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## THE HINDU

### **Drip irrigation gaining ground among farmers**



Drip irrigation has been gaining popularity among the farmers of interior villages who were hitherto hamstrung by poor irrigation facilities.

The Horticulture and Agriculture Departments have planned to cover about 600 hectares of land under drip irrigation through a subsidy-based scheme under the National Micro Irrigation Mission.

Villages in and around Kattuputhur and Murungai in Thottiyam block are some of the major areas where the drip irrigation scheme is being implemented with the active support of farmers.

Several farmers have raised multiple crops using drip irrigation in the villages. M.Yasodha, a farmer of Chinnapallipalayam near Kattuputhur, said that she had cultivated banana, sugarcane, and tapioca in about two acres of land.

Previously, the fields were irrigated twice a week, now, however, it's enough for me to irrigate them once in a week, she said.

Drip irrigation helps her to utilise the available water optimally and helps to keep weeds under check. "Excessive irrigation often leads to growth of unwanted weeds," she pointed out.

Murugesan, another farmer, said that apart from minimising the cultivation cost, drip irrigation would help improve crop yield by 20 to 40 per cent.

Excessive use of fertilizers could also be avoided, he said. Officials said that there has been an overwhelming response to the drip irrigation programme in the district.

The quantum of water used for irrigating one acre of land under the conventional system could now be used for irrigating a minimum area of three acres of land, the sources added.

### **NABARD commences initiation of 'Uzhavar Mandrams' for 2015-16**

The National Bank for Agriculture and Rural Development (NABARD) has commenced the process of starting farmers' clubs for 2015-16 in the district for promoting economic progress of agriculturists through technology integration and inculcation of best cultivation practices.

Of the 40 such clubs planned during the year, five 'Uzhavar Mandrams' were started last week in five hamlets surrounding Tamaraikarai on Bargur hills.

At a programme organised by Sudar NGO, NABARD Assistant General Manager G. Santhanam and Lead Bank Manager Selvaraj initiated the clubs at Onnakarai, Agnipavi, Periyur, Jeeyanthotti, and Sundaipodu hamlets.

### **Technology upgrade**

There are close to 400 such clubs in the district, each receiving Rs. 10,000 a year for conducting programmes focussing on technology upgrade of farming practices.

Experts are invited to provide orientation on organic farming, rearing of milch cows and goats and other income-generation activities.

Last year alone, 53 clubs were formed in the district, and this year at least 40 will be initiated, Mr. Santhanam said.

Last year, NABARD organised visits of farmers' teams from Erode to Theni to learn about banana tissue culture, to Maharashtra to know about pomegranate cultivation, and to Udumalpet to observe methodology of ultra high-density mango crop cultivation.

The NABARD is into the process of forming Farmers' Producers' Organisations out of the clubs, and secure them bank loans at low interest rates for income-generation activities.

The clubs envisaged as grass-root level informal forums are supported by rural branches of banks, NGOs and Krishi Vigyan Kendras for fulfilling the objective of development through credit, technology transfer, awareness and capacity building. The emphasis is on increasing the income of the farmers by increasing the production and productivity by adopting appropriate technology, good agricultural practices, proper use of credit and marketing skills.

Members of the newly started clubs were provided orientation by Director of Sudar NGO S.C. Nataraj, Canara Bank's Anthiyur Branch Manager Jebaraj Devid, Assistant Agriculture Officer K. Umaphathi, Assistant Horticulture Officer Thangavelu, Medical Officer of Bargur Animal Husbandry Dispensary Poovendraraja, Assistant Engineer of Agricultural Engineering Department Edwin Papli, and Kavignar Komagan.

The members of Thinai, Thendral, Kurinji, Mukil and Thirunachiamman farmers' clubs were given seeds of urad dal and pulses.

### **SCDCC Bank to drastically reduce home loan rates**

The South Canara District Central Cooperative (SCDCC) Bank has decided to drastically reduce interest rates on home loans to mark its centenary celebrations. All new home loans availed from May 1 onwards would be available at competitive rates, ranging from 9.5 per cent to 10.5 per cent per annum, said Bank president M.N. Rajendra Kumar on Monday.

Speaking to presspersons here, Mr. Kumar however said that existing loans would continue to be under old rates. He said that the bank's centenary building 'Utkrushta Sahakari Soudha' would be inaugurated by Chief Minister Siddaramaiah on Thursday.

It is also the first time when the Chairman of National Bank for Agriculture and Rural Development is attending a function of a DCC bank in the country, Mr. Kumar said. NABARD Chairman Harsh Kumar Bhanwala is scheduled to open the bank's Kodialbail Main branch in the centenary building on Thursday. The five-storied state-of-the-art building built at Kodialbail has various facilities including an IT centre for the bank to help

discharge various IT-related services; an auditorium in memory of bank's founder Molahalli Shiva Rao; a guest house; Karnad Sadashiva Rao memorial banking training centre and a conference hall for board meetings. The inauguration would be done at 3 p.m.

Additional Chief Secretary, Department of Cooperation and Agriculture Marketing, Mahendra Jain on Monday said the agrarian crisis haunting the country seems to not have affected the State so far. Attractive interest subvention by the State government and prompt loan repayment by farmers in the State could be the reasons for this, he said.

### **Farmers turn the heat to their favour**



A group of farmers of Kattuputhur near Thottiyam has proved that solar power can be used for drawing groundwater using heavy duty motors to irrigate oil palm grove.

The farmers, P.Sundaram and his son S.Gnanam of Chinnapallipalayam village, have set up a solar power plant close to an open well on their 15-acre field.

While the entire project cost was about Rs.5.17 lakh, the farmers have shelled out only Rs.1.17 lakh.

“The Central and State governments have been encouraging farmers to set up solar panels for drawing water for irrigating the fields,” he said.

The solar panels were maintenance-free, Mr.Sundaram said. Officials of the Agriculture Engineering Department, which implements the scheme, said

that farmers had set up the solar panels for irrigating horticulture plants and sugarcane in other parts of the district. Another farmer, who had cultivated tapioca on about one hectare of land, had erected solar panel on his field to operate water pumps.

