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THE HINDU

Bio-control agents from KVK launched

The Krishi Vigyan Kendra, (KVK) Ernakulam of ICAR-Central Marine Fisheries Research Institute has commenced supply of four types of bio-control agents through its sales counter at CMFRI. The bio-control agents are used to control pest and diseases in crops in an organic way by utilising certain beneficial micro organisms that have parasitic effect on insects and disease-causing microbes. Trichoderma, pseudomonas, verticilium and beaveria are the bio-control agents currently made available for sale in one kg packets, said a press release here. The microbes are embedded in inert powder medium. Farmers need to activate the microbes as per the prescribed procedure just before applying them to the crops. The bio-control agents supplied by KVK are produced at the Rice Research Station, Vytilla by Kerala Agricultural University, the press release added. Trichodermais a beneficial fungi that can control most of the soil-borne fungal diseases in crops.Psuedomonas is a beneficial bacteria that generates certain enzymes and hormones which enhances plant growth while controlling disease-causing bacteria and fungi in crops. Verticillium is an entomopathogenic fungus. This produces toxins which infect aphids, white flies, rust fungi, scale insects and lead to the death of the host.

Beauveria is a fungus that acts as a parasite on various insects attacking on crops. Beauveria can be used as a biological insecticide to control a number of pests such as termites and whiteflies.

Soil testing labs need better tools: expert

Fertility of soil should be examined periodically and appropriate measures need to be adopted for optimum yield. The soil testing laboratories intended to perform the role are unequipped to test micronutrients, leading to a low-yield crop pattern, according to P.K. Pushpangathan, an agronomist and former agricultural officer.

The soil testing laboratories of the Department of Agriculture lack sophisticated facilities for analysing micronutrients, he told *The Hindu* . The State Department of Agriculture has 14 district soil testing laboratories and nine mobile soil testing laboratories. Most of the laboratories are giving recommendations in respect of major nutrients

only, he said. “Panchayat-level plant nutrient management plans on systematic soil testing and scientific interpretations are required to ensure soil health and better crop production.” The Krishi Bhavans of the State should provide clear data about the availability of NPK, calcium, magnesium, sulphur, zinc, copper and boron as well as the pH value of the soil for each crop. The State being in humid tropics, vast areas are covered by laterite soil which is acidic, with low water and nutrient retention capacity. The base depleted soils are relatively infertile. It requires careful management to achieve more yield, he said.

Soil-based plant nutrient management plans for agro-eco systems of Kerala were formulated in 2010-11 as a multi-institutional project for which the Department of Agriculture was the implementing agency. Studies made as part of the programme found out that soil acidification had reached alarming levels.

“Ninety per cent of soils suffer from acidity. Studies indicated indiscriminate application of phosphatic fertilizers and deficiency of secondary nutrients such as calcium and magnesium. Recommendations were submitted to improve the soil conditions, but affirmative actions had been lacking,” he said.

Youth should enter agri sector: V-C

With the increase in their affinity with information and communications technologies and their ability to innovate new farming techniques, the youth can be attracted to agricultural sector and take forward the farming in India” said C. Swaminathan, Vice-Chancellor of Periyar University.

Agriculture in India is considered as a gamble with monsoon. With the rising climate change and reduced rainfall, many

places are facing severe drought, on the contrary natural disaster like flood brings in lot of devastation, he said while delivering his inaugural address at the conference on ‘agricultural scenario in India’ organised by the Department of Sociology of the University on Saturday.

More so, most of the farmers are small land holders and cannot invest in agricultural implements because of higher costs.

The present agricultural practices are neither economically profitable nor environmentally sustainable.

Poorly maintained irrigation systems and lower efficiency in using available water resources, lack of availability of labour, no mechanisation and fluctuating market are some of the prominent impediments faced by the farmers in India, Dr. Swaminathan said.

Indian economy

Agriculture is the driving force in Indian economy, he said and added that it was time for the youth to step into agricultural sectors and offer assistance in farming through their innovative ideas, research and techniques.

The Vice-Chancellor said that all students need appropriate training and exposures in farming to enable make them to work for the development of agriculture in India.

Pest management programme held

Forty farmers of Govindanayakampalayam were exposed to latest pest management practices for paddy crop by the Agriculture Department under the aegis of agricultural technology management agency.

The vice-president of Agricultural Graduate Consultancy and Service Society Limited, P. Muralidharan, demonstrated the process of integrated pest management in paddy crop. Technical expert from Myrada Krishi Vigyan Kendra, Gobi, John Prabakaran, elaborated on the utility of modern agricultural implements and machinery.

Adequate water available for wild animals in forest areas

The Forest Department is relieved that wild animals will not be straying out into human habitations for at least two months owing to water availability in waterholes, thanks to copious rainfall during the monsoon season.

There are a number of waterholes spread over the Sathy and Hasanur divisions in Sathyamangalam Tiger Reserve and in the Bargur forests in Erode division.

Elephants

There is no fear about straying of elephants into agricultural fields till February, though the menace of wild boars persists whether or not water is available in the forests.

By February-March waterholes will go dry and the presence of animals will be concentrated around perennial water sources: Moyar River, Bhavani Sagar Reservoir, Gunderipallam Dam, Varatupallam Dam, and Maniachipallam wild stream.

In the Bargur forest area where elephants are found in abundance, herds also move towards Palar River to the north and towards Mettur Dam when the waterholes dry up, District Forest Officer K. Nagarajan said.

Nevertheless, till the monsoon rains arrive, farmers live in perennial fear of their fields getting invaded by elephants, and to some extent by Indian Gaurs.

Allow firewood cutters to take away 'seemai karuvellam' free: farmers



THORNY ISSUE:Farmers in Erode district look for a plan of action to controlling prosopis juliflora invasion in vacant land

Farmers in the district are of the view that invasion of prosopis juliflora (karuvellam) in vacant lands could be considerably stopped by permitting those in need of firewood to cut the trees and take them home free of cost.

