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THE

Energy saving key to reduce power shortages



THE HINDUThe power supply mechanism to agriculture sector is ad-hoc which results in wasteful usage of electricity in Adilabad. Photo: S. Harpal Singh



THE HINDUPumping of water will increase on installation of pump sets conforming to ISI standards. Photo: S. Harpal Singh

Judicious use of power and quality pump sets and capacitors in farm sector can reduce power consumption by over 10 p.c., say experts. There are 94,575 agriculture pump sets in the district which are of 5 hp capacity on an average and run for five hours a day at present.

"Energy saved is energy generated." The Transmission Corporation of Telangana Limited (TSTransco) only touts this adage, but does very little to see it materialised.

Experts say judicious use of power and quality pump sets and capacitors in the agriculture sector could reduce power consumption by over 10 per cent and correspondingly cut the short supply of electricity. While power savings could be more in developed districts of the State, it could be as much as 7.4 million units (MU) per month in the backward district of Adilabad if pump sets conforming to ISI standards and capacitors are installed in agriculture sector the Rural

Water Supply mechanism and a 3rd 'neutral' line is rigged for street lighting in gram panchayats.

"An ISI standard pump set with matching capacitor, lets assume of 5 hp capacity, draws a reduced load of 6.3 amps against the 10 to 12 amps consumed by a locally made or repaired one," says B. Ashok, Superintending Engineer, Adilabad Circle under the Northern Power Distribution Company Limited. "The pump set would cost no more than Rs. 1,000 to Rs. 1,500, while the capacitor costs between Rs. 250 and Rs. 400 only," he adds, to drive home the point that the change would be much cheaper when compared to the quantum of energy that would be saved.

There are 94,575 agriculture pump sets in the district which are of 5 hp capacity on an average and run for five hours a day at present. "At 0.746 KW consumption per hp per hour, the cumulative consumption comes to 51 MU per month, against the total electricity demand of 116.34 MU in the district, and over 10 per cent of it can be saved by installing ISI standard motors and capacitors," the SE elaborated.

The 866 gram panchayats in the district consume 3.3 MU per month with the street lighting eating away 1.6 MU and the water supply devouring 1.7 MU. A neutral wire along the street light supply networking will save 0.16 MU and another 0.17 MU can be saved if the pump sets conform to quality standards.

"The saving of power through installation of ISI standard pump sets could even be as high as 25 per cent. If the government funds farmers to install such pump sets, it will turn into a beneficial proposition in about 4 years, thanks to the power saved," points out G.L.P. Reddy, a retired Transco SE from Nizamabad, as he proffers a solution to the irksome power problem.

Awards for farmers' clubs in Kerala

Agriculture Minister K.P. Mohanan has reiterated the government's commitment to promote Farmer Producer Organisations (FPOs) in the State.

After presenting the Karshakamitra awards instituted by the National Bank for Agriculture and Rural Development (NABARD) here on Tuesday, he called for steps to institutionalise mechanisms like farmer clubs to promote peer learning and knowledge sharing among cultivators.

The Green Earth Farmers' Club, Malappuram; Neeloor Farmers Club, Kottayam; and Kelakam Farmers Club, Kannur; won the first, second and third prize respectively. Thenhipalam Service Cooperative Bank, Malappuram; Neeloor Service Cooperative Bank, Kottayam; and Kerala Gramin Bank were also presented with awards for promoting the clubs. Appreciating the role played by NABARD for the development of agriculture in Kerala, Mr. Mohanan hoped the farmer clubs would grow into federations and FPOs.

N. Ramesh, General Manager, NABARD, Kerala Regional Office, inaugurated the event. Nirmal Chand, Regional Director, RBI; U. Ramesh Kumar, convener, State Level Bankers Committee, Kerala; and officials from various banks and farmers were present during the occasion.

Drought spells doom for Karnataka's Mango Barn

Scientists and experts from the Indian Council for Agriculture Research, New Delhi, Gandhi Krishi Vignana Kendra, Bengaluru, and Horticulture Department inspected the withering mango trees in Srinivasapur taluk of Kolar district on Monday. The team confirmed that continuous drought in the region had led to drying of the mangroves. *The Hindu* had published a report on October 15 detailing the damages caused to mango trees and how growers were felling them. Mango trees cultivated in around 4,500 acres of land in the district had withered owing to drought. Among them, 3,500 acres are located in Srinivasapur taluk alone, which is considered the Mango Barn of Karnataka. Addressing farmers at Tadigol after inspecting the damaged trees, ICAR scientist B.K. Pande said scanty rain and collapse of ground water are the main reasons for the withering. A report prepared by the officials of Agriculture and Horticulture departments would be submitted to the State government and the Centre, he said.

Y.T.R. Reddy, another member of the team, urged farmers to adopt alternative crops to withstand the loss.

Local MLA R. Ramesh Kumar urged the government to provide compensation to cultivators without differentiating between small and big farmers.



To market, to market...

The HinduMembers of Organic Farmers Market. Photo: M. Srinath

Organic Farmers Market, a collective of youngsters with hole-in-thewall organic stores, brings to Chennai the best of produce from across the country

Every grain of rice, millet, and pulse in the garage has a story to it. They have journeyed from farms near and far to occupy the racks at the hub of the Organic Farmers Market (OFM) at Kasturba Nagar, Adyar. Farmers with a heart have cultivated them — Mukesh from Nagpur, Chandrasekaran from Thalavady, Vijay Jardhari from Uttarakhand. Prod a little and you can find out the names of the people who grew them, and where they are from.

It all began after the demise of organic farming pioneer G. Nammalvar. Organic activist Ananthoo of the Safe Food Alliance noticed that Nammalvar drew a lot of youngsters in the last two years of his life. 'Why not involve them in a movement that will further the cause?' he thought. "We identified 15 youngsters to run mono shops that will function like a cooperative," explains Ananthoo. Also a founder-volunteer of non-profit organic store reStore, he started OFM in the same garage reStore was born in, six years ago.

"The idea is to take organic food to the middle-class," explains Gopi, who manages OFM's hub. Members, who range from IT professionals to homemakers, stock organic products in small outlets at home or in shops in their neighbourhood. Sourced from a wide network of organic farms across the country, the products are sold with a "small margin, without involving middlemen".

Kamalakannan, a member, is in a village near Uthiramerur on his monthly farm visit, an OFM protocol, as he talks to us. A systems engineer in an IT firm in the city, he stocks organic products at home. "My wife and I take turns to look after the store," he explains. Kamalakannan ensures he talks to as many people as possible on the goodness of organic food. "I set up stalls in places such as temple festival grounds to spread the word. Each of us should know where our food comes from." Kamalakannan has brought his five-year-old son and a customer to Karuveppam Poondi village to find out just that. These farmer verification visits ensure that products are completely organic.

