather information.

As per the schedule given to bidders, the 2,065 weather stations will be established in four phases with the installation to be complete within 18 months of signing the contract.



New research and development

FARMIT

With IT-based agriculture changing the way farming can be done, Lincoln University has developed a programme to teach people the latest techniques. IT-based farming, known as precision agriculture, involves using technologies such as sensors to carry out soil or crop mapping. This is supposed to allow farmers to use real-time data to place nutrients, fertilisers and chemicals more accurately. The New Zealandbased university recently started a second-year course in precision agriculture.

"This new IT world is more than just computerising existing farming," says Armin Werner, adjunct professor, who runs the course and works as the precision agriculture group manager at Lincoln Agritech Limited.

WHITE FAMILY

Most young Americans plan to get married someday, but more than 40% of births now occur outside marriage, and the American family itself has become far more diverse and varied. The new American family is not nearly as white as it used to be. White babies may already be in the minority. In addition, mixed-race couples have become far more common. As people take longer to get married, they are also waiting longer to have children. Fewer than half of young adults reach age 18 in a family headed by their married biological parents. More than half experience a change in their family structure, such as a mother divorcing.

METABOLISM

Researchers at the University of Michigan in the US have identified how a drug in clinical trials for the treatment of obesity and related metabolic disorders improves the sugar metabolism by generating a new signal between fat cells and the liver. In addition to illuminating how the drug, amlexanox, reverses obesity, diabetes and fatty liver disease, the findings suggest a new pathway for future treatment. The research was published in Nature Communications.

INTELLIGENCE

Competitive intelligence (CI) risks stigma and has little proven evidence of advantage, yet the business practice persists because firms "construct usefulness" by leveraging arms race-type fears of unilateral abandonment, according to research co-authored at Cambridge Judge Business School. While there is an absence of "clearly demonstrable benefits" from competitive intelligence -as companies do not talk publicly about it -firms persist in this risky practice to harm competition by "creating fear, uncertainty and doubt" among rivals, the study found. CI refers to "legal practices of gathering market information that have sometimes been associated with legal infringements and espionage". Focusing on large US companies from the Fortune 500 and S&P 1,200 between 1985 and 2012, the study constructs a picture of CI through examination of thousands of articles and interviews with CI practitioners.

PARTNER

Miles Professional Education, a provider of classroom training for the

Certified Public Accountant programme, the US equivalent of the Indian chartered accountant, recently introduced CMA (certified management accountant) training in India as the official partner of Institute of Management Accountants), US and Wiley.

NEW DEGREES

The School of Business and Economics at UK-based Loughborough University has introduced three MSc programmes in finance, corporate finance as well as finance and investment and is inviting applications for the same. Those who wish to apply for any of the three must have a Bachelor's degree with at least 60% marks from a UK university or an equivalent qualification in specified disciplines. The last date of application being April 30. International students can apply for 100% scholarships.

GREAT SCHOLARS

Sheffield Hallam University, is offering six scholarships worth £30,000 as part of the GREAT campaign. Six GREAT scholars will be selected to study MA sports journalism, MBA, MSc automation and control robotics, MSc technical architecture, MSc advancing physiotherapy practice and BSc tourism and hospitality management (first year of study only) at Sheffield in the UK in September 2015. Each scholarship, worth £5,000, would be awarded to students who demonstrate high levels of academic, personal or professional achievements. The last date to apply for the scholarship is June 30, 2015.

WOMEN LEADERS

European School of Management and Technology is open to applications for scholarships from women in leadership positions. Two full scholarships are available for the executive transition programme and the general management seminar. The scholarships are aimed at experienced female executives who have shown entrepreneurial initiative and proven success in their areas of responsibility. Further details at esmt.org

FELLOWSHIP

The application process for the INK fellowship, aimed at creative professionals aged between 18 and 40 years, is on till May 17, 2015. The award provides career support. More information at inktalks.com

Fruit production up but prices still high

The state may be the largest producer of bananas in the country, but prices per dozen bananas is around Rs 40-55 in the retail market and around Rs 20 in the wholesale market.

Similarly, apples cost Rs 160 a kg while good quality mangos cost around Rs 80 a kg. Wholesalers said that the price of grapes which is around Rs 65-80 per kg in the retail market is around Rs 30 wholesale.

Officials said prices of fruit are about 15-20% higher than last year. They said that this year, citing unseasonal rains, retailers are charging high prices. A retailer who asked not to be named said that they have to go to Naroda to get the fruits and thus spend more on transportation. A wholesaler said that retailers are making additional profits as residents of posh areas cough up more money because they are usually better off.

