

## TNAU trains scientists to create awareness on women-friendly farm equipment

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*Participants of the winter school on drudgery reduction technologies at the Tamil Nadu Agricultural University, Coimbatore.*

COIMBATORE, November 11, 2013 - The word 'drudgery' is becoming increasingly used in connection with work related to agriculture, especially in the case of

women. Farmers and farm scientists alike agree that a large portion of agriculture labour is not possible without women, and these activities are usually back-breaking for them, in the literal sense.

Since it is mostly work that involves standing for a long time, these activities get classified as 'drudgery'.

To make work easier for women, the Tamil Nadu Agricultural University is developing new technologies and also equipment / machinery. But the university rues that most of the women are not interested in learning about these, and even those who are aware of these technology / machinery, are not keen to use them. They prefer to follow the conventional method of cultivation.

To make these women-friendly measures reach the farm women, TNAU is using various methods.

Winter school

The Agricultural Machinery Research Centre of the university is organising a 21-day winter school on 'Drudgery Reduction Technologies Useful for Farm Women and Farm Workers' for agricultural scientists who are involved in research and extension work. Nearly 25 scientists from nine states are participating.

According to Training Co-ordinator and Head of the Centre B. Sridhar, gender friendliness was being focused in the designing of farm implements and machinery. Since most of the farm work was also being done by women, there was a need to help farm women by mechanising farm operations. The Centre has developed women-friendly cono weeder, drum seeder, coconut tree climber, bunch harvesting stand, etc., to make sowing, weeding, harvesting, etc., easier for women.

"The winter school is to equip these scientists with the technology and machinery available to reduce drudgery in farm work being done by women. They will go to their respective states and spread the awareness and also motivate women to do away with the conventional methods and use technology. The school includes classes, visits to various

industries manufacturing such machinery, and also demonstration of machinery in the wet lands of the university,” he said.

## Muvattupuzha to host agri fair

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KOCHI, November 11, 2013 - Muvattupuzha will host an agri fair from December 1 to 8. The fair will showcase various agricultural products and technologies.

Apart from an exhibition of traditional and new agricultural products and farm implements, seminars on farming practices will be conducted. New technologies such as agricultural polyhouses for adopting new methods of cultivation will also be on display.

The exhibition will help spread awareness of farming at a time when Kerala is importing much of its requirements in cereals and vegetables. Awareness of new methods of cultivation could improve yield and generate more income for the farmer.

The Kerala government is planning to introduce policies targeting a transformation in farming. Formation of agri-special zones by ‘agri-preneurs’ with State support, is one of the prime strategies. Unlike the State-promoted agri-export zones, the agri-special zones will focus on exports as well as domestic markets. The plan aims at promoting innovative precision farming practices to boost productivity.

The fair is being organised by the district administration in coordination with the local bodies.

***Muvattupuzha to host an agri fair next month with the support of the local bodies.***

## Farmers’ plea

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COIMBATORE, November 11, 2013 - Farmers’ Association that is unaffiliated has urged the State Government to immediately compensate those farmers whose lands it acquired for building the Chinnavedampatti Tank.

In a release, the organisation said that as per a High Court order the Government should immediately disburse 21.60 crore to compensate the farmers from whom the Government had acquired 65.5 hectare. The Government should also act against the officials who failed to prevent the sale of fertilisers over and above the price it had determined and also against those officials who had not acted against illegal fertiliser manufacturing units. The Government should initiate steps to ensure easy availability of ammonium sulphate to farmers.

The Government should through the Agriculture and Horticulture departments distribute quality seeds and not buy poor quality ones from private players. It also called for early completion of the work related to computerisation of land records and the work to link the registration offices with taluk offices so as to share transactions related to name transfer in title deeds (patta).

# Farmers want sugarcane procurement price fixed at Rs. 3,500 per tonne

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*FUTURE UNCERTAIN: Members of sugarcane farmers' associations converged in Erode on Saturday to discuss the future course of action.— PHOTO: M. GOVARTHAN*

ERODE, November 11, 2013 - Expressing disappointment over the State Government's silence over procurement price of sugarcane for 2013-14, farmers belonging to various associations have demanded that Rs. 3,500 per tonne be

fixed as ex-field rate.

The rate was determined by representatives of farmers' associations at a meeting they had here on Saturday.

Members of the coordinating committee representing associations supplying sugarcane for cooperative and public sector mills in Tamil Nadu and Puducherry wanted the government to ensure that the farmers are paid their dues within 15 days of procurement with legal safeguards.

## **Centre flayed**

They slammed the Centre for its import policy, questioning the need for importing when sugar was available at a good price within the country.

The policy impacted the capabilities of the mills to pay the farmers the dues within time, the farmers said and called for levy of Counter Veiling Duty or cent per cent duty on sugar imports to restore the economic strength of the mills.