OFM follows a strict purchase policy. Members take a lot of effort to ensure "source consistency", according to Gopi. "We perform random, surprise checks at farms, talk to the farmers' neighbours, and see if they own cows and goats for farming, rather than machinery," adds Ananthoo.

In essence, OFM wants to take consumers closer to Nature. Ananthoo is disturbed by the "sudden spurt of organic shops" in the city that sell branded organic products. "This is a danger," he observes. "The food industry went wrong because of centralising and processing products to give them longer shelf lives. The consumer went far from the producer."

His movement is steadily gaining strength — IT employee Dhamodharan Chandrasekaran and his wife have set up a 9 x 10 square feet shop with OFM products; Rajesh, who was an HR software consultant, sells organic food at his electrical service centre; Seethalakshmi displays products at her meditation class; Rekha, an IT-professional-turned-farmer, has started a store at home... these men and women meet at the head-garage every month to discuss and ideate.

With no distributors in the picture, they arrive at the garage when they run out of stock to purchase, pack and transport the items themselves. All of which, explains Gopi, cuts costs.

S. Radhakrishnan, a member who is studying the effects of climate change on soil, says that the coming year will be very supportive to organic farming. "A lot of people are coming forward to cultivate

organic food. By 2015, consumption of organic food would have doubled, when compared to the previous two years," he foretells.

Radhakrishnan provides technical and managerial support to "newage farmers", people in their twenties and thirties who have given up jobs in cities to turn farmers. This wave has also revived plenty of our traditional seed varieties. Radhakrishnan says he just received a box of bananas called 'vellai singam'. "The farmer says they will be tastier than the *yelakki* banana," he laughs. "Everything is coming back. Rice, pulses... The best about this is that I'm now able to give my products for a low price. I'm having a happy selling experience."

Water from the Krishna to be released till March

The Krishna water advisory committee has resolved to release the river's water through all canals, under the Upper Krishna Project, till March 10, 2015 and if the demand continues, till March 31. The decision was taken at a committee meeting chaired by the Minister for IT/BT S.R. Patil at the Alamatti dam guesthouse on Tuesday.

Officials of Karnataka Bhagya Jal Nigam Limited, who were present in the meeting, informed that the Alamatti reservoir has 89 tmcft of water for irrigation, while 24 tmcft was available for drinking and industrial purpose. "The available water will last till February 28, however, in later days, considering the need and availability, the water could be released in phased manner."

Legislators of the Krishna basin said that due to deficient rainfall in the Rabi season, the farmers were largely depending on the canal water. Therefore the officials should ensure that adequate water was supplied to the farmers through the canals.

Mr. Patil said that a despite a decrease of 11 tmcft of water in the reservoir this year, the government was making all efforts to provide adequate water to the farmers to meet their needs.

He urged farmers to minimise the usage of water by not cultivating water-intensive crop. He said that water could be saved even by repairing the damaged or broken canals, and directed the officials to take up repair works on a priority basis.

On a complaint by local MLAs of Raichur district that the water of Narayanapura dam was illegally diverted by some people who were allegedly assisted by the officials, Mr. Patil directed officials to install CCTV cameras at various places to monitor the diversion.

Alamatti reservoir has 89 tmcft of water for irrigation purposes

Complete irrigation project by 2016: M.B. Patil

Bennethora Major Irrigation Project was started in 1972-73

Water Resources Minister M.B. Patil has fixed 2016 as the deadline to complete the Bennethora Major Irrigation Project, which was started back in 1972-73 at an estimated Rs. 6 crore.

Mr. Patil, with senior official of the Krishna Bhagya Jala Nigama Ltd V.P. Huggi and Managing Director of the Karnataka Neeravari Nigama R. Rudraiah and others, inspected the Bennethora Dam at Heroor K. village in Chitapur taluk and also the canals and distributaries in both the right and left banks.

During his visit to the dam, the Minister said that the Karnataka Neeravari Nigama has given consent to modernise the canals and the distribution system of the project at a cost of Rs. 150 crore and the State cabinet, meeting in Kalaburagi on November 28, is likely to give its formal approval.

Mr. Patil admitted that the project had been delayed due to various reasons and after the Bennethora project gets modernised nearly 20,234 hectares in 41 drought-prone villages in Sedam and Chitapur will get water.

Mr. Patil said that in the right bank canal, of 82 km, there was no hurdle for the water till the 30th km and seepage and leakage, among others, hampered the flow of water beyond the 30th km. Likewise in the 60-km left bank canal, there was no problem till the 20th km.

In the modernisation proposal the Shahabad stone lining in the main canal and the distributaries will be replaced with concrete lining to prevent recurrent breaches and seepage.

The Minister also said that tenders for the modernisation project will be floated in January and 18 months will be given to complete it. He said that officials of the Water Resources Department have been instructed to install telemeters in the canals of all irrigation projects to measure the exact amount of water released to the farmers' fields.

Mr. Patil asked the officials to utilise the available funds in the project and complete the strengthening work of the right bank canal upto the 50th km within a month.

When some farmers complained about field irrigation canals constructed above the canal level, preventing the water from entering the fields, the Minister directed officials to level the land in the command area and reconstruct the canals.

The Minister also visited the Gandorinala Medium Irrigation Project and inspected the canals and distributaries. Incidentally, the Bennethora project was "inaugurated" before it was completed by the then Chief Minister H.D. Kumaraswamy in 2006.

Security strengthened as farmers' associations plan celebrations

Heavy police were deployed at Gudalur town as a precautionary measure as the water level was expected to touch 142 feet in Periyar dam.

Sufficient force has been deployed at the check posts, district borders and also in the Cumbum valley to regulate the cheering crowd.

Already, several farmers associations and other social organisations have planned to celebrate this historic event in a grand manner.

Security has been strengthened as the police did not want to take any risk since both political parties and farmers would be celebrating it in a grand manner. An attack on PWD Executive Engineer A. Madhavan too has ignited simmering anger and disgust among farmers and various associations.

Situation was already tense in Uthamapalayam and Gudalur as the effigy of Peermedu MLA Biju Mol was burnt by the Bar association members in Uthamapalayam and by the public in Gudalur.

Deep concern

Many leaders of farmers' associations also expressed their deep concern over the attack.

The police wanted to ensure that such discontent and anger should not get reflected in the celebrations and create a law and order situation.

Meanwhile, MDMK general secretary Vaiko has also planned to visit the Lower Camp area and shower flowers on the Mullai Periyar River on Wednesday morning.

At present, the water level stood at 141.5 feet in Periyar dam and the dam received moderate showers in the evening.