The retailers said that mango season is approaching but this year one can expect to pay more for the mangos as unseasonal rains have damaged the crop in Gujarat and Maharashtra. Mango prices, in wholesale, may not come below Rs 50 this year. Wholesalers say that they had sold mangos for around Rs 20 per kg last year.

THE HINDU **BusinessLine**

India's silent spring

India's agricultural sector is far more important to the country than its falling share in the GDP suggests. About two-thirds of India's population depends on agriculture for livelihood. Bucking global trends, the agricultural population in India rose by 50 per cent between 1980 and 2011. And in spite of sustained public spending on poverty and hunger eradication, about 300 million, mostly rural, Indians live in chronic poverty and are malnourished.

Even as modernisation in the sector has contributed to higher yields, agricultural income has stagnated over the last two decades. This is due to the increasing use of resource inputs.

The demand for water and energy to grow food is a mounting policy concern. The Prime Minister recognised the urgency of the problem by calling for 'Per Drop More Crop'. The 2015-16 Budget reflects this by

allocating Rs. 5,300 crore for the proposed Pradhan Mantri Gram Sinchai Yojana, aimed at providing countrywide access to irrigation and improving water-use efficiency.

But it is hard to encourage a market for efficient pumping and irrigation systems when States offer almost free electricity to farmers.

The effect of subsidies

Since the introduction of agricultural electricity subsidies in the 1970s, the area irrigated by groundwater has almost quadrupled while that irrigated by surface water has remained unchanged. The aquifers in corresponding States have hit rock bottom lows. The northern states (Punjab, Haryana and Rajasthan) which produce most of India's rice and wheat are experiencing the fastest rate of groundwater loss in the world. Satellite images show that across the Gangetic Plain, some 54 cubic kilometres of water are disappearing each year.

Moreover, there is no national inventory of groundwater stocks. All we know is that many farmers are bringing up poorer quality water or are having to use more energy to pump from greater depths.

Fertiliser use, also heavily subsidised, increased from 1.1 million tonnes (MT) in 1966/67 to 25.5 MT in 2012/13.

Although this is still less than other major food producing countries, there is a variation in usage of fertiliser across States. While average consumption is 128.34 kg per ha — similar to the US — Punjab, Bihar and Haryana consume 250.19 kg/ha, 212.23 kg/ha and 207.56 kg/ha, respectively.

There's a cost to it

And these inputs don't come cheap. In 2013-14, the Centre spent Rs. 67,971 crore (about 0.6 per cent of GDP) on fertiliser subsidies, while electricity subsidies are a growing burden on finances, especially in major food-producing States. In 2014-15, the agricultural electricity subsidy in Punjab alone reached Rs.4,454.54 crore.

Reliance on chemical fertilisers, combined with flood irrigation, has degraded soils and leached nutrients. This jeopardises health. Recent estimates suggest that 38 per cent of children under five in India are stunted due to malnourishment.

And there are other side effects. Greenhouse gas emissions attributed to agriculture make up 17.6 per cent of the annual national total. Add emissions related to consumption, including electricity, diesel and fertilisers, and that figure rises to 27 per cent.

Meanwhile, the sector itself is extremely vulnerable to climate change. About 90 per cent of arable land in the country is prone to climate-induced extreme weather events — the early effects are already evident. Further rises in temperature and the failure of the monsoon are projected to shrink water and land availability. Without greater efficiency, this will reduce food production and hit rural livelihoods and urban markets. So has the government paid enough attention to making agriculture sustainable?

Efforts below par

Since the late 1990s, governments have launched several initiatives to improve water and energy efficiency in the sector. But these were often localised, fragmented and blind to the linkages between resources. The National Mission for Sustainable Agriculture, proposed since 2008 to consolidate existing initiatives, has not taken off.

Technologies and practices that can reduce water and energy demand substantially exist. For example, systemic rice intensification is a proven technique that can reduce water demand by 50 per cent in irrigated rice cultivation. Development of surface irrigation sources, improving pump efficiency, solar powered pumps and micro irrigation technologies together offer great opportunities to tame water and energy demand in the sector.

In the past, efforts that focus on a single resource have failed. Decreasing fossil fuel energy (for example, through solar pumping) may not conserve water.