This suggestion made during the farmers' grievance day meeting is reportedly under the consideration of the district administration. Farmers say there will be no need for the government to spend money on removing the wild growth of the trees from the 'poromboke' land.

According to sources, there was no hitch in the cutting down of the trees on patta land. The Agriculture Department has reportedly, so far, not

received guidelines on eradicating the weed. According to Forest Department sources, its clearance was not required for cutting down the weed in ‘poromboke’ land, irrespective of its extent of growth.

Farmers emphasise that local bodies must be instructed by the district administration to clear the weeds on the lines of the implementation of ban on plastic use.

Earlier this year, the Madurai Bench of the Madras High Court had instructed the Public Works Department to come out with a comprehensive report by the end of January, 2016 for eradicating the weed.

Farmers apprehend that the weed would cause rapid decline of groundwater.

A let down for farm sector: experts

Says regional Free Trade Agreements pose greater threat



The World Trade Organisation’s (WTO) ministerial declaration at Nairobi last week has left little scope for policy intervention to help farmers in Kerala and elsewhere in the country overcome the crisis caused by the sliding price of crops and the surge of cheap imports, according to civil society groups and farm trade experts.

The Congress and other Opposition parties have accused the government of failure to secure commitments on Special Safeguard Mechanisms (SSM) to protect farmers against import surges and price fall and to ensure procurement and public stockholding for food security.

“There is nothing in the Nairobi declaration for a country like India. The Indian delegation led by Commerce Minister Nirmala Sitharaman failed

to make any headway in protecting our interests,” says R. Sridhar, environmental activist and spokesman for Thanal, a city-based no-profit organisation.

‘Little to offer’

“Whether it is poor lobbying by developing countries or intense pressure exerted by rich nations, the outcome of the Nairobi meet has little to offer farmers in India,” says B. Harikumar, WTO Cell, Agriculture Department.

He feels that regional trade agreements such as the Indo-ASEAN free trade pact, Trans Pacific Partnership (TPP), and the proposed Regional Comprehensive Economic Partnership (RCEP) could have a deeper impact on the country’s farm sector in the coming years, especially in the case of cash crops such as rubber, spices, tea, and coffee. “The going will be increasingly tough, unless we equip ourselves for the challenge.”

‘Unfair’ competition

Former MLA K. Krishnankutty, who chaired the expert committee for the preparation of Kerala’s agriculture policy concurs,

“On the one hand, lowering import tariffs on spices, rubber, and coconut will affect thousands of farmers in Kerala, while on the other, regional trade pacts like the TPP and RCEP will expose them to unfair competition. He feels that the WTO Cell should be equipped to advise the government on global trade trends.

C. Bhaskaran, retired Professor, Kerala Agricultural University, says, “Kerala’s export potential has witnessed a serious erosion as countries such as Guatemala and Vietnam began eating into our traditional markets with cheaper, though inferior, spices such as cardamom and pepper. What we need is a monitoring system to keep a close tab on global trade and a forecasting mechanism for better crop planning.”

Relief for crop damage to be given

Funds to the tune of Rs. 330.82 lakh have been sanctioned for the first assessment, say officials



voicing views: Farmers taking part in the grievance redress meeting chaired by Collector R. Nanthagopal .- Photo: C. Venkatachalapathy

The first phase of relief for crops damaged in floods will be credited to the cooperative bank accounts of farmers in a week. Funds to the tune of Rs. 330.82 lakh have been sanctioned for the first assessment of damaged crops in Vellore district, officials said.

Officials, during the farmers' grievance redressal meeting chaired by Collector R. Nanthagopal, said the government has sanctioned Rs. 288.46 lakh for agriculture crops and Rs. 42.36 lakh for horticultural crops for the first round of crop damage assessment.

The funds will cover crops damaged in floods on 2,012 hectares of agricultural lands, and 306.8 hectares of lands on which horticultural crops were raised, officials added.

The first phase of enumeration of crop damage was taken up in November. It came to a close on November 19. The second phase of enumeration was taken up following subsequent rains and the report was submitted on December 11.

G. Ramakrishnan, PA to Collector (Agriculture), told the farmers that the relief would be credited to the bank accounts of farmers.

“The relief amount will be deposited in the farmers' accounts in Primary Agricultural Credit Societies in a week. Accounts will be opened for farmers who do not have one,” he said.

Close to 15 varieties of crops have been covered in the assessment. This included paddy, cotton, vegetables, fruits and flowers.

CM announces Pongal gift packs

All cardholders in the Union Territory to receive them from January 5



Chief Minister N. Rangasamy releases the calendar for the year 2016. School Education Minister T. Thiagarajan receives it in Puducherry on Monday.— Photo: S.S. Kumar

Chief Minister N. Rangasamy on Monday announced that special Pongal gift packs containing essential commodities worth Rs.280 would be distributed to all the cardholders in the Union Territory for the Pongal festival.

Talking to reporters after releasing the Government Calendar and Diary 2016, he said the gift packs containing one kg of raw rice and sugar and half a kg of toor dhal, urad dhal, jaggery and green gram would be distributed to cardholders from January 5.

The distribution would cost the Government Rs.9.4 crore.

The government has deposited the rain relief amount of Rs.4,000 into the bank accounts of over 2.81 lakh cardholders in Puducherry and Karaikal regions who have already furnished their bank account number.

As many as 15,425 beneficiaries in Puducherry and 12,394 beneficiaries in Karaikal regions were yet to submit the details of their bank accounts.

Cardholders can also check whether their ration card details have been seeded with their bank accounts by visiting the Common Service Centres. Arrangements have also been made to complete the seeding of ration cards with savings bank accounts at taluk offices in Puducherry, Oulgaret and Villianur, he said.