'Increase import duty on cooking oil'

Tamil Nadu Toddy Movement has urged the Central Government to increase the import duty on unrefined and refined cooking oil to protect oil seed farmers. In a release, the organisation's field organiser C. Nallasamy said that the country imported 1.18 crore tonne to meet its requirement of 1.90 crore tonne, which was a shame.

To protect the domestic industry and the farmers, the Government must hike the import duty from 2.50 per cent and 10 per cent to 50 per cent and 100 per cent for unrefined and refined cooking oil respectively, he suggested.

Mr. Nallasamy wanted the State Government to take a cue from the Kerala Government in tapping and marketing 'Neera'. With help from the Coconut Development Board, the Government was tapping 'Neera' and storing it in the optimum temperature to market it as 'Green Health Drink' as an alternative to multinational companies' aerated drinks.

It had also adopted the cooperative route to market the drink. The Tamil Nadu Government could tap 'Neera' and market the same by forming cooperatives and cooperative federations on the lines of the milk marketing societies.

Demands

His other demands included selling only palm and coconut based toddy products in TASMAC liquor outlets until total prohibition in the State.

Rs. 2,912-crore credit plan for Pudukottai district released

The Potential Linked Credit Plan prepared by National Bank for Agriculture and Rural Development envisaging a credit flow of Rs. 2,912.99 crore in the district for the financial year 2015-16 was released here on Tuesday.

The credit for short term crop loan is put at Rs.1,812.62 crore and the term loan for allied sectors remains at Rs.761.79 crore. The flow for medium and small enterprise (MSE) sector including food and agro processing stands at Rs.135.38 crore, and Rs. 203.20 crore for other priority sector such as rural housing, education and retail trade. Collector C. Manoharan, who released the plan, advised officials to ensure proper utilisation of the potential as detailed in the plan for achieving an overall development in agriculture and allied activities.

The NABARD wanted to ensure a growth rate of four per cent in agriculture sector and it could be achieved by increasing quantum of term loan for farm mechanisation and animal husbandry and renewable energy. Mr. Manoharan drew the attention of officials to Integrated Dairy Development programme for which the plan had envisaged a credit flow of Rs. 9.40 crore. This, he said, would go a long way in supplementing the income of small and marginal farmers.

The plan had identified sector-wise infrastructure demand for development. For instance, drying yards and processing centres with storage godowns in every block have been suggested. It has sought restoration of storage of water in 5,451 tanks through dredging and strengthening of supply channels. It has also suggested construction of check dams across the South Vellar. S. Somasundaram, District Development Manager, NABARD, said that the plan has suggested construction of a coconut market complex at Aranthangi.

About 2,600 joint liability groups would get credit this financial year. The NABARD had released Rs. 246.96 crore under Rural Infrastructure Development Fund and about 125 works including Rs. 153 crore for drinking water supply schemes, Rs. 18 crore for school buildings, Rs. 38.54 crore for roads and bridges and Rs, 22.44 crore for godowns were being carried out.

The first copy of the plan was received by S Ramasamy, Lead District Manager.

Entries invited for best farmer award

: The District Agri-Horticultural Society has invited entries from farmers for the Karshaka Srestha Award 2014. The person who is adjudged the best farmer will be presented a cash prize of Rs. 15,551, a citation and a plaque.

According to District Collector N. Padmakumar, who is also the president of the society, the award will be presented to those who have ensured high productivity in their fields, provided importance in attaining food security and created new farming models that were suitable to be emulated by other farmers. Individuals and organisations involved in agriculture have been requested to forward their nominations to the Secretary, Alappuzha District Agri-Horticultural Society, Narasimhapuram, Mullackal, Alappuzha by 5 p.m. on November 29.

ICAR chief to visit Kakinada tomorrow

Director-General of the Indian Council for Agriculture Research (ICAR) S. Ayyappan is visiting Kakinada on November 20. Dr. Ayyappan, along with Vice-Chancellor and Director of ICAR W.S. Lakra will inaugurate the Godavari hostel building constructed on the premises of the Central Institute of Fisheries Education near old Burma Shell on the Beach Road, according to a press release by P.P. Suresh Babu, in-charge officer of the institute here.

Concern over staff crunch in agricultural economics department

Mruthyunjaya, an agricultural economist and the former national director of National Agricultural Innovation Project at Indian Council of Agricultural Research, New Delhi, expressed concern over the declining staff strength in the department of agricultural economics in the Universities of Agricultural Sciences and other institutions across India.

He was delivering the keynote address at the 22nd annual conference of Agricultural Economics Research Association held at the University of Agricultural Sciences, Raichur on Tuesday.

"The staff strength was less than the sanctioned strength in all categories, especially in scientific and teaching category. The crunch varied from 25 per cent to 40 per cent in different institutions. The shortage naturally overburdened the staff with the responsibility of teaching more courses and guiding more students whose admissions are considerably increased over the years and affected the quality of teaching and research guidance," he observed.

He pointed out that the faulty recruitment and promotion policy had resulted in an inverted pyramid where generals are more than the soldiers. "Reversing the inverted pyramid will take considerable time and efforts. Ageing of staff, no succession planning and fear of vacuum of experts in the near future are other issues that need to be addressed on priority basis," he added. According to him, the continuing and increasing emphasis on farm management and production economics-oriented curriculum has resulted in a structural imbalance in the composition of human resources development and expertise-mix within the discipline.

Nabard training programme begins in Nuzvid

A 30-day training programme on livestock health for workers was launched here on Tuesday. The programme being organised by the National Bank for Agriculture and Rural Development (Nabard) would impart training in first aid practices for animals, dairy management, feed preparation, feed mixing, and animal care etc to the beneficiaries. The training is being imparted to about 20 SHG members to develop skilled workers in the villages. Nesthaam, a non-governmental organisation, is organising the event with financial support under Nabard's Farmers Technology Transfer Fund. Department of Animal Husbandry is extending technical support.

Vegetables from other States to be tested for contamination

Tests would be done at the farm from where they are sourced

Vegetables procured from other States may soon be tested for pesticide contamination at the farms from where they are sourced.

At a high-level meeting convened here on Tuesday, Chief Minister Oommen Chandy mooted the idea of field tests to ensure the quality of fruits and vegetables imported from other States for sale in Kerala.

He suggested that the results of the tests be made available to the public. Mr. Chandy also proposed a campaign to sensitize farmers and farm workers in the neighbouring States to the hazards of indiscriminate use of pesticides. He said contamination of vegetables and fruits would invite prosecution.

The meeting decided to constitute an authority to ensure inter-state coordination for the supply of safe-to-eat vegetables and fruits.

To be headed by the Food Safety Commissioner, the authority would comprise officials of the departments of Health, Agriculture, Animal Husbandry and Sales Tax, as well as representatives of Kerala Agricultural University and Horticorp.