Several States have attempted to reduce electricity subsidies or ration electricity for water pumping. Reform is politically difficult: many farmers, for example, perceive free electricity as an entitlement in the absence of surface irrigation facilities, more so because they receive the same price for their crops as farmers with easier access to water.

To change entrenched practices, we need an alternative approach; one that acknowledges the scarcity value of interlinked resources.

Armed with this knowledge, the government has at its disposal a range of levers with which to influence consumption and production choices.

It should seek to reorient and align policies that affect land use, crop choices, fertiliser use, irrigation practices and energy inputs, so that the respective efforts complement each other to achieve sustainable growth.

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India to iron out Basmati import row with Iran



Indian Basmati rice exporters, hit by Iran's decision to restrict imports last year, are likely to get some encouraging news next week.

Senior officials from both sides will meet in Tehran on Monday to sort out pending issues related to high import duties, quality norms and import licenses so that shipments can start moving soon.

Commerce Secretary Rajeev Kher is leading a delegation of officials and businesspersons to Iran next week with the primary agenda of removing all hurdles on rice imports and also to promote other potential business areas such as pharmaceuticals.

Pesticide residues

“In 2013, Iran had imported a lot of rice and had huge stocks. So, they raised their import duties when their own harvest came in the market in order to protect their farmers. They also raised the issue of (high)

pesticide residue in our rice,” Commerce Secretary Rajeev Kher told *BusinessLine*. Kher said that the problem related to the pesticide residue will get sorted out in his meeting with Iranian officials as it was basically related to the issue of high stocks which is not a big problem anymore.

“I am hopeful that all issues including high import duties and the pesticide residue will get addressed and licences will be issued soon for imports,” Kher said.

Sliding shipments

Iran is India’s largest Basmati rice market with exports in 2013-14 rising to 1.4 million tonne (mt) – roughly 40 per cent of total Basmati shipments. Iran stopped issuing import licences since October last year as there was a glut in the domestic market. It also raised its import tariffs to 45 per cent. “In 2014-15, exports are expected to be lower at 0.9 mt because of the restrictions. In the new fiscal, we hope to export about 1 mt,” AK Gupta, Director, Basmati Export Development Foundation, APEDA, said.

Higher duty

While Iran brought down import duties to 22 per cent in January this year, but exporters claim that they are still being made to pay 45 per cent under various other categories.

“The increased level of duty is maintained because most of it is charged in the form of other duties which are directed into agricultural development. The importer has to pay the same amount of money but all of it is not classified as import duty,” Gupta said.

Chana to stay steaming hot



Chana prices have been rising sharply in the last six months. The price of the chana futures contract traded on the National Commodity and Derivatives Exchange (NCDEX) has shot up over 32 per cent from Rs. 2,770 in September to the current levels of Rs. 3,675. Ankita Parekh, Research Analyst, Nirmal Bang Commodities, says the price rally has been fuelled by, “One, fear of a lower supply after government estimates of a fall in production for the year and the other, increase in bargain buying from stockists.”

Chana production is estimated to be lower this year due to drop in area sown under the crop. According to data from Agriwatch, only 85.91 lakh hectares has been covered under chana as of mid-February this year as against 102.25 lakh hectare covered over the same period last year. This is almost a 16 per cent drop in sowing.

So, production is estimated to stand at 7.9 million tonnes this year as against the 9.1 million tonnes produced last year. But, to start with, why has the sowing come down this year?

Poor returns from the chana crop as prices traded below the minimum support price (MSP) in 2013-14 dissuaded farmers from sowing chana, says Ankita Parekh. Record production of over 9 million tonnes of chana drove market prices below the MSP last year.

Unseasonal rain impact

There has been talk of the unseasonal rains in the last few months having damaged crops.

But chana crops are not much affected so far; the little damage whatever has been because of the hailstorm in February and March. Ram Gopal

Yadav, Senior Research Analyst, Agriwatch says, “The unseasonal rainfall is going to affect only the quality of chana and not the quantity”. But, Ankita Parekh adds, “If the rains and hailstorm persist in April, then it will be a problem as yields will be hit.”

Arrivals pressure

The rally in chana prices might pause for some time as the peak arrival season begins in April. The supply is expected to increase in this season to 40,000 to 45,000 tonnes as against the normal 20,000 tonnes, according to Ankita Parekh. Supply will remain higher for the next couple of months and it is expected to put pressure on the price. Having said this, further rise in chana prices from current levels is less likely. However, the downside in price from here is also expected to be limited as lower prices would again attract fresh buying interest from the stockists.