Mr. Rangasamy said that all families in the Union Territory would be covered under the free mixie and grinder scheme. Five centres had been set up in each of the Assembly constituencies to distribute the freebies to all cardholders.

The distribution of freebies has already been completed in Kalapet, Bahour, Embalam, Mannadipet and Thirubhuvanai assembly constituencies. The freebies would be distributed to all families in the remaining assembly segments before Pongal.

The government will also deposit the compensation for crop damages and loss of livestock in the recent rains in the savings bank account of the beneficiaries, he said.

The Centre had released the first instalment of Rs.50 crore to Puducherry for relief and rehabilitation work. We are expecting the Centre to release the second instalment, he said.

The government has also taken up improvement works to repair arterial roads which were severely damaged in the recent rains in Puducherry and Karaikal regions.

A committee was going into the encroachments of canals and water bodies and based on the report the encroachments would be removed, he said.

Water released from Kodiveri Dam

Water was released from Kodiveri Dam for second crop cultivation in the ayacuts of Thadapalli-Arakankottai and Kalingarayan canals totalling 40,247 acres, on Sunday.

Water flow into the canals from the Kodiveri Dam, which is fed by Bhavani Sagar Reservoir, will be maintained continuously for the next 133 days, said State Environment Minister Thoppu N.D. Venkatachalam, who initiated release into Thadapalli-Arakankottai canals. Chief Minister Jayalalithaa ordered the release for irrigating crops in the old ayacut areas spread over Gobi, Anthiyur, Bhavani and Erode blocks, the Minister said.

District Collector S. Prabakar, Gobi MLA K.A. Sengottaiyan, Anthiyur MLA Ramandharan, and senior PWD officials took part.

Training programme in soil health

A free one-day training programme on 'preparing healthy soil for plant growth' will be conducted at Krishi Vigyan Kendra on the premises of Veterinary College and Research Institute here on December 28.

A press release from B. Mohan, programme coordinator, said that healthy soil is the basis of healthy plants so that it needs less fertilizers or pesticides. The programme would cover the methods of using easily available organic manure which is vital for growth of plants. Farmers, members of self-help groups and youth can participate in the day-long training programme. Interested persons can come on working days or register through phone numbers 04286-266345, 266244 and 266650, the release added.

Jackfruit saplings planted for greening Jipmer



A sapling planting drive was launched under the green campus initiative at Jipmer in Puducherry.— Photo: Special Arrangement

A Kerala-based environmental group has pitched in for the green campus drive at the Jawaharlal Institute of Post Graduate Medical Education and Research (Jipmer).

Samskrithi, an organisation based in Adackaputhur in Palakkad, recently sponsored 100 jackfruit saplings for the sprawling Jipmer campus.

“We’ve been looking to increase the proportions of fruit-bearing trees on the campus,” says Deepak, a volunteer with Jipmer’s Plantation Committee which oversees the ‘green campus’ drive.

Though there have been sporadic sapling planting efforts within the campus, it was only after the constitution of a Plantation Committee about six months ago that greening of the campus has become a coordinated effort.

Samskrithi

Though Jipmer usually sources some varieties of saplings from other nurseries, the 100 saplings were sponsored by Samskrithi.

Jipmer Director S.C. Parija, Dr. Surendra Kumar Verma, chairman of the Plantation Committee and Samskrithi volunteers led by Rajesh Adakkaputhur planted the first set of saplings. Jipmer's first year MBBS students have been tasked to plant the saplings across the campus and also nourish the plants on a daily basis. The Plantation Committee next plans to plant 50 saplings of the deciduous 'nelli' or the *Phyllanthus emblica* on the campus.



Eat 14g of almonds daily to boost your health

Almonds are a good source of plant protein — essential fatty acids, vitamin E and magnesium, says a researcher.



The scientists based their conclusions about improved dietary intake on participants' scores on the Healthy Eating Index. (Source: Thinkstock Images)

Eating a moderate amount of almonds daily can enrich the diets of adults and young children, says a new study.

“Almonds are a good source of plant protein — essential fatty acids, vitamin E and magnesium,” said one of the researchers Alyssa Burns from University of Florida in the US. For the 14-week study, the scientists gave almonds daily to 29 pairs of parents and children. Most of the adults were mothers with an average age of 35, while their children were between three and six years of age.

The children were encouraged to consume 14g of almond butter daily and parents were given 14g of almonds per day. An online dietary recall was

used to find out what adults had eaten and how much. That way, researchers could measure diet quality.

The scientists based their conclusions about improved dietary intake on participants' scores on the Healthy Eating Index (HEI), a tool used to measure diet quality and adherence to the 2010 Dietary Guidelines for Americans. The results indicated that when parents and children were eating almonds, their HEI increased for total protein foods, seafood and plant proteins and fatty acids, while they ate fewer empty calories.

For all components, a higher score indicates higher diet quality. When parents and children ate almonds, their HEI score increased from 53.7 to 61.4. Parents and children consumed more vitamin E and magnesium when eating almonds, Burns noted. The study was published in the journal Nutrition Research.

Tackling negative agriculture growth biggest challenge: CM Fadnavis

Addressing mediapersons in Nagpur, Fadnavis expressed concern over the continued water crisis and higher expenditure, which might lead to higher off-budget borrowing.

Chief Minister Devendra Fadnavis said on Monday the biggest challenge before his government was the negative agriculture growth that would have a cascading effect on the state's overall GDP.

Addressing mediapersons in Nagpur, Fadnavis expressed concern over the continued water crisis and higher expenditure, which might lead to higher off-budget borrowing.

Stating that Maharashtra can't afford a GDP growth less than 10 per cent, the CM said, "If the state's plan size is Rs 54,000 crore and we have to spend Rs 10,000 crore more on tackling drought, the possibility of exploring various options, including higher borrowing, cannot be ruled out."