The Food Safety and Standards Authority of India would be requested to convene a meeting of health secretaries and food safety commissioners of the southern States to discuss the issue. The meeting was informed that tests carried out by the Food Safety department had detected dangerously high level of pesticide residue in amaranthus and apple. Curry leaves, coriander leaves and mint leaves were also heavily contaminated.

Food safety officials said efforts to detect pesticide residue in vegetables and fruits were hampered by the lack of adequate laboratory facilities.

The results of tests often took more than a week.

Biogas conference at BITS Pilani, Goa

The Birla Institute of Technology and Science (BITS) Pilani, K.K. Birla Goa campus, in association with Institute of Agricultural and Urban Ecological Projects affiliated to Humboldt University, Berlin, will hold a two-day conference on 'Decentralised biogas digesters and their slurry management' from Thursday.

CII, banana growers to submit 'mission banana' document

The Confederation of Indian Industry (CII) and the Tamil Nadu Banana Growers Federation (TNBGF) will soon submit a "Mission Banana" document to the State and Union governments to devise a plan of action to market the Tamil Nadu banana worldwide, said M.S. Srinivasa Reddy, CII representative and Co-Chairman, Tamil Nadu Banana Festival.

Speaking to reporters along with A.P. Karuppaiah and G. Ajeethan, president and general secretary of TNBGF, here on Tuesday he said Tamil Nadu was the largest banana producer in India accounting for 29 p.c. of the output. It had everything to market different varieties of banana under the brand name of "Tamil Nadu Banana." Based on the outcome of two editions of Tamil Nadu Banana Festival held in 2012 and 2013 and an intensive study, a document had been prepared to get the support of State and Central governments on banana

cultivation, preservation and marketing the Tamil Nadu banana in other countries. It would enable the banana producers to tap the export potential.

Revealing the objectives of third edition of CII Tamil Nadu Banana Festival to be held on December 20 and 21 in Tiruchi, Mr. Karuppaiah said that reducing post-harvest damage, finding better price, "Tamil Nadu Banana branding", segmentation techniques, adopting modern irrigation methods, and reducing input cost were the objectives.

The underlying theme of the festival would be "from bunches to boxes". The thrust would be on post harvest processes and value addition of banana and banana products.

Mr. Ajeethan said that it had been proposed to float a Tamil Nadu Banana Producers Company Ltd. on the first day of the conference. It would have 50 groups of banana growers from different parts of the State. It would be headquartered in Tiruchi. A large number of banana growers had come forward to be the members of the company. With the help of various stakeholders, it would provide all needed technical inputs for modernising the banana cultivation. Moreover, the company would market the produce of its members to get better price.

Mr. Karuppaiah said there would be an exhibition at the festival, showcasing different varieties of bananas.

• Tamil Nadu accounts for 29 p.c. of the national output

· 10,000 farmers expected to visit banana festival in Dec.

Deforestation in Brazil's Amazon 'surges 450 per cent'

Deforestation in Brazil's storied Amazon basin region skyrocketed more than 450 per cent in October from a year earlier, a nongovernmental group warned on November 17.

The alarming loss was the equivalent of 24,000 football pitches, said Imazon, which works to support sustainable development in the massive and unique ecosystem.

The group's Deforestation Alert System found that clearcutting in Brazil's nine Amazon basin states hit 244 square kilometers (94 square miles) for October. In October 2013, the damage was just 43 square kilometers.

About 60 per cent of deforestation took place on privately owned land or land that is occupied by squatter-farmers, the group said.

Reducing the loss of tree cover in the Amazon basin is seen as vital to addressing global warming and climate change.

Brazilian authorities are stepping up surveillance to crack down on deforestation using satellite images.

TNAU booklet condemned

Dravida Viduthalai Kazhagam cadre staged a demonstration here on Monday condemning a booklet published and distributed to farmers by the Tamil Nadu Agriculture University on rainfall forecast, with content referring to 'Panchangam'-based predictions.

The demonstrators led by the Kazhagam's founder Kolathur Mani raised slogans urging the university to forecast rainfall based on scientific facts and the climatic changes to benefit farmers, than misguiding them with superstitious predictions. Noting that the purpose of education is to disseminate knowledge, Mr. Mani has stated that the purpose is lost through inclusion of superstitious predictions.

It is learnt that the booklet titled 'Mazhaikala Kuripu Puthagam – 2014' has 70 pages, including 13 pages on 'Panchangam'-based predictions.

He pointed out that there were contradictions in predictions made by astrologers in that booklet. They urged TNAU to remove those pages and come out with scientific predictions alone to help farmers cultivate the right crop at the right time.

Bolt from the blue

Climate change may mean 50 per cent more lightning by 2100

Lightning has the power to spark wildfires and kill, and scientists said Thursday that climate change may lead to 50 percent more of it by century's end.

The report in the U.S. journal Science is based on measurements of precipitation and cloud buoyancy, applied to 11 different climate models that estimate how warm the planet may get by 2100.

"With warming, thunderstorms become more explosive," said climate scientist David Romps of the University of California, Berkeley.

"Warming causes there to be more water vapour in the atmosphere, and if you have more fuel lying around, when you get ignition, it can go big time."

Using data from the U.S. National Weather Service, researchers found that 77 percent of variation in lightning strikes could be predicted by knowing CAPE and precipitation.

When applying the parameters to climate models, the team found that each one degree Celsius rise in global average air temperature would mean about 12 percent more lightning strikes.

If temperatures warm four degrees Celsius by century's end, that would mean nearly 50 percent more lightning by then.

Lightning effects

Lightning now strikes 25 million times a year around the world.

More lightning strikes could place people at higher risk of being hit and injured or killed, and may also have a devastating effect on wildlands and species.

An uptick in the rate of strikes could cause more fires in dry forested areas, killing off a host of birds and other woodland creatures and endangering people who live nearby.

Lightning begins as a static charge inside a rain cloud. Turbulent wind conditions inside the cloud can lead to a negatively charged bottom and positively charged top.

When these electrical fields get strong enough, the atmosphere is no longer able to insulate the electrical charge and it erupts into a lightning strike.AFP

Lightning now strikes 25 million times a year around the world.

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Today's Weather	Tomorrow's Forecast				
Partly Cloudy	Wednesday, Normal 19 Max Min 31° 25° Partly Cloudy	Thursday, Nov 20 Max Min 31º 24º			
Rain: 0 Humidity: 79 Wind: normal	Sunrise: 06:09 Sunset: 05:39 Barometer: 1015				

Extended Forecast for a week

Friday	Saturday	Sunday	Monday	Tuesday
Nov 21	Nov 22	Nov 23	Nov 24	Nov 25
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31º 24º	33∘ 27∘	33º 27º	33º 26º	33º 26º
Partly Cloudy				

THE TIMES OF INDIA

Healthy diet helps protect your kidney

Two new studies have claimed that keeping a healthy diet may help protect the kidneys.