So far, 52 solar panels had been set up in various parts of the district – mostly in Andanallur, Manikandam, Musiri, and Thottiyam blocks. Banana and paddy were the major crops being raised by farmers using solar energy, said official sources.

### **Dairy farming popular in Wayanad: study**



Dairy farming is getting more popular among farmers in Wayanad district, a study says.

It reveals that milk production has increased by 25 percent in the district in the past three years and nearly 30 percent of marginal farmers in rural areas have selected dairying as their major occupation.

The study was organised by the final year B.Tech students of the College of Dairy Science and Technology (CDST) under the Kerala Veterinary and Animal Sciences University (KVASU) in various parts of the district as a part of the Venma-2015, a seven-day field extension training programme.

More number of young entrepreneurs are venturing into the sector in the wake of the sharp decline in price of cash crops, especially rubber, arecanut and tea, the study says.

Recent reports suggested that the situation is quite similar in the rubber and tea growing areas of the State, T.P. Sethumadhavan, Director of Entrepreneurship, KVASU said.



The survey found that increasing availability of land as well as the use of unconventional feeds like beer waste and oil cakes has helped in reducing the cost of production. Even with the current milk price, farmers are getting better income from dairying.

Increasing cost of production, increasing treatment cost and decreasing productivity are the major issues raised by farmers during the survey. Though many farmers were relying on traditional practices to control diseases, it could not produce any positive results.

Incidence of mastitis, a potentially fatal mammary gland infection, is high among dairy cattle due to unscientific cattlesheds including improper flooring.

Scientific housing, feeding, dairy management and disease control measures can reduce the cost of production and can make dairying more profitable in the State, the survey added.

As many as 30 students participated in the week-long survey. They took classes for the dairy farmers on 'Quality Milk Production' as part of the quality awareness programme in various parts of the district. G. Girish Varma, Dean, and S.R. Shyam Suraj, Assistant Professor (Dairy Extension), CDST, coordinated the programme.

### **'Govt. will lift all grains from farmers'**

Punjab Chief Minister Parkash Singh Badal on Monday directed the officials of the State government to make all-out efforts towards smooth, timely and hassle-free procurement of grains from farmers during the ongoing procurement season.

Presiding over a high-level meeting here to review the ongoing procurement in the State here, the Chief Minister had detailed interactions with the officials on the issues pertaining to procurement, moisture content, damage and payment of the wheat crop, an official spokesman said here.

### **Prevent harassment**

He asked the officials of the state government particularly the Managing Directors of the State procurement agencies to personally visit the grain

markets for ensuring that farmers do not face any sort of problem in selling their harvest.

“This will facilitate the farmers in selling their harvest without any sort of undue harassment,” Mr. Badal said.

On Tuesday last, Congress leader former Chief Minister Amarinder Singh had blamed the Akali-BJP government in Punjab for the alleged distress sale of wheat by farmers as the state agencies “failed” to procure the produce on time.

Two days ago, Punjab Pradesh Congress Committee President Partap Singh Bajwa had also said that the party would intensify protests “if the government fails to solve the issue of non-procurement of crops.”

Meanwhile, it was apprised in the meeting today that in order to ensure smooth, prompt and hassle free procurement of wheat, the state Food and Civil Supplies Department had already issued the ‘Wheat Procurement Policy’ for this current marketing season.

### **Storage space**

Necessary arrangements for required storage space had already been completed and a network of purchase centres has been notified by the Punjab Mandi Board and allotment of ‘Mandis’ to six procurement agencies have been made as per their allotted share by the state government.

The officials also apprised the Chief Minister that barring some pockets the work of procurement was going on smoothly.

The Chief Minister further asked officials to make the payment of the crops to the farmers immediately, without any delay.

## Tough time for prawn farmers



Prawns at a number of farms at several places in the district had been affected by some disease and farm owners who have invested a huge sum of money have been sparing no effort to protect the prawns for ensuring adequate returns.

Farm managers apprehend that the damage caused to a single prawn in the farm is quite enough to spoil prawns not only in the entire farm but also in the farms in the vicinity.

A number of villages in the district account for prawn farms and each farm, measuring about one hectare in area, is used for developing five lakh seeds for a period of 120 days.

“We invest huge sum of money to buy seeds at Muttukadu, Sozhanginallur, both near Chennai, Marakkanam and Anumandai, both in Villupuram district.”

S. Sathiyamoorthy of Karuvelankadai on the Nagapattinam – Vedaranyam segment, one of the growers, says fall in quality of water and ‘white spot’ disease in prawn were posing a problem. Although they have taken up remedial measure, prospects of the yield were bleak, he said.

The problem was more pronounced in adjoining villages such as Paravai Velankanni, Chithiraikovil, Vellapallam, says K. Mathi, another grower.



The farmers said that export would be badly hit by the disease. They could market the prawn only in the local market.

While the export product fetched about Rs.700, the sale for local consumption would be less. Although the prawn is due for harvest during June, farmers say they would be compelled to go for the harvest earlier as growth and consequent weight of prawns would be less. Officials of the Fisheries Department at Sirkali pointed out that they would conduct a survey of the area shortly and assess the nature of the disease.

### **Bracing up for ‘white revolution’**

The Chittoor administration has geared up to making the district into a ‘Milk District’ by 2020, eyeing on a target of producing more than 50 lakh litres per day.

Animal Husbandry Department, dairy industries, veterinary experts and researchers from Sri Venkateswara Veterinary University (SVVU) in Tirupati have formed into a consortium, with a series of action plans to execute the ‘Ksheera Sagaram’ (Ocean of milk) programme which was launched by Chief minister N. Chandrababu Naidu in February this year.

As part of the preparatory measures, the Animal Husbandry Department has been organising target-oriented workshops, with participation of officials and dairy farmers as well since the last two months.