While the Central Government must increase the composition of ethanol in petrol to 25 per cent, the State should lift restrictions on sugar mills generating power with co-generation plants. The power from these plants must be procured on the basis of the rate prevailing in open market, the farmers emphasised at the meeting.

The associations decided to hold rallies and demonstrations in Chennai on December 9 and in New Delhi on December 12 to highlight their plight and convey the demands.

# Farmers allege dupe by sugar mills

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KOLHAPUR, November 11, 2013 - Sugar mills in Maharashtra and (especially in southern Maharashtra) are allegedly deceiving sugarcane farmers by manipulating the cane weighing machine thereby reducing the cane weight and duping farmers to the tune of Rs. 2,600 per truck. The allegation was made openly by Shivsena's district chief Vijay Devane while speaking in a farmers' rally at Malage in Kolhapur district. Shivsena has started an agitation

for a fair price for sugarcane and in various farmers' rallies the sugar mills in the region were being exposed by activists who were alleging the sugar barons' various ways of duping farmers.

#### CHAIN SNATCHING

In addition to burglary incidents, chain snatching incidents have continued at Satara. Gold chains worth Rs. 55, 000 were snatched from Nutan Shirke (28) and Kusum Sawant (45) when the two women were walking down the street in Satara on Friday night.

#### FARMERS TARGET CM ON CANE PRICE ISSUE

Farmer activists of 'Swabhimani Shetakari Sanghatana' (SSS) has decided to target chief minister Prithviraj Chavan if the sugar mills in southern Maharashtra fail to respond to the demand of a fair price of Rs. 3,500 per tonne and Rs. 3,000 as the first instalment. In a recent rally (on Friday) at Jaysingpur in Kolhapur district SSS leader Raju Shetty M.P. demanded that besides the price for the current cane, Rs. 2,800 should be given per tonne as final bill for the cane crushed in the last season, as the final payment for that cane is still pending. He declared that after demanding rallies and processions in various areas if the mills still denied fair price as per the demand, the last target would be Chief Minister Chavan's residence at Karad.

#### STATE-WIDE IMPORTANCE OF ANTI-TOLL CAMPAIGN IN KOLHAPUR

If the toll compulsion for entry into Kolhapur is not opposed vehemently and the IRB Company allowed to impose toll, the same formula would be followed in all municipal councils and corporations where road contract would be taken and tolls for inside the city area would be forcibly collected. As the danger has a state-wide connotation people should come forward in large numbers to oppose toll collection, said veteran leader of PWP Professor N.D. Patil at a news conference on Saturday. He declared that a very massive and ultimate struggle would soon be launched against toll compulsion as both the State government and its local administration were reluctant to halt the toll, despite continuous anti-toll agitation.

## Ayyappan to make presentation to legislators on farm scenario

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*Minister for Law and Parliamentary Affairs T.B. Jayachandra presenting the Rajyotsava award to Indian Council of Agricultural Research Director-General S. Ayyappan (sitting) in Bangalore on Sunday. — Photo: Shraddha Vishwakarma*

BANGALORE, November 11, 2013 - In a bid to tap the potential of agriculture and allied sectors through proper policy initiatives, the State government has decided to organise an interaction for

legislators with Indian Council of Agricultural Research Director-General S. Ayyappan on the sidelines of the winter session of the legislature in Belgaum.

Announcing this after presenting awards to innovative farmers on the fourth day of the International Krishi Mela here, Minister for Law and Animal Husbandry T. B. Jayachandra said that he had spoken to Speaker Kagodu Thimmappa in this connection.

Later, he told reporters that Dr. Ayyappan, who is secretary to the Union Department of Agricultural Research and Education, had agreed to make a presentation to legislators on emerging opportunities in agriculture and allied sectors.

“Dr. Ayyappan will touch upon the export potential in different areas and the policy changes to be made to cash in on the emerging opportunities. The interaction programme will lead to policy changes in the agriculture and allied sectors,” the Minister said.

The interaction will be held at the Suvarna Vidhana Soudha in Belgaum.

Expressing concern over cattle being frequently affected by diseases, he said that the State government had decided to take up a programme to encourage research on developing disease-tolerant breeds of sheep and goat.

Union Minister of State for Small and Medium Enterprises K.H. Muniyappa, Dr. Ayyappan, MLC M.V. Rajasekharan and University of Agricultural Sciences, Bangalore, Vice-Chancellor K. Narayana Gowda spoke.

#### **Rajyotsava award**

Dr. Ayyappan was honoured with the Rajyotsava award on Sunday at krishi mela by the Law Minister, as he could not attend the award presentation ceremony on November 1 due to official work.

#### **20 lakh visitors**

The krishi mela has become a crowd puller with 20 lakh persons attending the event in the first four days.