Andrew Smyth, MD at National University of Ireland Galway and his colleagues analyzed questionnaires completed by 544.635 participants of the National Institutes of Health-AARP Diet and Health Study that assessed diet quality, as well as sodium and potassium intake. A higher-guality diet, as measured using 3 different scoring systems for dietary qualities known to reduce the risk of cardiovascular disease, was associated with a 16 percent to 23 percent reduced risk of needing dialysis or dying from kidney problems. Higher-quality diets included those high in fruits, vegetables, and unsaturated fats. The researchers also found that high sodium intake (average of 4.7g g/day) was linked with an increased risk of needing dialysis or dying from kidney problems, but no benefit was seen for low sodium intake (average 2.0 g/day) compared with moderate intake. In contrast, high potassium intake was associated with a reduced future risk. Dr. Smyth said that their findings extend the known benefits of healthy eating and show that the consumption of a healthy diet might protect from future major renal events. As dietary modification is a low-cost, simple intervention, it offers the potential to significantly reduce the burden kidney disease, while from chronic also protecting from cardiovascular disease. In another study, Meg Jardine, MBBS, PhD (The George Institute for International Health, in Australia) and her colleagues found that reducing salt intake reduces albuminuria, or excess protein in the urine, which is a hallmark of kidney dysfunction.

For the study, 120 rural villages in China were randomized to no intervention or an 18-month sodium reduction program, including education and access to a reduced-sodium salt substitute with added

potassium. Individuals in villages that received the sodium reduction intervention had a 33 percent decreased likelihood of having albuminuria compared with individuals in the control villages. Dr. Jardine said that the fundamental question now is whether dietary salt reduction would also protect against progressive kidney damage, and If it did, community dietary interventions would present a new method for improving kidney health with efficient uptake and relatively low cost, which would supplement current pharmaceutical-based approaches. The studies will be presented at ASN Kidney Week 2014 at the Pennsylvania Convention Center in Philadelphia, PA.



A guide to Yoga for pregnant women

Image courtesy: Thinkstock Photos / Getty Images Staying fit and eating healthy are not the only things that top the priority list for a pregnant woman. Rather, maintaining a calm and stress-free persona and looking after her health and also the wellbeing of her unborn are important. And this is where yoga comes in.

Dr Amrapali Patil, weight-management and yoga consultant, says, "Most women are anxious about their pregnancy — their own or their baby's well-being. Yoga tends to stabilise the mind and help gain perspective (unlike other forms of physical activity) as it is meditative in nature. Pranayams tends to calm and balance the mind." Prenatal yoga classes are important, say experts. Gynaecologist Dr Kiran Coelho states, "I advise pregnant ladies to join prenatal yoga classes to stay fit, calm and stress-free. These classes prepare the couple to handle the newborn." "The aim of practising yoga is to bring the newborn into the world with minimum pain and hassle. Also, it keeps your mood swings, emotions and physical worries at bay. Other than the mental well-being of the mom-to-be, yoga also helps them to keep their weight in check and be physically fit," says Dr Coelho. There are some dos and don'ts (see box) that one needs to keep in mind, suggests Dr Patil.

A pregnant woman automatically assumes a guarded posture of protectiveness towards the baby in her womb, says Dr Patil. Some also encounter increased awkwardness due to the sheer change in their size. This leads to rigidity and stiffness of muscles, which can hamper a smooth delivery.

Gynaecologist Dr Mugdha Raut says, "You can continue yoga in the first trimester, after incorporating a few modifications. There is also the belief that if you did an activity prior to pregnancy, you can continue to enjoy it throughout pregnancy, without changes. However, I think it is incorrect to ignore the hormonal, physiological and anatomical changes that happen to the pregnant body, regardless of pre-pregnancy conditioning."

Benefits of pre-natal yoga:

1. Yoga stabilises emotions. 2. It facilitates blood circulation for both mother and the baby. 3. Yoga boosts the functioning of relaxin (a hormone that relaxes the muscles and joints) and makes the muscles, supple, strong and flexible, says Dr Patil. 4. It improves sleep, reduces stress and anxiety. 5. It leads to a marked increase in muscle strength and flexibility and so, helps in birthing. 6. Regular

yoga decreases the risk of pre-term labour. 7. In the postnatal period, yoga strengthens the pelvic floor just like Kegel's exercises. This prevents prolapse of pelvic organs, especially that of the uterus.

The asanas

Trikonasana or the triangle pose

Stand straight with your feet apart. Raise your arms and then bring them parallel to the floor, keeping your palms down. Now exhale and bend from your hip (not waist). Rest your right hand, without distorting your body, on your shin or ankle or on the floor while you stretch your other arm up in a line with your shoulder. Hold this pose for around a minute or less and then inhale as you come up. Reverse and repeat. **Benefits:** This works the legs and also stretches the side body. Your shoulders open up and your hips are energised too.

Baddha Konasana or Butterfly pose

Sit with your legs stretched in front of you. Then bend your knees, bring your feet in and make the soles of your feet touch. Clasp both feet with your hands and while you keep your back straight. Move your knees up and down — try touching the ground too — without moving your joined feet. It should resemble the movement of butterfly wings. **Benefits:** Stretches the inner things and hips and increases mobility of the hip joints.

Sitting Side Stretch

Sit with your legs stretched in front of you. As you exhale, slowly spread out your legs. Then, fold your right leg and bring your heel towards your crotch. Let your left leg remain straight, with the toes pointing to the ceiling. Stretch your right hand towards the ceiling and bend sideways. Your left elbow should be near your left knee, palms facing upwards.**Benefits:** This asana opens up your side waist, pelvis and also stretches the hips.

Warrior Pose or Veerabhadrasana

Keep a distance of two to three feet between your legs as you stand straight. Turn your left foot by 90 degrees and align the heels of both feet. Lift both your arms together and bring them parallel to the floor. Now exhale as you bend your right knee and look to your right. Your ankle and knee must be in a straight line. Stretch your arms, push down your pelvis gently. Keep breathing as you go lower. Inhale when you come up and exhale as you bring your hands to your sides. Reverse and repeat. This asana should be practised with support stand close to the wall. **Benefits:** Ladies in their second and third trimester will find this asana beneficial. This strengthens your limbs, improves balance, increases stamina and releases stress. Your lower back will also benefit.