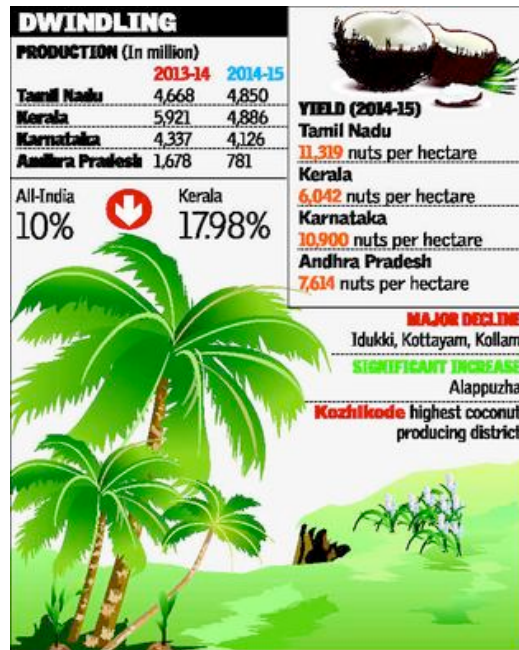
The district, having an ample scope for dairy development, from Satyavedu to Kuppam, is considered as a congenial zone for milk production, with a number of private diaries, government-owned milk collection centres and active involvement of Mahila Samakhyas.

At present, the district has a healthy population of nearly 6 lakh cows, and more than 50,000 buffalos. A plan is underway to double the cattle population in a phased manner, apart from intensification of research activities at the field level to augment milk production and sustenance of indigenous breeds.

Speaking to *The Hindu*, Joint Director (Animal Husbandry) M. Srinivasa Rao said that the present milk production in the district stood at 24 lakh liters per day owing to summer, which is 2 lakh litres less than the average figure.

To achieve the projected production, he said, the immediate focus areas included increase in fodder availability and maintenance of ‘ensoiled fodder stocks’.

## Coconut production falls in Kerala



While coconut production in Tamil Nadu increased by 3.90 per cent in 2014-2015 over the previous year, its production in Kerala fell by 17.98 per cent during the corresponding period.

According to a survey report released by the Coconut Development Board on Monday, coconut production in Kerala which was 5,921 million nuts in 2013-14 fell to 4,886 million nuts in 2014-15.

The production in Tamil Nadu stood at 11,319 nuts per hectare in 2014-15 while in Kerala it was 6,042 nuts per hectare. At the all India-level, coconut production during the period showed a fall of 10 per cent.

In Kerala, major decline in production was observed in Idukki, Kottayam, and Kollam districts and a significant increase in yield was found in Alappuzha district. Kozhikode is the highest coconut producing district in the State followed by Malappuram.

Coimbatore is the largest coconut producing district in Tamil Nadu followed by Thanjavur district. In Karnataka, production declined from 4,337 million

nuts to 4,126 million nuts in 2014-15. Production stood at 10,900 nuts per hectare during the period. Major coconut growing districts of Tumakuru and Hassan recorded a decline in production, so are the coastal districts of Udupi and Dakshina Kannada. Tumakuru is the largest coconut producing district in the State followed by Chitradurga and Hassan.

### **Kisan Sangha bats for revival of the sugar factory at Brahmavar**



The district unit of Bharatiya Kisan Sangha has urged the State government to take immediate steps to rejuvenate the ailing Brahmavar Cooperative Sugar Factory.

The factory, which started functioning in 1985, closed down in 2004 amid mounting losses. The factory was started on the premise that the Varahi Irrigation Project, for which the foundation stone (along with that of the factory) was laid in 1980, would provide water for irrigation, which in turn would help in sugarcane cultivation. But the snail's pace progress of the Varahi Irrigation Project delayed it by 35 years.

In a release issued here, B.V. Poojary, president of district unit of Sangha, said that water from the Varahi Irrigation Project had reached up to 25 km this month. The factory has 110 acres on National Highway 66, with a market value estimated at Rs. 250 crore. The factory owed about Rs. 75 crore to the government and other financial institutions.

Since the machinery at the factory was old, the government should install new machinery in its place, he said. The government could go in for co-generation, ethanol production and fodder production units at the premises of the factory. All this might require about Rs. 150 crore.

When the government had spent Rs. 700 crore for the Varahi Irrigation Project until now, it would not be difficult for it to spend another Rs. 150 crore for rejuvenating the factory, Mr. Poojary said.

There were rumours that the Karnataka Industrial Area Development Board would acquire the factory land for establishing industries. Under no circumstances should the land be given to the industries, he said.

The government should think about the advantages of rejuvenating the factory. The new factory unit would be able to crush 2.5 lakh tonnes of sugarcane. The farmers could grow a minimum of 25 tonnes of sugarcane on one acre of land. This meant that 10,000 acres (4,000 hectares) of land was required for growing sugarcane.

The Sangha had submitted self declaration forms from 1,800 farmers who had assured to grow sugarcane in 3,500 acres for the factory. The Varahi project was expected to provide irrigation facilities to 7,500 acres of land this year. Next year, the project was expected to extend irrigation facilities to additional 5,600 hectares (14,000 acres). If farmers grew sugarcane in 6,500 acres, the requirement for the factory could be fulfilled from Udupi district alone.

Since sugarcane was less labour-intensive, the farmers from Dakshina Kannada and Uttara Kannada districts too might grow cane after the factory's revival, the release added.



### **Crop damage update: 189 lakh hectares**



The unseasonal rainfall accompanied with hailstorm in February and March have caused much more damage to the crops than it was previously thought of, Union Agriculture Minister Radha Mohan Singh told Rajya Sabha on Monday.

Singh said that the *latest* assessments by the state governments add up to 189 lakh hectares of cropped land that have been affected by the recent rainfall. Replying after a marathon eight-hour debate on the agrarian crisis in the country, Singh said Uttar Pradesh has revised the extent of damage of cropped land from 29 lakh hectares to 94 lakh hectares.

“I had told Lok Sabha on April 20 that a total of 94 lakh hectares of cropped land have been damaged. Since then some states have updated their numbers. As of now, the assessment is that 189 lakh hectares have been damaged,” Singh said, adding that the *Centre* was doing all it could to give relief to the affected families.

At the same time , he admitted that the crop insurance schemes, run by various private companies, had not turned out be very effective.

“The Central government has given licences to these companies to run crop insurance schemes. But it is the states who select which companies would be allowed to operate in their area,” Singh said.

He said the government has already taken a number of steps to help farmers, including an increase in the compensation amount. He countered the claims made by several Opposition members on the number of farmers who had committed suicide.