He said 3 lakh farm ponds were the only way forward to effectively tackle the water crisis in Marathwada, Vidarbha, parts of north and west Maharashtra. "In Madhya Pradesh, construction of 5 lakh farm ponds helped in agriculture growth up to 24 per cent," said Fadnavis. Acknowledging that incomplete irrigation works would require Rs 1.25 lakh crore, he said, "We have decided to stress on works that are 75 per cent complete to channelise the available water to farmers."

He claimed that the state's mega-infrastructure projects had also been designed in such a way the benefits reached both urban and rural Maharashtra.

The Rs 30,000-crore Nagpur-Mumbai Super Communication Expressway would be a game changer, asserted Fadnavis. He added, “The project, which will be complete in 2019, will change the economy in 14 districts that are worst drought-hit, panned across Vidarbha and Marathwada. The two critical aspects, which have to be expedited with greater investment, are power and water. On the power front, more than generation, we have to focus on competitive tariff.”

Citing an example, Fadnavis said, “ In Israel, even with 50 per cent less rainfall compared to our worst drought-hit districts, they have adopted technology for efficient water management.”

The CM added that various land reforms undertaken by the government would help it mobilise resources up to Rs 40,000 crore.

Power hitch for first smart village

It promises to usher in a digital revolution in 353 villages in malnourished Dharani and Chikhaldara belts in Maleghat forest in Maharashtra.

Barely 15 feet from the hut of tribal farmer Kesaria Motiram Kasdekar (65) in Harisal village — he cultivates jowar and wheat on 3.56 acres of land — is a 1,600 sq feet land earmarked for a communication centre, complete with a 40-metre tall tower. It promises to usher in a digital revolution in 353 villages in malnourished Dharani and Chikhaldara belts in Maleghat forest in Maharashtra.

The village has a population of 1,480. The people are aware that the communication tower, when installed this week, is set to make the village the country’s first digital smart village. However, the big question they ask is, will it help them overcome loadshedding they face for 18 hours daily. In July 2015, [Microsoft](#) CEO [Satya Nadella](#), at a meeting with Chief Minister Devendra Fadnavis, had agreed for a partnership with the Maharashtra government to make Harisal, the country’s most backward tribal village, a smart digital village. A 14-member team has begun the work.

Nodal officer Deepak Belawanshi in Harisal says, “The communication tower brought from Pune has been assembled and is ready for installation. It is awaiting the crane to carry out operations.” Pointing to a new concrete complex, he says, “We have a computer centre, healthcare centre and an agro centre.”

However, a lot more work is in the pipeline and is being monitored by district collector Ravi Gite. Fadnavis has directed the team to give the highest priority to the digital smart village.

Fadnavis said, “My primary concern was to bring the tribal villages into the mainstream. Microsoft will provide technology assistance in partnership with the state government.”

Technology will have to be adopted to improve lives of tribals, especially in malnourished Maleghat. The prime goal is to use communication for telemedicine and agriculture.

The little centres are painted in bright hues of purple, green and pink each for computer, agro and medical facilities. Except for the main road, the access routes are all kuccha (mud).

The journey to the village, 288 km from Nagpur, is not easy. The dense forest cutting through the high hills dotted with rivulets and rocks and 100 to 150 ft tall trees has cut off tribals from the mainstream. Humans are confined to scattered villages.

Harisal was chosen as the first digital smart village after a survey found it closer to the road widened through a project sanctioned by the NHAI. The communication network at Harisal would help in covering all other villages lost in the dense forest.

Feroze Khan, a generation next villager, runs a food grain purchase centre. “Yes, I know the tower will bring computers and internet. The chief minister had visited this village a year ago and things have started moving. But power shortage is still unresolved,” he says. Electricity is missing for 12 to 18 hours. Shanta Sukhdeo Whetkar (35) says, “There is no shortage of water. But water cannot be drawn into tanks as motor pumps don’t work. Our children fetch water from ponds or borewells.” The children attend district schools. Most of them step out of Harisal for college education in Dharini. Akash Murlidhar Shewadikar says, “Travel is not a problem. I am doing my graduation in social sciences in Mukta Vidyapeeth.” The 18-year-old lives with his parents in a mud house three feet from the communication centre.

The generation next has adapted to technology and has mobile phones. They are waiting to operate computers. Neelam, who completed Class 12, says, “My mother Sumitra goes to Anjan goan to work in a spinning centre on a daily wage of Rs 150 to Rs 200. She is away from Harisal for the last one month.” The villagers migrate to the neighbourhood for almost four months a year for their livelihood. Shobharam Chunni Kasdekar’s tea centre run from a broken wooden structure and baked mud chulla, brewing tea in kettle, is a village “adda”. The tribal has been running the “chai” business for the last forty years and manages to run a family of four. “A handful of vegetables from nearby fields, rice and jowar roti is a meal.” Adding, “I don’t earn even Rs 50 daily. How can I buy Rs 160 per kg dal.”

Focus on nutrition, Tata Trusts to be ‘support system for often misunderstood’ state

Assistance will also be provided to help in spheres such as education, agriculture and solar energy.



Chairman of Tata Trusts, Ratan Tata, with Chief Minister Akhilesh Yadav and his wife Dimple Yadav at the CM’s official residence in Lucknow on Monday. (Express Photo by Vishal Srivastav)

About three weeks after Ratan Tata expressed his desire to invest in Uttar Pradesh, the Tata Trusts Monday signed a memorandum of understanding (MoU) with the state government in the presence of both Ratan Tata and Chief Minister Akhilesh Yadav.

According to the MoU, the trust will act as a “support system” for the government and help it with its existing or any new programme launched in future in the spheres such as livelihood, health, education, nutrition, agriculture and solar energy.

Of these, nutrition emerged as the prominent field in which both Ratan Tata and the CM pledged to work together.