Other Recommended asanas:

Dr Patil suggests the following asanas... 1. Sukhasana 2. Tadasana 3. Ardha-vakrasana (don't overtwist here. Turn from shoulders and chest and not from your waist) 4. Marjarasana 5. Yoga mudra 6. Gomukhasana in sukhasana 7. Shavasana

Recommended pranayams:

1. Anulom vilom 2. Sitali n Sitkari

Before you begin prenatal yoga classes..

- 1. Consult your doctor before you embark on any exercise regimen.
- 2. 2. Make sure you go to a qualified yoga instructor who has experience in teaching pregnant women.

Keep in mind

"Women at risk are those with a past history of miscarriage, placenta previa or a weak cervix. Those who have undergone cervical cerclage and similar procedures should be extra careful," says Dr Patil.

Dos

1. Set aside a fixed time. 2. Wear loose and comfortable clothing. 3. Be relaxed. Use a chair if you want. 4. Hold each pose only for about 10 to 40 seconds, based on your comfort level. 5. Be in sync with your body. Don't let your attention wander, lest you hurt yourself. Yoga is meditative, so being focused helps. 6. Do yoga twice a week for 5 to 20 minutes. 7. Consult your doctor immediately in case of any doubt.

Don'ts 1. Avoid over-stretching at all costs. 2. Stop immediately if there is any discomfort. 3. Don't lie on your abdomen. 4. After the first three months, don't lie on your back as doing so impedes the blood flow to the uterus and can affect your pregnancy adversely. 5. Avoid long duration of activity. 6. Don't do any asana or breathing exercise vigorously. Take time. Easy does it.

Climate change not behind collapse of European Bronze Age: Study



Scientists who studied a huge population collapse in Europe at the end of the Bronze Age have said climate change, commonly assumed to be responsible, could not have been the culprit.

WASHINGTON: Scientists who studied a huge population collapse in Europe at the end of the Bronze Age have said climate change, commonly assumed to be responsible, could not have been the culprit.

Researchers from several universities in Britain and Ireland found that changes in climate that scientists believed to coincide with the fall in population in fact occurred at least two generations later.

The study, published in the US journal Proceedings of the National Academy of Sciences, correlated archaeological data from sites throughout Ireland to determine both population and climate dynamics from 1200 BC to 400 AD.

It showed that human activity during the Bronze Age appears to have peaked around 1000 BC with a steady decline until 800 BC and a steep population decline by 750 BC.

Paleoclimate records preserved in peat bogs, however, recorded a rapid shift to wet climate conditions around 750 BC.

"Our evidence shows definitively that the population decline in this period cannot have been caused by climate change," Xinhua quoted lan Armit, professor of archaeology at the University of Bradford and lead author of the study, as saying Monday.

Armit said in a statement that social and economic stress was more likely to be the cause of the sudden and widespread fall in numbers.

Communities producing bronze needed to trade over very large distances to obtain copper and tin, and control of these networks enabled the growth of complex, hierarchical societies dominated by a warrior elite, he said. As iron production took over, these networks collapsed, leading to widespread conflict and social collapse and, therefore, the population collapse at the end of the Bronze Age.

The findings have significance for modern day climate change debates which, said Armit, were often too quick to link historical climate events with changes in population.

"The impact of climate change on humans is a huge concern today as we monitor rising temperatures globally," he said.

"Often, in examining the past, we are inclined to link evidence of climate change with evidence of population change. Actually, if you have high quality data and apply modern analytical techniques, you get a much clearer picture and start to see the real complexity of human/environment relationships in the past."

BusinessLine

DAE arm looking for businessmen to set up facilities for irradiation

Such services have good scope in view of food safety requirements, exports



Chennai, November 18:

The Board of Radiation and Isotope Technology (BRIT), an arm of the Department of Atomic Energy, is trying to encourage entrepreneurs to set up irradiation facilities.

Irradiation is the modern method of sterilising fruits or vegetables of insects.

Business opportunity

Providing irradiation services is good business as there are only 15 such facilities in the country. It is woefully inadequate given the sheer size of the country.

Three of the 15 facilities are owned by BRIT, which operates them on a not-for-profit basis. These facilities are reference plants for high, medium and low dose radiation – high for sterilisation of medicines and syringes, medium for the likes of spices, pet food and cosmetics and low for onion, potatoes, to prevent them from sprouting.

Expansion plans

The remaining units are owned by industries and entrepreneurs. AK Kohli, Chief Executive of BRIT, says the Board is working towards raising the number to at least 50 in another five years. BRIT also provides radio-active isotopes for industrial applications such as non-destructive testing, testing for leaks in pipes and cracks in columns and radio-medicine.

The board earns Rs. 80 crore annually.

Setting up irradiation facilities for third party use is good business, says Kohli. It seems so going by the experience of Universal Medicare Ltd, which owns two such facilities in Gujarat.

Eight years ago, the company set up its first unit of a capacity of 1,000 KCi (kilo curies, which is a measure of radiation) at a cost of Rs. 6 crore.

Today, the business fetches profits of Rs. 5-6 crore a year, Patel told *BusinessLine*. Radio-active substances 'decay' about one per cent a month. So these units will have to keep adding "pencils" (in which form isotopes such as Cobalt 60 or Iridium 192 are supplied). It costs Rs. 65 lakh for 100 KCi.

Quality control

In future, food safety requirements will make irradiation mandatory, says Kohli.

Exports of foods to the developed countries will surely require irradiation and the mangoes that go to the US pass through an inspection.

Irradiation also enhances shelf-life of foods, so farmers can store them till they get better prices. "You can process 20 tonnes of onions per hour and it will cost 20 paise a kg."

As prices plunge, cotton growers may shift to other crops

Gujarat farmers may sow soyabean, pulses or sesame next season



Expensive business For cotton, wages alone make up 20-25 per cent of the total input cost.

Ahmedabad, November 18:

Will cotton farmers shift to other crops when sowing begins for the kharif crop next June?

The current thinking among some farmers of the Saurashtra region in Gujarat, known as the Texas of the east, is to try out soyabean, sesame or pulses next year in view of a glut in cotton leading in lower prices this year.

The 11 cotton-growing districts in Saurashtra make up 16 per cent or two million hectares of the total 12.5 million hectares under cotton in the country. Cotton sowing in Gujarat touched a record of over 3 million hectares this year, while production has been projected at around 14.5 million bales (170 kg each).

Global downtrend

In view of record sowing, farmers have been unable to recover their costs globally as the cotton market is in a downtrend. Delayed monsoon and subsequent unseasonal rains affected the prospects of the crop in Gujarat.

Rates have dropped to the minimum support price (MSP) level of Rs. 4,050 a quintal.

Farmers incur a cost of nearly Rs. 24,000 an acre. Cotton yield in the region is around four quintals an acre and the fibre fetches only Rs. 16,200.