“Unhappy” with the minister’s reply, members of Congress, Samajwadi Party and Trinamool Congress walked out of the House.

Earlier in the day, a large number of MPs took part in the debate, most of them taking up issues of minimum support price, farmers’ suicides, compensation for crop damage, and the land acquisition bill.

CPM’s Sitaram Yechury said the government would be failing not just the nation but also the humanity if it did not take adequate steps to stop the spate of suicides being committed by farmers. He said the suicide of a farmer during the rally of Aam Aadmi Party in Delhi “was just a manifestation of a much bigger problem”.

Ashwani Kumar of the Congress suggested that the minimum support price should be based on the income level of the farmers rather than on the cost of production.

### **Amid cry for beef ban, meat exports from India on a rise**

Even as states like Maharashtra and Haryana ban beef and impose strict punishment in case of violation, there has been a continuous growth in the export of the meat in the past three years.

<b>Animal Product</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15 (Apr-Feb)</b>
Animal Casings	645.84	352.20	244.34
Buffalo meat	10,76,103	13,65,643	13,56,794
Other meat	194	268	248
Processed meat	796	508	222
Sheep and goat meat	15,287	22,608	21,807
<b>Total</b>	<b>17,38,223</b>	<b>17,41,227</b>	<b>16,23,418</b>

US department of agriculture shows that [India](#) has been the largest exporter of beef in the [world](#) since last year. While it remains the largest exporter of beef, according to the UN Comtrade data, India's share in global trade of animal products for 2013 stood at 0.89 per cent.

Politics over beef notwithstanding, India has been flagging the issue of market access of buffalo meat with China, Indonesia and the EU, which have halted meat import from India citing reasons like prevalence of foot & mouth diseases.

<b>IMPORT OF ANIMAL PRODUCTS IN LAST THREE YEARS</b> (IN TONNE)			
<b>Animal Product</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15 (Apr-Feb)</b>
Animal Casings (kg)	20	220	Nil
Other meat	426	361	428
Processed meat	566	388	156
Sheep and goat meat	22	60	75
<b>Total</b>	<b>1,034</b>	<b>1,029</b>	<b>659</b>

Reasons for India's meager share in world trade include high consumption base, relatively low productivity, prevalence of various livestock diseases such as foot and mouth disease, impeding market access to Indian livestock products, several quality, and non-tariff issues from major competing countries.



### Priority sector credit plan up 17%

Buoyed by the rising credit off take in non-agriculture and micro, small and medium enterprises sector and other priority sector including agriculture equipments, the district level consultative committee (DLCC) has cleared the annual credit plan with an increased credit provision of 43.68% for other

priority sector. The total plan has gone up by 17% compared with just 3.86% last year.

The Annual Credit Plan (ACP) was unveiled by the district collector on Monday in which the total credit plan has been pegged at Rs 8,504.19 crore against Rs 7,724.57 crore for 2014-15. "The priority sector with Rs 7,862.39 crore has seen a phenomenal rise - up to 17.06% against the Rs 6,716.52-crore planned last year," said district collector Deependra Singh Kushwah, appealing to farmers and entrepreneurs to benefit from the credit plan.

The plan has provided the credit of Rs 2,525.22 crore for other priority sector, which is 43.68% more than that last year. "The other priority sector contributes to the goods and equipments required for the agriculture - primarily and other things. The achievements for 2014-15 point out that the achievement by December 2014 quarter was 113.31% of the target of Rs 1,757 crore. The figures of March are yet to be incorporated. The credit thus made available will help raise infrastructure for agriculture. The farmers are taking loans for the shed nets, other equipments that are likely to contribute for agri production in the next year," officials from agriculture department said.

The official said private and government banks in the district had already achieved 102.33% of their targets for the quarter ending December 2014 and were upbeat about crossing the annual target.

The best performance was reported in the agriculture and allied activities in the district that recorded 123.85% of the target till December 2014 (Rs 198.46 crore) after non-priority sector (that recorded 202% of achievement).

"We are hopeful that the credit plan could see achievement around 105% as the final figures for the annual plan come in," the officials said.

## **How technology can be used for assessing crop loss data**

Remote sensing technology can be used to find crop acreage, yield and loss due to weather



The Agriculture Ministry's recent move to assign government officials to various States for assessing damage to standing crops due to unseasonal rain seems to indicate the reluctance of the government in adopting new technologies.

Relying too much on manual intervention, at a time when things can be done faster and more accurately and at a lower cost using technology, may be inappropriate and undesirable.

### **Reluctance to change**

The government depends on inputs received through an organisational structure with a village-level officer at the lower rung estimates on area under various crops, estimating yields around harvest time, assessing damage to crops. The use of statistical methods in such estimations is fine. However, in most cases, the initial input coming from the ground level might be an approximate one given the resource constraints at the disposal of the officials concerned. Errors in the basic unit of data collection will only magnify as one goes on aggregating at higher levels.

As a result, the government has to come out with nearly four estimates for yield and production data and the final figures are published almost a year later. Further, there are chances of wide variations between the initial estimates and the final data, which distort supply-demand scenarios, leading to loss to farmers and consumers.

In cases of damage to crops due to vagaries of the weather, the compensation calculations take time and the needy farmer might have to wait longer to get compensation. Worse, there could be errors of inclusion and exclusion when crop loss estimates are done manually.

### **Faster, cheaper & reliable**

The answer to such problems lies in tapping remote sensing technology.

Satellite-based technology has made tremendous progress and it is possible to assess the area covered by a crop at different stages using direct images or on the basis of the wavelength of the colours reflected by the crops. This can help provide near accurate estimate of the area under a particular crop.

The same can be tracked at different stages of the crop, right up to harvest. Satellite images that can map heat produced can also be used to estimate the approximate yield of a crop, after correlating the actual yield with the wavelengths produced by the crop at harvest stage.

### **Ease in compensating**

The same logic can be extended to assessing crop damages, not only due to weather abnormalities but also severe pest or disease incidences.

Superimposing the satellite maps with revenue maps can help in identifying the exact field or farm that has suffered damage and the compensation can be worked out at a much faster pace.

The Centre can, in fact, use the faster compensation mechanism as a means to encourage States to hasten and complete computerisation of land records and use GIS for maintaining land records.