“One never thought that state government would support a nutrition plan that we have been preparing — of embedding nutrients in wheat, rice, salt, and later in milk. It is amazing that we have received such a level of support and cooperation from the state of UP,” said Ratan Tata, who was full of praise for Akhilesh and even for Uttar Pradesh, a state which he termed as “often misunderstood and underplayed”.

“I can only say that due to dynamism of CM and his executives, it is a great privilege for us to be here looking at UP, which is a new UP.”

Calling himself a “friend of the state” and promising to help build it further, Tata said, “This is a state which is going to lead the way for its people as well as for the country. Personally, I am loosing my heart to this state.”

As per the MoU signed on Monday, Tata Trusts would help the government launch a special 'Double Fortified Salt' programme in 10 districts, where its distribution would be done through public programmes. It would also help the government in targeting micronutrient deficiencies, especially anemia, apart from assisting in early detection of cancer through primary healthcare. Moreover, assistance would also be provided to improve maternal and child health, supplying latest teaching and learning tools to enhance the quality of education, assisting in the development of off-grid electricity and establishing solar water lifting pumps and high-tech nurseries, among others.

R Venkataramanan, Executive Trustee of Tata Trust, who signed the MoU with Chief Secretary Alok Ranjan, said the aim of the understanding would be to improve quality of life of people in the state with focus prominently on tackling malnutrition, anemia, education and early childhood.

Dimple Yadav, the CM's wife and an MP from Kannauj, was present on the occasion. Hailing the moment, Akhilesh said, "You (Tata) keep coming and give your blessings and show the path. This will bring about change in the state and the country."

He put a premium on issues of farmers and villages and their incorporation so as to "usher in changes in their lives and make them educated" for employment opportunities. "It is true that UP is not viewed in the manner in which it should be looked at," he noted.

The CM claimed his government has worked for the development of cities as well as villages ever since his party came to power. "The biggest thing is that poor people are not aware of nutrition. At times, minor things can solve big issues like nutrition. I feel things will improve with mutual cooperation," he said.

Akhilesh said his government is trying to better the lives of women in the state too. "We are giving Samajwadi pension and if the budget permits, not a single poor woman will be left out," he said.

"I thank Ratan Tata... If he comes here, people will know that UP is going in the right direction."

Smart city 2016: Infrastructure, investments are twin forces that make city smart

In Indian context, the basic infrastructure being ghastly inadequate and underdeveloped, our definition of smart cities starts with basic infrastructure development and probably ends with the adoption of technology to ensure quality services and governance.

TODAY ABOUT 31 per cent of India's urban population contributes to 60 per cent of GDP. This is expected to rise to 75 per cent in the next 15 years. This is precisely why the cities are being referred to as the engines of economic growth.

If the engines of economic growth have to run with optimal efficiency there are two imperatives, one they have to be smart and two they should have again optimal economic activity, which alone will achieve economic growth. There are different definitions of smart cities and the original one is more about technology adoption for efficient and effective governance to ensure quality services to the citizens. In Indian context, the basic infrastructure being ghastly inadequate and underdeveloped, our definition of smart cities starts with basic infrastructure development and probably ends with the adoption of technology to ensure quality services and governance.

In this context of economic growth, smart cities are those that are able to attract investments. Investment will get attracted if they offer good infrastructure, simple and transparent online processes that make it easy to establish an enterprise and run it efficiently. These are probably important features of an investor-friendly city. It is very clear, without this a city loses attraction as an investment destination. Smart cities are those which have smart (intelligent) physical, social, institutional and economic infrastructure. Quality of life, employment, investment opportunities, define the competitiveness of a city and probably the degree of competitiveness decides the smartness of the city.

Competitiveness in this context refers to a city's ability to create employment opportunities, attract investments and people. The ease of being able to do business and the quality of life it offers determines its competitiveness. Quality of life includes safety and security, inclusiveness, entertainment, ease of seeking and obtaining public services, cost efficient healthcare, quality education, and opportunities for participation in governance.

Unfortunately in many of our cities though they contribute substantially to the revenue of the city, the industry does not have participation in

governance. The expertise and the experience the industrial segment has undoubtedly will contribute to the quality governance and services. As the participation of industry through PPP vehicle in the creation and subsequent management of a smart city is an imperative for the successful sustainability of the smart city, so is its involvement in governance.

A smart city, in order to make itself a destination for global investment , and to create the appropriate economic infrastructure for attracting such investment, as also creating employment opportunities, has to first identify its core comparative advantages, the planning, allied development will follow this identification .This offers holistic growth.

Greater institutional integration offers ease of doing business and in smart city this being important becomes yet another important imperative. We today experience the inefficiencies and operational difficulties due to absence of it .A smart city needs reliable, adequate high quality utility services, which also includes recycling of water which assumes greater importance today.

If cities are to be efficient engines of economic growth, it is important that goods are able to move from production canter to consumption centres at low cost and high speed. Therefore, a good freight movement system acquires importance from the Industrial perspective. Seoul, Singapore, Yokohoma are all smart cities and highly industrialised centres too. Could they be our role models and bench marks?

Sardeshmukh is Mahratta Chamber of Commerce Industries and Agriculture (MCCIA) Director-General

Debt, despair and drought: Once their cash cows, cattle a liability now for farmers

Farmers flock to market to sell their livestock, complain that very few interested in buying them, that too at a low price.

AFTER TRAVELLING for more than 200 kms all the way from Niphad of Nashik District, Sunil Bhaskar Kashid had come to the village of Belhe to participate in the cattle market. Since the last few months, it's been a struggle for him to feed his family of 16 people, leave aside a bullock. Following someone's suggestion that he would get a good price for his bullock at Belhe cattle market, he decided to travel the distance. However, despite his long wait—7 am onwards—he is unable to find a single buyer for his bull.

“Ideally the bull should fetch between Rs 30,000 and 35,000 but there are hardly any buyers, and those interested, are not ready to offer more than Rs 15,000. I can't keep him at home because I can't feed him. Our entire

crop has got spoiled due to no rain in summer and later, the unseasonal rain. A day's fodder costs anywhere between Rs 100 and 150. I already have a loan of Rs 3 lakh on my head," says Kashid, who has been into grape farming since more than a decade.