Unfavourable situation

"Cotton farmers are in a fix. They are incurring losses even if they sell in the market or to the Cotton Corporation of India. They are fed up of the situation and may not take up cotton next season. Instead, they will choose soybean or pulses," said Babubhai Patidar, chief of Savarkundla APMC in Amreli district. Cotton is cultivated in some 41,500 hectares in Amreli, the highest in the State.

The cost of cultivation is lower for soyabean, sesame or pulses compared with cotton. For sesame, the cost of cultivation is

between Rs. 5,700 and Rs. 6,250 an acre and from Rs. 6,800 to Rs. 7,500 for soyabean. In the case of pulses, the cost of cultivation is below Rs. 6,500. The thought to change crop is despite other crops too ruling lower.

For cotton, labour wages alone make up 20-25 per cent of the total input costs. Farm labour is required for spraying and most importantly, plucking cotton. Besides, cotton farmers also incur costs on pesticides and insecticides.

"For soyabean, the labour cost is almost half of cotton. Also, cotton being an eight-month crop reduces the chances of growing other crops in between. Soyabean is a four-month crop and farmers can take up winter crop after harvesting, improving chances of higher returns," said Ramesh Bhorniya, a farmer in Rajkot. Bhorniya grows cotton and groundnut on 24 acres.

"Because of uncertain prices and high costs, I have already started shifting from cotton to other crops. Two years ago, I began growing horticulture crop on a trial basis on a 2-acre patch. Next year, I will further reduce my cotton and groundnut area and take up either soyabean, sesame or pulses," Bhorniya said.

Junagadh district in Saurashtra saw soyabean cultivation catch up last season. Several farmers cultivated soyabean in parts of Kodinar taluka on a trial basis last year. "We have about 100 hectares under soyabean currently. But looking at the losses incurred in cotton and also in groundnut, farmers are likely to take up soyabean in a big way," said Balubhai Parmar, the chief of Kodinar Agricultural Produce Marketing Committee and a farmer.

Flicker of hope

High dependence on Chinese imports is responsible for the current plight of farmers. China has cut its import of the fibre this year, while the textile industry has shifted to importing yarn. With the next Kharif sowing season seven months away and the CCI stepping up procurement at support price level, farmers hope their fortunes can improve. Prospects of cotton fetching better prices in the months to come will also be the key at the crucial moment when the farmer decides on his choice of crop for sowing.

With competing nuts ruling higher, raw cashew price may not fall

Kochi, November 18: The cashew market, which showed some buoyancy from mid-August till mid-October, is witnessing subdued activity. During the last three weeks, prices have slipped by a few cents from large processors and more from the small and medium processors.

According to trade sources, cashew continues to be the most reasonably priced nut moving in a relatively narrow range compared with other nuts.

Therefore "it would be reasonable to expect prices to remain in this range and maybe even move up a bit – depending on buyer behaviour," Pankaj Sampat, a Mumbai-based dealer, told *BusinessLine*.Highest levels traded were W240 at \$4.05-4.15 and W320 \$3.60-3.70 per lb (fob). Offers/trades during the last fortnight were in the range of W240 \$3.75-3.95, W320 \$3.40-3.55, W450 \$3.30-3.45, SW320 \$3.35-3.45, butts \$3.10-3.25, splits \$2.95-3.05 and pieces \$2.85-2.95 per lb (fob).

However, for the time being, many buyers seem to be waiting to see how market moves in coming weeks. But, some are still buying part of their requirements from reliable processors (even at higher levels).

RCN prices up

Raw Cashew Nut (RCN) market moved up between August and mid-October, with prices for West Africa RCN moving up from \$1,150-1,250 to \$1,350-1,550 a tonne range. Tanzania RCN traded at around \$1,600 c&f. During the last 2-3 weeks, this has come down to \$1,425-50.

"If processors are not able to sell kernels at higher prices, they may be slow in buying RCN which in turn might lead to some reduction in prices, but reduction will not be much since availability is limited due to a fall in Southern crop output, estimated to be less than 25 per cent of world production," Pankaj said.

"Although we cannot be sure how market will move, especially in an uncertain situation like we face at present, our feeling is that cashew kernel market will remain in the range of \$3.40-3.70 for next 3-4 months and maybe more," he said.

Cold snap at large, mercury dips to 5.5°C in Rajasthan

Thiruvananthapuram, November 18:

Mercury has plunged to 5.5 degree Celsius in Churu in Rajasthan as a cold snap sustained for the second day over much of North and North-West India.

Fog in North-East

A cold wave that was in evidence over north-east Madhya Pradesh and is now forecast to extend a tongue into adjoining north Chhattisgarh. Cold wave conditions will continue to prevail over these areas for the next couple of days as well, an India Met Department outlook said.

Meanwhile, fog to dense fog conditions would prevail over the northeastern States of Assam, Meghalaya, Manipur, Mizoram and Tripura as some moisture from North Bay of Bengal floats into the region.

The Met did not expect a major change in the prevailing temperature regime over North and North-West India over the next two to three days.

Feeble westerly

The arrival of a western disturbance is now anticipated, which can qualitatively improve conditions thanks to the overall warming impact.

The Met said on Tuesday that a feeble western disturbance has called in over north Pakistan and neighbourhood.

It should cross the international border and enter North-West India later this week.

Being a feeble system, it may not be able to significantly alter the scenario except snow and showers over the higher reaches (western Himalayas).

Outlook for South

In the South, weather models say that dominant rainfall activity is likely to get concentrated over Sri Lanka over the next two weeks.

Parts of Tamil Nadu will also benefit, with the US Climate Prediction Centre saying that the entire coast may variously benefit from the wet weather. Extreme south peninsula may also witness thundery showers during this period as the Bay of Bengal becomes moderately active due to fortuitous circumstances.

India Met said on Tuesday that a trough of lower pressure has already developed over south Andaman Sea. This could be the fountainhead for sustained activity though models are not sure if a major weather system is evolving in the Bay just yet.

How the US winter can heat up natural gas prices globally



Demand will increase on projections of colder than normal weather Natural gas is one of the favourite commodities for traders as its price swings gives them an opportunity to make handsome returns in a short period of time.

Although there are risks associated with this, the momentum gives the commodity the much-needed attention most of the times.

The cyclical nature of the commodity and the supply and demand factors, inventory situation, along with the climate changes play a dominant role for setting the price trend for this commodity.

Prices of natural gas have been volatile in recent weeks with the commodity rising eight per cent on Monday.

Earlier, NYMEX natural gas prices has touched a high of \$4.544 mmbtu in mid-November before heading downwards to \$3.994.

Inventories

Inventory build-up in recent weeks coupled with moderate climate was the main factor that led to fall in natural gas prices.