Timely assessment of crop production will help in identifying the supply-demand scenario and some price ranges too can be arrived at, which can be



disseminated to farmers. This would help farmers in taking decisions on holding or selling their stocks and plan for the next crop as well.

Accurate and near real-time information can also enable crop insurance companies to develop better products that are more useful to farmers. And all this is possible using extant technologies, perhaps with some fine-tuning and customisation to the agricultural sector. It is high time that we make a quantum leap from human dependent interventions to technology-based ones in agricultural data collection.

### **Ways ahead**

The government is using remote sensing technology in natural resource management, with agriculture and soil as one of the nine areas that have been included for enabling application of remote sensing technology.

ICAR institutes such as Indian Agricultural Statistics Research Institute can collaborate with National Remote Sensing Agency for initiatives in developing the model for data collection and analysis. Needless to say that agricultural data collection through modern technology will help not only bring in structural changes but also in capacity building of manpower.

Aashish Argade is pursuing Fellow Programme in Management at IIM Ahmedabad. Enamul Haque is Director at TransRural AgriConnect Services. Views are personal.

### **Technology-led approach, effective usage needed to boost agricultural productivity**



Water resource management crucial to sustainable development

The Green Revolution has played a transformational role in the revival of Indian Agriculture, making India not just self-sufficient in food grains but a net exporter too.

However, decades after the Green Revolution, India is faced with the challenge of ensuring food and nutritional security.

To achieve this primary goal, it is critical for our agriculture sector to overcome low productivity levels arising out of depleting land resources, soil degradation, high dependency on rain-fed irrigation and climate change patterns.

The slow-down in agricultural productivity has become the major cause of concern for low agricultural growth.

### **Comparative yield**

Productivity of Indian agriculture is low as compared to the productivity at the global level.

According to FAO estimates, the yield of rice as of April 2011 in India was 3.2 tonnes per hectare as against 7.5 tonnes per hectare in the United States, 6.7 tonnes per hectare in China and global average of 4.3 tonnes per hectare (Chart).

Similar contrast in yields have also been observed in case of wheat and coarse cereals though yield gaps as regard oilseeds were lesser, that is, 1.0 tonne per hectare, 2.7 tonnes per hectare and 2.1 tonnes per hectare for India, United States and China respectively.

Even the most productive States in the country fall short of world standards in terms of yields of major crops.

### **Significance of technology**

Technology has a major role to play to improve crop productivity.

In this regard, introduction of soil health card and integration of economically important genes for crop yield improvement are two primary initiatives that have been taken by the Centre.

The card will carry crop wise recommendations of nutrients/fertilisers required for farms, making it possible for farmers to improve productivity by using appropriate inputs. About 14 crore Soil Health Cards are envisaged to be issued over the next 3 years.

The Centre has initiated long term measures through sequencing of genomes of important plants and microbes, targeted integration of economically important genes for crop yield improvement genomics and bio-fortification for qualitative and quantitative improvement in food crops.

### **Improving water resources**

India's largest user of water is the agricultural sector. However, increasing competition for water between industry, domestic use and agriculture has highlighted the need of proper water management.

Water usage and management for sustainable development is rapidly becoming a focal point for all growing economies.

Given the fact that India withdraws 85% water for irrigation and only a mere 9% is utilised by the industry while the balance goes to households, it is one of the most important input side commodities that runs the risk of drying up, unless comprehensive management practices are put in place to assess and manage the requirement, usage and regeneration of water sources.

Piped transport, better on-farm management of water, and use of more efficient delivery mechanisms such as drip irrigation are among the actions that could be taken.

Steps needed to be taken to exploit the use of groundwater. Incentives to pump efficient water usage such as levying electricity charges, or community monitoring of use, have not yet succeeded beyond sporadic initiatives. Gujarat's Jyotigram Yojna is an innovative Electricity Scheme in that separates electricity feeder lines for agricultural and non-agricultural users.

The three-phase reliable electricity supply made it possible for farmers to stick to their irrigation schedules and helped inculcate discipline in the extraction of ground water. Meters were also installed on each feeder to curb theft. This resulted in a 9.6%-growth rate in agricultural as compared to a national average of 2.9%.

### **Other priorities**

Other key priorities include: modernising irrigation and drainage departments to integrate the participatory irrigation management with farmers; improving M&O cost recovery; rationalising public expenditures, with priority to completing schemes with the highest returns; and allocating sufficient resources for operations and maintenance for the sustainability of investments.

The Union Budget 2015 has mentioned the focus on water management through ‘Pradhanmantri Gram Sinchai Yojana’ to provide ‘Per Drop More Crop’ and Rs. 5,300 crore to support micro-irrigation, watershed development. It is planned to include NREGA with Pradhanmantri Gram Sinchai Yojana.

The Centre has taken major steps to address the two major factors critical to agricultural production, soil and water.

To boost farm productivity, technology intervention should address farm mechanisation of small farms. Integration of ICT in Research and Extension can give a dimension towards innovative solution by linking institutional responsibilities.

### **Participatory approach to rural growth key to address challenges**



Will the Prime Minister's Saansad Adarsh Gram Yojana (SAGY) achieve this?

The trajectory of India's rural development has been commended for successful interventions, yet the country is still a long way from eradicating poverty and bridging the development gap between rural and urban centres. As we study the history of developmental strategies in the country, we realise that the approach to rural development has undergone a paradigm shift over the last few decades, from that of a 'top-down' to a 'bottom-top' approach.

Until the 1990s though India's strategy to development was that of centralisation, where the centrally administered support programs and planned interventions like community development and integrated rural development did not result in substantial rural poverty alleviation. These shortcomings led to the realisation that the top-down approach or the 'trickle down' effects of economic growth takes way too long to reach the poor, and the need for decentralisation.

### **What it means**

Decentralisation typically involves transfer of power and authority from the central/State government to the local level, and to non-government and private organisations, thus enabling the rural poor to – a) share in decision-making that affects their daily lives; b) evaluate the outcome of their own decisions; c) minimise chances of misunderstanding; d) understand the difficulties and complexities of administration, planning and management; e) accept responsibility for failure; and f) develop a sense of belonging and commitment to civil society.