Organised every week on Monday in Belhe, about an hour-and-a-half from Pune, interested buyers and sellers from across Maharashtra gather at this cattle market to strike a deal. Almost 5,000 to 7,000 livestock, including goats, bullocks and buffaloes, are brought every week to the market that is abuzz with activity from 7 am to 5 pm wherein interested parties discuss, bargain and make a deal. In general, the participants include farmers those interested in buying livestock as well as businessmen who want to sell cattle at a high margin. However, this year, the trend has changed. More than 25 per cent participants are those farmers who have come to the market to sell their own livestock.

Arun Bhimaji Gite has come to Belhe from Lavana in Ambegaon Taluka to get a good price for his pair of bullocks. "From the last five months, I have been borrowing to feed them (bulls). There are 26 members in our family. We ourselves are barely able to manage with the leftover crop of last year. In normal circumstances, a pair of bulls sells for Rs 1.25 lakhs. Today, nobody is ready to give me more than 50,000," he says.

Just last month, Krushna Dhamane of Manchar has sold one of his tractors. "Now, situation is so bad that I have no option but to sell my bull -at least I will get Rs 50-60,000 that will help me sustain for some time," he shares.

Even the businessmen who have booked huge profit at the cattle market in the past rue that the 'business' is no more lucrative. "Earlier, I would get 7-8 bulls to the market and by the end of the day, would sell of at least five to six. Today, I got six in the morning. After sitting for five hours, I was able to sell just one and that too at a low margin," says Ramdas Ganpat Dabhade, who hails from Loni Mavala in Ahmednagar and has been in this field since 1991. Dabhade asserts that just one-and-a-half years ago, when times were 'good' he had sold a bull for a lakh also, unlike now when it is fetching him a mere Rs 20-30,000.

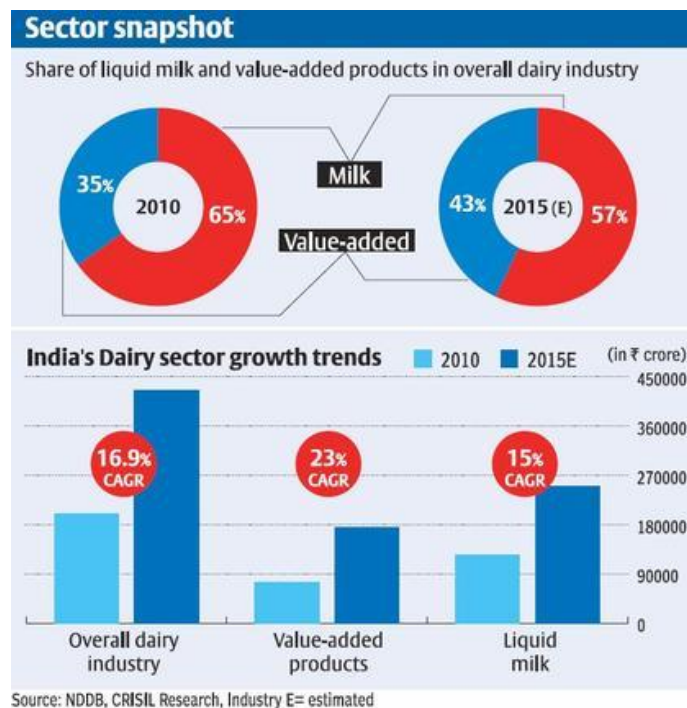
Jawed Ahmed Sheikh from Rande village, who has participated in the cattle market in the past, complains that earlier the market would go on till 5 pm in the evening, now both buyers-sellers gauge the energy of the market and leave by 1 pm. "We came to know there will not be any 'business' today. There are a very few who stick around. When farmers themselves are selling their cattle, who will buy ours," he questions.

THE HINDU BusinessLine

It will be a Cream Run for dairy industry for next 3 years: Crisil



Management of logistics costs and secured procurement is crucial to profitability and cash flows in the business.



AHMEDABAD, DEC 21:

India's organised dairy sector will see a 'Cream run' through 2018 with special focus on value-added products. The sector will see capacity augmentation to around 1,050 lakh litres per day (LLPD) with an overall capex infusion of around ₹15,000 crore in next three years, ratings agency Crisil highlighted in its latest report on organised dairy players.

Increased disposable income and quality consciousness among the consumers along with greater preference for branded milk and milk

products, would drive the growth for organised dairy players, who would see faster growth in next three years as against 22 per cent seen in last five years. Commenting on the report, Anuj Sethi, Director, Crisil Ratings, said, “Nearly a third of the overall capex is expected to be undertaken by the largest domestic dairy player, Gujarat Co-operative Milk Marketing Federation (which sells under the ‘Amul’ brand), through its member co-operatives.”

“These expansions will be strategically planned to ensure there is geographical diversification that strengthens milk procurement. The revenue share from the organised segment could rise to 25 per cent by 2018 from 19 per cent in 2015,” the report named ‘Cream Run’ stated.

Crisil rated 84 firms comprising 60 per cent of the organised dairy capacity in India. The organised segment rakes up revenues of ₹75,000 crore currently.

The sector is increasingly becoming attractive for private equity players, as it is ranked among the top 10 sectors monitored closely by PE players. From accounting for just 2 per cent of total PE investment a decade ago, the Indian dairy sector is now attracting over 6 per cent on a much larger base. Over ₹900 crore has been invested in the sector since 2010.

However, management of logistics costs and secured procurement would be crucial to profitability and cash flows in the business, it added.

According to NDDDB and Crisil Research estimates, the country produces around 3,800 LLPD of milk, accounting for a fifth of the global output. About 40 per cent of this is retained by producers (farmers) for household consumption; another 41 per cent share is with the unorganised segment. Only 19 per cent is procured, processed and sold through by organised dairies currently.