To start with, natural gas inventories as on March 31, 2014 were 826 billion cubic feet, the lowest since April 2003. Since natural gas prices react largely on inventory positions, it becomes important how the injection season (which starts in April and ends in October) fares.

Heading into the injection season this year, producers of natural gas began stocking at a slower pace in April.

However, in later months, producers quickly ramped up inventories and exceeded five-year average level for 28 weeks in a row till October 31. As on October 31, inventories were 3,571 billion cubic feet – a record increase of 2,734 billion cubic feet during the injection season.

These high level of injections happened because of relatively low gas demand from the electric power sector as well as substantial increase in domestic gas production.

Mild summer temperatures led to low demand for air conditioning, which in turn helped to build the inventory.

Production side

Report released from Bentek Energy, a US agency, for April-October 2014 indicated that consumption of natural gas averaged lower at about 2 per cent compared with the same period a year ago and also 16 per cent lower that the same period in 2012.

On the supply side, there has been quite a revolution over the last few years in re-shaping energy supply scenario in the US. Ample supplies from shale gas have led to high natural gas production from lower 48 states this season too.

According to the latest report from Bentek Energy, natural gas output in October 2014 was 6 per cent higher year-on-year and is the tenth consecutive record breaking month in 2014.

Natural gas production averaged 68.5 billion cubic feet (bcf) a day in this year's injection season. This is 3.6 bcf/day higher than average production in 2013, which was at 64.9 bcf/day.

In the first six months of this season, production averaged 36.4 bcf/day, an increase of 15 per cent compared with the same period a year ago.

The report further points towards a positive impetus on production side and estimates production to climb to 67.9 bcf in 2014, when compared to 55.1 bcf in 2009.

Outlook

Although prices have corrected due to higher inventory levels along with rising production, prediction of a winter colder than normal in the US may likely lead to enhanced demand for heating.

This will result in higher natural gas demand in the coming weeks.

On basis of the same, NYMEX natural gas prices (CMP: \$4.27/mmbtu) can head towards \$4.5 per mmbtu and MCX natural gas prices (CMP: Rs. 256/mmbtu) may touch Rs. 280 per mmbtu levels in next 1-2 months.

The writer is Associate Director – Commodity & Currencies, Angel Commodity Broking. Views are personal.

Mother Dairy to soon sell its products in southern markets

Will launch brand of milk and dairy products at competitive prices, set up a chain of parlours



Mother Dairy milk products. Bijoy Ghosh

Chennai, November 18:

Mother Dairy Fruit & Vegetable Pvt Ltd plans to enter the southern markets with a range of dairy products in the next couple of months, said Sandeep Ghosh, Business Head (Dairy Products), Mother Dairy.

The company, a wholly-owned subsidiary of National Dairy Development Board, will launch the Mother Dairy brand of milk and dairy products at competitive prices and set up a chain of exclusive parlours.

At your doorstep

Mother Dairy double toned (regular) milk will be available at Rs. 36 a litre, which is the lowest compared to other major private sector brands such as Arokya (Rs. 40 a litre), Heritage (Rs. 40) and Tirumala (Rs. 42). The Tamil Nadu dairy cooperative-owned Aavin, after a recent increase in price, now sells at Rs. 34 a litre. "Besides,

Mother Dairy will also deliver the milk sachet at customers' doorstep, at no extra cost," Ghosh said.

The company expects at least 10-15 per cent of its dairy business to come from the southern market over a period.

For the Rs. 6,500-crore company, milk and other dairy products contribute over 75 per cent, while the rest is made up of fruits and vegetables (under the brand Safal) and edible oils (Dhara).

Brand visibility

"We have been doing our test marketing in select pockets in Chennai, Hyderabad and Bangalore, which proved to be very successful," he said. With the company's milk processing plant, Balaji Dairy in Tirupati going full steam, the company can now cover more areas in these cities. Besides processing milk, the facility in Tirupati will also make dairy products such as curd, paneer, ghee, sweetened lassi and other cultured products. To enhance brand visibility, Mother Dairy also plans to set up exclusive parlours — at least 10 in each city, which will showcase all its products.

Ghosh said Mother Dairy has the necessary cold-chain distribution network in place in Chennai, Hyderabad and Bangalore, and will slowly expand it to cover all pockets of these cities in the following weeks. Overall, it will sell its range of products in around 6,000 outlets in these cities. At present, the Mother Dairy brand is well established in the NCR and the western region. "With our expanded market, we would cross Rs. 10,000 crore business in the next two-three years," he said.

For the Rs. 6,500-crore company, milk and other dairy products contribute over 75 per cent, while the rest comprises fruits and vegetables and edible oil (Dhara).

'Research crucial for disease management'

Mangalore, November 18: With the emergence of newer diseases, researchers play a crucial role in their detection, diagnosis and management, according to the Karnataka Health Minister UT Khader.

Inaugurating the national conference of Society of Biological Scientists of India (SOBSI) in Mangalore on Tuesday, he stressed the need for close interaction of researchers with the government in taking up need-based programmes.

Researchers should share their knowledge for the benefit of the masses, and their focus should be on the eradication of diseases, Khader said.

He urged the government and private institutions to educate the people on better life styles, good food habits and on prevention of diseases.

The conference was jointly organised by Yenepoya University and Mangalore University. Around 250 delegates attended the conference.

Kerala to launch local component of dairy development scheme

Thirvananthapuram, November 18: The State government will formally unveil the local component of the National Project for Dairy Development at a function here on November 26.

The day is observed as National Milk Day to commemorate the birth anniversary of Verghese Kurian, the father of the white revolution.

Focused programme

Kerala Cooperative Milk Marketing Federation, popularly called Milma, will coordinate various activities across its dairy farms in the State.

The national programme is to be implemented over the next three years and aims at the wholesome development of the sector by building infrastructure, training farmers and strengthening the cooperatives.

The Centre launched the scientifically planned multi-State initiative to increase productivity in existing herds through a focused programme for breeding and feeding. The Planning Commission's estimates show that demand for milk is likely to be 155 million tonnes by 2016-17 which will rise to 200 million tonnes by 2021-22.

Chief Minister Oommen Chandy will officially launch the local component of the project for the benefit of dairy farmers in the State. Milma will host BM Vyas, Director, National Dairy Development Board and former Managing Director, Amul, to speak on 'Verghese Kurian – the institution builder.'

V Mukunda Das, Director, Chandragupta Institute of Management, Patna, will deliver the other lecture on 'Professional Management – Learnings from Verghese Kurien's Life.' Milma plans to put in place a scientific approach and systematic processes to improve the livelihoods of small producers who are the bedrock of the system, said PK Pathak, Managing Director.