Article 40 of the Indian Constitution provided for the decentralisation in the form of a general directive to the state to establish Panchayati Raj institutions at the village level to formulate and execute various programs of economic development and social justice. Today a plethora of central and State-sponsored schemes are being implemented directly/indirectly through Panchayats on many aspects including health, education, income security, water and sanitation, housing and roads.

However, the promising start towards decentralisation in most States soon began to fade, either under political pressure or due to changes in growth strategies and policies of the government. The creation of Panchayats was



not followed up by the devolution of powers and resources to these bodies, stalling progress of the decentralisation process.

Prime Minister Narendra Modi's ambitious Saansad Adarsh Gram Yojana (SAGY) has renewed the focus on translating the concept of Gram Swaraj or village democracy into reality by ensuring the participation of all sections of the society in all aspects related to village development, especially in decision-making and resource allocation. The focus of this program is on strengthening local democracy through strong and transparent Gram Panchayats and active Gram Sabhas, facilitating overall good governance. Under this flagship scheme, each Member of Parliament would motivate and drive development of best quality amenities & opportunities in these villages. MPs are expected to lead and nurture these villages and mobilise local community participation as they turn into "model villages" – a shining example for replication elsewhere.

### **Approach of scheme**

The Scheme is unique in its having a holistic approach towards development. It envisages the all-round development of the village across areas such as agriculture, health, education, sanitation, environment, livelihoods etc. Going beyond development of institutional & social infrastructure, it lays emphasis on raising the living standards along with accumulation of social capital.

Each MP is free to identify any village for the Adarsh Gram initiative except for their own village or that of their spouse. Lok Sabha members can choose any village within their constituencies (urban MPs can select one from nearest rural area) and Rajya Sabha members can opt for any village in the State they represent with members. A member is expected to adopt one village right away and 2 others subsequently, out of which the first model village needs to be ready by 2016 and all three by 2019. Thereafter, members are expected to adopt one village every year so the target is to ensure 5 model villages by 2024. At this rate, the whole team of MPs can together contribute to 6,433 model villages by 2024. The number of Gram Panchayat's covered will be 2,65,000.

Technology and innovations are expected to play a crucial role in the success of this flagship scheme. Adoption of breakthrough and cost-efficient technologies related to agriculture, livelihoods, building and road

construction would vastly improve quality of life and expand the opportunities horizon, besides facilitating improved monitoring.

Andhra Pradesh has been the first State to formalise this approach to development as part of its Smart Village/Smart Ward Program. This program envisages implementing an integrated local development process around the principles of inclusion, equity, empowerment, social justice, bottom-up participation, self-management and inter-sectoral convergence.

The Smart Village program brought a new angle to governance through participation by encouraging individuals, institutions or private organisations to partner villages and handhold the development process by facilitating the communities, especially women, youth and deprived and marginalised communities in society, while integrating different sectoral verticals of the government.

They will be acting as a catalyst between the village body and the government in identifying the development needs, connecting them to the relevant government schemes, and monitoring the implementation process. They will also be responsible for mobilising any additional funds and appropriate technical support for development projects.

Effective coordination and systemic monitoring is essential for ensuring the achievement of the desired outcomes of the approach to development.

### **Committees to be set up**

The Government of The State Government on its part will be setting up various committees at State, District, Mandal and Village level to independently monitor the development process. However the self-monitoring and learning system of the participatory approach will ensure that all the key stakeholders in the Smart Village Program, including sponsors and service providers, are capturing and understanding the progress, process, performance, degree of participation and persistence of sustainability of the development initiatives.

### **Advisory boards**

In addition for effective governance, advisory boards have to be set up at the village level which will act as a decision-making and implementation authority. The crux of this approach is to provide the basic social and

economic infrastructure, create human and institutional capacity, create more jobs and focus on the growth areas in identified sectors for increased resource use efficiency.

The participatory approach outlined above is built upon the belief that marginalised people of community will best understand the challenges they face and how to address them. However, for the success of any participatory approach to rural development, control rights in governance structures should be assigned to people who have the requisite information and incentives and at the same time responsible for both political and economic consequences of their decisions.

In many situations, this devolution of power to local authorities and communities ends up putting the development process at the mercy of local power elite who may frustrate the goal of achieving public delivery of social services. Therefore, decentralisation through participation of local communities should accompany serious efforts to change the existing structures of power within communities and to improve the opportunities for participation and voice for disadvantaged sections of the community.

### **Farm pact at WTO distant, but India wins support**

India's fight at the World Trade Organization (WTO) seeking continued legitimacy for its food procurement programmes has got a shot in the arm with a majority of developing countries and some food exporting developed countries supporting a farm text drafted in 2008.

The text approves procurement subsidies for poor farmers and proposes higher tariff cuts for rich country members.

In a recent meeting of the WTO Committee on Agriculture, Chairman John Adank, however, said he was not too optimistic about reaching a breakthrough on farm issues, including market access and domestic support, by the scheduled July deadline. This is because many other members, including the US, are not happy with the 2008 draft.

“We have the support of almost all developing countries and LDCs (least developed countries), including the large African Group, on building further negotiations on the 2008 text. It suits us as the text talks about exempting

farm programmes that support poor farmers from trade-distorting support calculation,” an Indian official told *BusinessLine* .

### **Doha round conclusion**

Members are working to reach an agreement by July on the agriculture chapter of the work programme, to conclude the Doha Round talks.

The Doha round, which started in 2001 for greater opening up of markets, languished after 2008 due to huge differences over market access issues between developed and developing countries.

The talks got a new lease of life in the Bali Ministerial Meeting in December 2013, when fresh timelines were set to conclude the talks.

### **2008 draft**

The draft 2008 text in agriculture proposes a more than 50 per cent reduction in farm tariffs for developed countries, to be implemented over five years, and about one-third reduction in tariffs for developing countries, over 10 years.

“The US doesn’t support the 2008 draft as it says that it imposes a much greater burden on developed countries compared to large developing countries such as India and China,” the official said.

The draft also states that programmes supporting low-income or resource-poor producers should be placed in the ‘Green Box’, which includes subsidies that are non-actionable.