On the milk prices, Crisil maintained that increased availability would keep milk prices stable in the near term. But it would affect cash generation of the players primarily engaged into liquid milk.

The growth for organised dairy players is driven by value-added products, which grew 23 per cent annually compared with 15 per cent for liquid milk. In the branded segment, consumption of paneer, cheese, curd, butter, ice-cream and lassi has increased faster than milk.

The share of value-added products in fiscal 2015 is estimated at 43 per cent, up from 35 per cent in fiscal 2010.

(This article was published on December 21, 2015)

Biotech body opposes Centre’s move to regulate cottonseed prices

Cautions that such decisions would impact R&D investment flows into the country

HYDERABAD, DEC. 21:

The ABLE-AG has opposed the Centre's move to regulate cottonseed prices and wondered how could it take such a decision without consulting the industry. It cautioned that such a step would hit investments in innovative research and development.

"We question the decision-making process that involved no prior information, discussion, or consultation by the government with the association or any of its constituent organisations or technology developer and provider and any other stakeholder in general," the Association of Biotech Led Enterprises (Agri focused Group) has said.

The association represents the seed technology provider and other agri biotech firms. In a gazette notification, the Centre announced its plan to regulate the cottonseed price, including the licence fee (to be paid by the seed firms to Mahyco-Monsanto for providing Bt technology) and royalty. It planned to put a full stop to endless rows between the State governments, seed firms and Mahyco-Monsanto on the issue of seed price every year.

"Being an association committed to the improvement of Indian agriculture through biotechnology, we strongly oppose the order and the manner in which it was adopted," Ram Kaundinya, Director-General of ABLE-AG, said.

"While a part of the Order seeks to determine Maximum Sale Price (MSP) of cottonseed under the Essential Commodities Act, it surprisingly extends to fixing a component thereof associated with innovation. We are saddened that such action has been taken without consultations," he said.

The association had written to the ministries concerned on the issue, opposing the move.

Licensing agreements

The association contended that the agreements between the seed firms and Mahyco-Monsanto were in vogue for the last 10 years. "Such arrangements reflected the prevailing environment in the country including seed-price controls which have been in place in some States. Trait fees for cotton technologies in India are amongst the lowest in the world and comprise only about 1-2 per cent of the total cost of cultivation," he argued.

Paresh Verma, Head of Management Committee of ABLE AG, said that any policy that brought in adhocism related to potential return on investment would hit research investment decisions of technology development companies.

(This article was published on December 21, 2015)

Argentina's duty-free exports of soya oil fuel worries among Indian extractors



MUMBAI, DEC 21:

In yet another blow to the ailing edible oil industry, the Argentina government has removed export duty on soyabean and soya oil to make their exports competitive and retain its share in global edible oil market where prices are falling.

Pravin S Lunkad, President, Solvent Extractors Association, said the move by newly elected Argentina President Mauricio would have a positive impact on their export but soyabean and soya oil prices have started falling in the international markets.

Indian edible oil industry and farmers are already hit by the 24 per cent increase in edible oil import at 14.4 million tonnes last oil season (November 2014 to October 2015) worth about ₹65,000 crore (\$10 billion).

“Globally, edible oil prices are at record low levels of 2008 and Indian edible oil producers are unable to compete with rising imports due to high prices they pay for soyabean in India,” he said in a statement on Monday. Indonesia and Malaysia, the major palm oil producing countries, have set up a council with a common objective to maintain higher price of palm products in the international market and reduce competition amongst them.

India imported nearly 9.5 million tonnes of palm products from Indonesia and Malaysia – almost two-third of total imports in 2014-15.

Both these countries have inverted duty structure where crude palm oil attracts more duty than finished product refined palm oil, affecting the domestic refining sector. This may have serious implication for India in

the long run if the government does not take corrective measures, Lunkad said.

The association has asked the Centre to revise the duty difference between crude and refined oils to at least 15 per cent to protect the margins of domestic industry and ensure some value addition within the country.

The Association has made representation with the Commission for Agricultural Costs and Prices to reduce import duty on high oil-content oilseeds such as rapeseed/mustard and sunflower seeds to 5-10 per cent from 30 per cent so that crushing of these can reduce edible oil imports and also enhance oilmeal supply for domestic consumption by feed industry and exports.

“Oilseed imports will not have any impact on the farmers as they are protected with an assured minimum support price of the government,” he said.

(This article was published on December 21, 2015)

Budget 2016-17: Centre to bet on low oil prices to meet pay panel/OROP bill

May prune fiscal deficit target to 3.5% of GDP to keep public spending up

NEW DELHI, DECEMBER 21:

Budget making for 2016-17 is not going to be easy, with the Centre staring at large outgoes on account of the implementation of the Seventh Pay Commission recommendations and the One Rank One Pension scheme. Further, it is also firm on continuing its spending momentum to prime the economy. While the government deciding to push back the 3-per cent fiscal deficit target by one year will provide some cushion, a godsend has been the low crude oil prices, especially in the backdrop of disappointing tax mop-up and disinvestment receipts so far this fiscal.

As a senior Finance Ministry official said: “We expect crude oil prices to remain low in 2016-17 and so we will continue to push public spending.”

On fiscal deficit, Minister of State of Finance Jayant Sinha said the Centre is likely to prune it to 3.5 per cent of GDP in the 2016-17 Budget and 3 per cent in 2017-18.

The key factor, according to Finance Ministry sources, is that for Budget 2016-17 the government will assume the crude price much lower than the \$69/barrel taken for the current Budget, in keeping with the subdued international prices.