Import impact

India depends on imports to meet domestic demand. Chana imports average 0.2-0.3 million tonnes per year. As the peak arrival season ends in May, the dependency on imports will be more in June/July.

Prena Sharma, Research Analyst, Emkay Global Financial Services, says, “The inventories came down sharply to 6 lakh tonnes from about 18-20 lakh tonnes in January. At this rate the inventory will run out in a couple of months and turn the attention towards imports.”

As imports become inevitable, the value of the rupee is also going to play a significant role in the domestic chana price. So a weak rupee in the coming days could also be one factor that will push chana prices higher in the coming months.

Technical Outlook

The rally that had begun in the NCDEX-Chana futures contract in October is facing resistance near Rs.3,750 levels now. There is a strong trendline resistance at this level. The 50 per cent Fibonacci retracement resistance is placed at Rs. 3,763.

The contract had tested these levels a few times in the last couple of months, but failed to breach the hurdle. The inability to breach Rs. 3,750 has increased the chances of a short-term corrective fall. An intermediate

fall to Rs. 3,400 cannot be ruled out while the contract trades below Rs. 3,750. However, the downside is expected to be limited.

The presence of a trendline as well as the 200-week moving average, both at the same level of Rs. 3,400, makes it a strong support. A break and further fall below Rs. 3,400 is unlikely.

Medium-term view

As mentioned above, Rs. 3,400 is a strong support that can limit the downside for the contract. Also, there is another key medium-term support at Rs. 3,340.

There is a strong likelihood of the price to reverse higher again from these levels in the coming weeks. Such a reversal will have the potential to take the contract higher to Rs. 3,800 initially.

A strong break above Rs. 3,800 will open the doors for the contract to move to the next target of Rs. 4,000.

Traders with a medium-term perspective can go long at current levels. Stop-loss can be placed at Rs. 3,280 for the target of Rs. 3,950. Short-term declines to Rs. 3,400 can be considered to accumulate long position.

TAFE launches 'FarmDost' initiative in Chennai

Tractors and Farm Equipment Limited (TAFE), the second largest tractor manufacturer in India, has launched 'Be a #FarmDost' initiative in Chennai. This initiative is aimed to celebrate the farmer and bring back the farming community into social consciousness.

TAFE's #FarmDost initiative is to encourage people of all ages, from all walks of life, to step into the shoes of a farmer, even if it is just for a short time. The idea stems from the thought that if people find it hard to take care of just one single crop, in one square foot of land, they would truly realise what the average farmer has to go through, day in and day out.

As part of the launch, students from local schools and colleges were presented with the #FarmDost kits consisting of seed packets, and were invited to join the #FarmDost initiative, said a company press release.

Can organic and GM crops co-exist?

Can organically cultivated crops and genetically modified crops co-exist especially, in adjoining fields? This has been an issue of debate for some years now. The issue at hand is the potential of contamination of organic

crop through pollen drift from non-organic or GM crop cultivated in proximity.

While companies selling genetically modified seeds claim that the technology is not in conflict with organic cultivation as the former helps reduce use of pesticides, those engaged in organic cultivation perceive GM technology as not purely organic. GM crops still need integrated pest management and integrated nutrient management. There are issues with organic certification too.

The matter has come to a head in a court in Western Australia where owners of two neighbouring fields — one cultivating organic oats and the other GM canola — are fighting over cultivation rights and duty of care. The organic farmer has lost his certification because his neighbour planted modified canola. Commercial cultivation of GM canola was permitted by the Australian government sometime in 2009-2010.

The outcome of the legal dispute is keenly awaited. The court is likely to rule on the relative rights and obligations of neighbouring farms. The outcome may also potentially force amendments to the organic certification process.

Clearly, the issue is not about desirability or otherwise of GM crops and their contribution to the market; but whether organic and non-organic cultivation can harmoniously co-exist.

It may be a coincidence that the legal dispute in faraway Australia has come up at a time when the Indian Government has permitted field trials of GM crops, subject to State government's approval. Maharashtra, for instance, has decided to allow firms to undertake field trials of select crops.

Given that landholdings in India are rather small — over 80 per cent of farmers own less than two acres — the issue of co-existence of GM and non-GM crops assumes greater importance. Currently, Bt Cotton is the only GM crop commercialised. Over the last several years, area under modified cotton cultivation has expanded and currently stands at nearly 90 per cent of the total area under cotton (11-12 million hectares).