### **Long battle**

India has been fighting at the WTO, along with other members of the G-33 group of developing countries in agriculture, seeking favourable treatment for the subsidies given under its food procurement programmes so that it is not penalised for breaching existing caps on such sops.

### **Interim solution**

While an interim solution is in place since Bali, which gives immunity to developing countries against action from members on breaching subsidy

caps (provided a number of stringent conditions are met), India wants a fool-proof permanent solution.

The proposal on food security floated by India and the G-33 states that while the Agreement on Agriculture of the WTO is changed to place food procurement subsidies in the Green Box, the reference price for calculating the subsidies should be changed (from 1986-88) to make it more current or inflation should be taken into account.

### **National agri market: Karnataka shows the way**

The unified platform for online trade enables farmers to accept or reject the price thus avoiding middlemen



A group of farmers watching the online prices of ball copra on the display unit at the APMC office at Tiptur, Tumkur District , Karnataka

The Unified National Agriculture Market (UNAM), proposed by Finance Minister Arun Jaitley in the Union Budget for 2015-16, may take time to evolve nationally, but Karnataka is already leading this silent movement with its successful online integration of many of its APMCs.

Looking at the success of this first-ever farm market integration in the country, many States are set to replicate the “Karnataka model”.

“States such as Rajasthan, Madhya Pradesh, Odisha, Uttar Pradesh, Telangana, Gujarat and Tamil Nadu have approached us to study this model and replicate,” said Manoj Rajan, Managing Director, Rashtriya e-Market Services Pvt Ltd (ReMS).



ReMS was set up in February 2014 as a joint venture (50:50) company by the Karnataka Government and NCDEX Spot Exchange Ltd for implementing the State's new agricultural marketing policy to bring in efficiency and transparency in the agricultural marketing system for efficient price discovery to benefit farmers and other traders.

### **Price discovery**

This was done following recommendations of a high-level committee, constituted in 2013 to explore means to improve agricultural marketing system, identify the interventions required in the sector and suggest necessary reforms. The committee also studied nationwide electronic trading of commodities.

Pioneering the move was Karnataka Chief Minister Siddaramaiah, who launched the unified platform for online commodity trade, a virtual market for agricultural produces, in February 2014.

Licensed traders could bid online from anywhere in India and farmers will have the right to accept or reject the price. This led to a "scientific" price discovery by the farmers themselves and breaking the hold of middlemen.

Until March 2015, about a third of 155 APMCs in Karnataka, were thus integrated under the Unified Market Platform (UMP) whose turnover was Rs. 5,000 crore in 32 commodities traded online.

In all, 31,000 traders and 17,000 commission agents have so far been registered on this platform. "ReMS is not replacing APMCs but only making the mandis more efficient and transparent in their functioning," Rajan said.

### **Tiptur example**

Just how an online trading platform could benefit the farmers is visible at the Tiptur APMC in Tumkur district of Karnataka. The total cultivated area under coconut plantation in Tiptur taluk is 28,000 hectares.

Tiptur is mainly a one-commodity market (copra) whose farmers earned 53 per cent more for a 30 per cent less arrival between 2013-14 and 2014-15. At Tiptur APMC, nearly 10,000 farmers have registered for online auction.

## **Turnover**

They are not charged any registration fee. Nearly 170 traders are also registered with a nominal fee. Their facilitator, ReMS, charges a 1.5 per cent transaction fee.

In 2013-14, Karnataka registered a turnover of Rs. 31,000 crore in agricultural commodities, 92 of which were notified.

With increased integration of these markets for online trading, the State Government is setting up 25 huge facilities across Karnataka to evaluate agricultural produces for true price discovery, by giving physical and financial information to farmers. How does an UMP function? Unlike other APMCs, those part of the UMP in Karnataka present a different picture. As soon as a farmer enters APMC, he gets an entry pass and a unique lot number. His product is weighed and exposed on a platform, ready for sale. This is followed by bidding across the lots available.

After the bid finalisation, an SMS is sent to the farmer concerned and the highest bidder wins the lot. This is followed by a post-auction activity envisaging issuance of sale bill, payment the same day, delivery of the lot and e-permitting.

Thus the farmer is virtually free after putting on mat his products, by 2 pm on the particular trading day. By 3 pm, he can be seen watching a TV set in the market courtyard, not a movie or a cricket match but tracking the screen for the price of their produce.

The screens flash results of an online auction of their produce. The bids are made at Tiptur by buyers, mostly traders and millers, for ball copra and dried coconut.

## **No link between farmer's suicide and land acquisition: Venkaiah**

Union Minister M Venkaiah Naidu on Monday asked the Opposition not to link the incident involving farmer Gajendra Singh with the issue of land acquisition.

He also appealed to the Opposition not to politicise every issue.

Referring to the case of Gajendra Singh, the farmer from Rajasthan, who allegedly committed suicide at Jantar Mantar during an AAP rally, Naidu said, “Some people tried to politicise the issue. It was an unfortunate incident. But there was no connection between this issue and land acquisition issue. Because that has nothing to do with land acquisition.”

“That was for different reasons. Some parties are trying to club it with the land acquisition issue,” the Parliamentary Affairs Minister said on the sidelines of a function.

Asking the Opposition not to divert attention of people from real issues, Naidu said, “More than 2 lakh farmers committed suicide in the last decade. At that time who was running the country? So don’t try to politicise every issue and do not try to divert the attention of the people. It is my humble request to the Opposition.”

Terming the criticism of the NDA government over land Bill as “unnecessary”, he said large chunk of land was acquired for SEZ during the UPA regime.

“Unnecessary criticism has been levelled against the government. More than 2 lakh acres of land have been acquired for SEZ and other activities by the previous government in the last 10 years. What is their answer to this? Our government has not taken any major portion of land,” he said. Taking potshots at the Congress and former Environment Minister Jairam Ramesh, he said, “They are saying the 2013 Land Act is a very progressive one. If it was so progressive then why did people voted against it. Jairam Ramesh is saying NDA’s land bill will work as ‘*sanjeevani*’ for Congress.

“Your 2013 Bill did not work as ‘*sanjeevani*’ and you lost miserably as people doubted your integrity, commitment. You did not do your homework properly and your party people wrote to the then Prime Minister and also participated in an all-party meeting and then suggested improvements.”