The Indian crude basket — that is, the price at which Indian refiners buy oil — averaged \$51.72 a barrel from April till December 18. This meant a lower crude import bill. For the April-November 2015 period, it was ₹3,11,660 crore versus ₹5,35,111 crore during the corresponding previous period. The import bill for fiscal 2014-15 stood at ₹6,87,416 crore. But one downside of the low crude price is that the country also earns less from the export of petroleum products. In April-November 2015, their exports fetched ₹1,26,226 crore against ₹2,20,351 crore in the corresponding previous period.

Another is the rising consumption though this may not have a direct correlation because demand can go up, for instance, because of more vehicles hitting the road. But demand for petrol and diesel did go up nearly 4.3 million tonnes in April-October 2015 over the same period of 2014, according to the Petroleum Planning and Analysis Cell.

This coincided with the fall in crude oil prices. Sceptics also question the wisdom of assuming a low crude price. They point to OPEC Secretary-General Abdalla Salem El-Badri's recent observation that "I have seen several oil price cycles and this is one of them. The low prices will not continue. In a few months to a year this will change."

However, with Brent crude hitting an 11-year low of \$36.17/barrel, the Centre is sure to see the benefit of low fuel prices kicking in this fiscal itself when it revises the estimates. With the US also set to sell its oil output and no signs on the horizon of a pick up in the global economy, the Centre may not be erring if it assumes the crude price at under \$50/barrel when making Budget 2016-17. The saving in the import bill should cover the expected outgo of ₹1.35 lakh crore on account of the implementation of the Seventh Pay Commission recommendations and OROP.

No wonder the Finance Ministry was emboldened to seek an additional expenditure of ₹56,256 crore in the Second Supplementary Demand for Grants though it hopes to rope in States and the private sector to crowd in investments.

(This article was published on December 21, 2015)



Spread of antibiotic-resistance gene does not spell bacterial apocalypse — yet

A ‘last resort’ drug to which bacteria are rapidly developing resistance is not quite the end of the antibiotic line.

TREND WATCH: Researchers have discovered that bacteria worldwide are sharing a gene that confers resistance to colistin, a 'last resort' antibiotic. Reports of the discovery originated last month from China¹, and have been followed by findings of similar resistance in countries including Denmark², the Netherlands³, France⁴ and Thailand⁵.

Although the findings are concerning, they may not be as catastrophic as many media reports have suggested, because colistin is only one of several antibiotics that are rarely used in humans. The discovery “is bad, it isn’t apocalyptic”, says Makoto Jones, an infectious-disease physician at the University of Utah in Salt Lake City.

Colistin was developed in the 1950s, one of a class of compounds called polymyxins. It is known as a last resort drug — physicians avoid using it when possible — because it tends to damage patients’ kidneys, says epidemiologist Lance Price at George Washington University in Washington DC.

As a consequence, bacteria have been slow to develop resistance to colistin, compared to other antibiotics (see 'The spread of antibiotic resistance').

Italian scientists under investigation after olive-tree deaths

Prosecutors accuse researchers of spreading disease and order a halt to the culling of infected trees.



Davide Monteleone/The New York Times/Redux/eyevine
Olive trees infected by Xylella in Italy; the disease is sweeping across one of the nation's most famous olive regions.

Nine scientists are being investigated for a possible role in enabling an outbreak of a [disease that is ravaging olive groves in Puglia, Italy](#). The public official in charge of containing the epidemic is also under investigation.

Public prosecutors announced the formal investigation at a press conference in Lecce in southern Italy on 18 December. At the same time, they ordered an immediate halt to measures put in place to contain the spread of the disease, which include chopping down and burning infected and vulnerable trees, and spraying insecticide. The prosecutors argue that too little is understood about the science of the disease to justify such measures.

“We are shocked,” says Donato Boscia, head of the Bari unit of Italy’s Institute for Sustainable Plant Protection. He is one of the accused, who, according to local newspaper reports of the press conference, are suspected of "negligent spreading of the plant disease, presenting false information and materials to officials, environmental pollution and disfiguring natural beauty".

Related stories

- [Italian scientists vilified in wake of olive-tree deaths](#)
- [Murky manoeuvres](#)

“The accusations are crazy,” Boscia says.

Spread of disease

The outbreak is caused by the bacterium *Xylella fastidiosa* and spread between trees by the spittlebug. The particular strain of *Xylella* involved is endemic to Costa Rica, Brazil and California, and had not been seen in Europe until 2013, when it was identified in southern Italy.

Under European Union rules, Italy is obliged to carry out a scientifically based containment plan to stop the disease from spreading to other EU countries. In addition to culling infected trees, this plan involves destroying healthy trees to create buffer zones. But farmers, supported by environmental activists who deplored the destruction of ancient trees, have protested against its implementation. Individual court rulings have found in their favour, stopping tree felling and the spraying of insecticide on their land.



ROPI / Alamy

Workers in southern Italy prepare to cut down an olive tree infected with *Xylella fastidiosa* bacteria.

On 10 December, just over a week before Italian public prosecutors announced their investigation, the European Commission opened an infringement procedure over Italy’s failure to carry out containment measures quickly enough. Commission spokesman Enrico Brivio says

that he does not know what will happen now that Italian courts have blocked the entire containment plan. “*Xylella* in all its strains is the most dangerous pathogen for plants, and epidemics have huge economic impact,” he says. “The emergency measures are necessary and need to be implemented.”

Prosecutors, who had confiscated computers and documents from scientific institutes in May, have not made public any details of their evidence against the scientists. But they say that they continue to worry that the deadly *Xylella* strain may have been imported from California for a training workshop at the Mediterranean Agronomic Institute of Bari in 2010, and may then have been released into the environment. They say they are also concerned that the strain may have escaped into the environment from field experiments.

Boschia said that he had been told not to comment on details of the investigation. But scientists have previously pointed out that the *Xylella* strain in question was not used in the workshop.

Most scientists who have examined the issue consider it likely that the disease arrived with ornamental plants imported from Costa Rica, which harbour the same strain of *Xylella*.