## **Surging arrivals kill cardamom’s aroma**

Exporters and upcountry traders turn active



Cardamom prices continued to slip on heavy arrivals at last week's auctions held in Kerala and Tamil Nadu.

Liquidation in good quantities by growers and dealers following intermittent rains in the growing regions and a consequent fear of a price fall has led to the surge in arrivals, PC Punnoose, General Manager, CPMC, told *BusinessLine*.

As the prices have fallen to unexpected levels both upcountry buyers and exporters were buying actively.

Upcountry dealers who have bought at higher prices were covering at the current prices briskly to mix it and so as to balance the prices, Punnoose said. Exporters were also active and bought an estimated 50 tonnes last week, trade sources said.

Arrivals last week were at around 510 tonnes against 341 tonnes during the same week of the previous season, trade sources claimed.

Arrivals stood at 23.8 tonnes and of this 23.6 tonnes were traded. The auction average dropped to around Rs. 620 a kg from about Rs. 640 the previous Monday.

The individual auction average last week vacillated between Rs. 620 and Rs. 700 a kg. Where as, during this week last year the average price was swinging between Rs. 850 and Rs. 990 a kg.

Prices as on April 27 was at Rs. 929.06 a kg against last year's Rs. 640.

Total arrivals during the season up to April 25 stood at 17,484 tonnes against 18,863 tonnes during the same period last year. The sales were at 17,058 tonnes and 18,253 tonnes respectively.

The auction average as on April 25 was at around Rs. 695 ( Rs. 865) a kg.

Prices of graded varieties ( Rs. /kg): 8 mm bold green 960-1,000; 7-8 mm 800-850; 6-7 mm 720-750; below 6 mm: 650-700.

### **Argentine apples back in India after 10 years**

Shipment of 170,000 kg apples enroute to India besides pear and quince



After 10 years of market restrictions, apples from Argentina are on their way to India.

The first shipment marks a heady start to a \$200-million market for Argentina, said market sources.

## **Major market**

The Argentinean National Health and Food Quality Service (called Senasa) has cleared the first shipment of fresh apples, consisting of eight containers with 170,000 kg (170 tonnes) from the Patagonian region, according to available information.

## **Other fruits**

India is expected to become an important export market for apple exporters from the region, with many keen to establish a foothold in the main metros, before branching out to the second tier cities.

Following intense efforts from both sides, Senasa had reached an agreement with its counterpart in India last November, to enable the export of apples, pears and fresh quinces.

The latter looks like a pear, and is golden yellow in colour. Amarendra Khatua, Indian ambassador to Argentina, had also spoken about the potential market access that India provided.

Speaking at a seminar during the Indian Festival held by the Argentine Chamber of Commerce late last year, he had noted that bilateral trade needed to be enhanced between the two countries.

In 2013, trade between India and Argentina was around \$1.93 billion.

## **Prices may dip**

Khatua said that 2014 had been spent identifying niche areas to diversify bilateral trade.

Though India is flooded with imported apples from the US and Chile, sources indicated that the fresh consignment from Argentina is expected to bring down prices for apple consumers.

## **Argentine fruit output**

However, market sources indicated that in CY2014, production of apple, pear and table grapes in Argentina slumped to 700,000 tonnes, 670,000



tonnes, and 70,000 tonnes, respectively, compared to the previous year, due to frost and high temperatures.

Exports for the three fruits are also expected to decrease to 160,000 tonnes (for apples), 410,000 tonnes (for pears), and 10,000 tonnes (for table grapes), due to fewer production.

### **Kochi tea prices gather steam on export demand**

Improved demand from exporters was seen for good liquoring tea varieties at Kochi auctions last week. In sale no 17, the quantity on offer in CTC dust was 13,62,500 kg.

In the beginning, good liquoring teas were barely steady. As the sale progressed, the market was lower by Rs. 3-5 a kg and more following quality. However, several tea manufacturing companies including Kerala Loose Tea Traders continued to be active on good liquoring varieties, the auctioneers Forbes, Ewart & Figgis said.

The demand was less in Orthodox grades and the quantity on offer was only 7,000 kg, which was low compared to last week. The market was lower by Rs. 3-5 and witnessed some withdrawals. A small quantity of Orthodox dust sold was absorbed by exporters.

In Cochin CTC dust quotation, good varieties fetched Rs. 95-142, medium quoted Rs. 75-115 and plain grades stood at Rs. 60-70.

There was a higher arrival in leaf varieties and the quantity on offer in Orthodox grades was 191,500 kg, registering a marked improvement compared to last week. The quantity on offer in CTC grades was also up by 105,500 kg compared to last week. Upcountry buyers and exporters lent useful support for both the varieties.

In the dust grades, Injipara SRD quoted the best price of Rs. 167 followed by both Manalaar SFD and Manalaar SRD at Rs. 155 each. In leaf varieties, Chamraj FOP (Sup) Green Tea fetched the best prices of Rs. 301 followed by Chamraj FOP at Rs. 261.

## **MSMEs protest import duty hike on natural rubber**

Micro, small and medium rubber enterprises have protested against any further import duty hike on natural rubber.

All India Rubber Industries Association (AIRIA), in a petition to the government, has asked the government to take into consideration the plight of over 5,500 rubber MSMEs in the country before taking any step for increasing duties.

An expert group formed by the government has been finalising the national rubber policy.

The group, formed last year, has had a series of meetings with both rubber producers and consumers and has taken a note of their respective issues and concerns.

The final report of the working group is to be released soon. In all fairness, the Government needs to wait for the national rubber policy and take a concerted decision on a major issue such as increasing duties, Mohinder Gupta, President, AIRIA said.

According to rubber MSMEs, India already levies one of the highest duties on import of rubber and one of the lowest duties on import of finished rubber goods.

As a result the competitiveness of the Indian rubber industry is affected and many rubber units have already closed down.

The difference between domestic rubber production and consumption has grown to almost 4 lakh tonnes. There is no other way but to import rubber to keep the factories running. Import duties on rubber, therefore, should be reduced and brought to the level of import of finished rubber goods so as to address inverted duty in the rubber sector, said AIRIA.