Disclosing this to *The Hindu*, Dr. Narayana Gowda said that about 6.5 lakh persons visited the mela on Sunday by 5 p.m.

“The final figures for Sunday is yet to be updated,” he said.

Referring to the number of farmers visiting visited the mela, Dr. Ayyappan described it as a “Krishi Kumbh Mela”.

## Egg rate

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NAMAKKAL, November 11, 2013 - The National Egg Coordination Committee has fixed the egg rate at Rs. 3.76 on Sunday.

## Rain takes heavy toll on paddy crop

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KURNOOL, November 11, 2013 - Heavy rains and the resultant growth of foliage have increased pest attack on the paddy crop this season.

Crop diseases like Blast, Bacterial Leaf Blight and Brown Plant Hopper (BPH) were noticed on paddy planted early, say agriculture scientists.



The cycle effect was more severe in plots transplanted in July and August. Areas where crops were sown late have, however, escaped the effect.

Former Associate Director of Research G. Narasimha Rao said farmers should immediately take up pest control measures to prevent damage to the yield.

According to an estimate, paddy was grown in 70,000 hectare.

#### **Cotton logs growth**

Meanwhile, the cotton crop registered good growth due to copious rains. The flowering, which was set so far would yield, but second flush of flowering might be affected.

As the natural immunity from transgenic varieties would diminish after 100 days, farmers should protect crop through use of chemicals.

Area under cotton cultivation rose to 1.4 lakh hectares this year on account of remunerative prices last season.

#### **Rains wreck pulses**

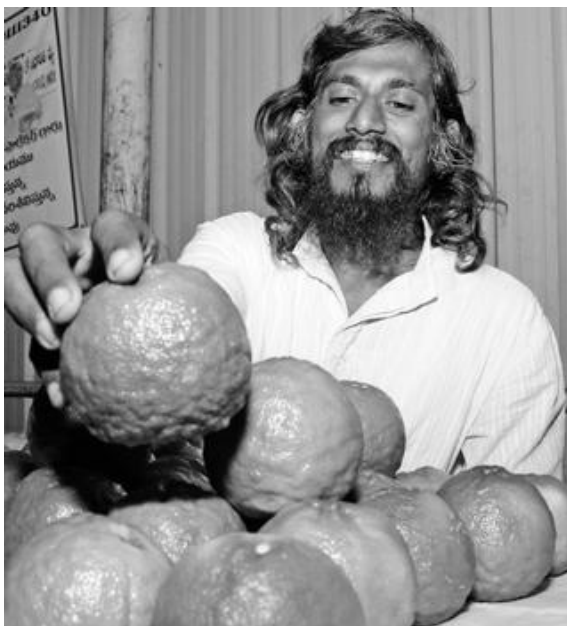
The rains also damaged Bengal gram that was sown in September and October. However, plots in elevated areas escaped water-logging.

Maize farmers harvested a bumper crop this year, here again rains damaged the quality of grain during harvesting. Even financial assistance from the government would not cover post-harvest damage.

***Paddy sown early – in July and August – has been afflicted by diseases such as Blast, Bacterial Leaf Blight and the Brown Plant Hopper***

## Organic farming need of the hour, says technocrat-turned-farmer

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*Yerneni Kaleswara Rao displaying his produce*

VIJAYAWADA, November 11, 2013 - If one wishes to drink fresh and unpolluted water, breathe pollution free air and eat pure food, then the solution lies in switching to organic farming, said Yerneni Kaleswara Rao, a B. Tech electronics engineer who switched to organic farming seven years ago.

The technocrat-turned-farmer, who set up a stall at the exhibition-cum-seminar on organic farming and organic products, organised by Andhra Pradesh Organic Farmers Federation at Industrial and Agricultural Exhibition Society Hall here on Sunday, pointed out that farming was the oldest profession. It was time to give

back something to mother earth, he opined.

According to him, farming, using pesticides and artificial fertilisers, might yield quick results, but had a negative impact on the natural nutrients and potential of the soil.

## Misconception

Complying with Kaleswara Rao, former Medical Officer Durga Prasad Rao, who switched to organic farming at Gannavaram about 25 years ago, said, "Organic farming is the future. It is in our roots and we must switch back to it, before the soil becomes unproductive."

The medico turned farmer, pointed out that there was a misconception that organic farming was not lucrative. Explaining the myth, he said that organic farming might not be fetching immediately, as farmers need to treat the soil and allow it to regenerate its nutrient potential. The rejuvenation process takes about three to five years. Once the process is complete, the fields will yield the same quantity as in fields using inorganic material.

Kaleswara Rao told *The Hindu* that the investment per acre in organic farming was half of farming done using chemicals and artificial fertilisers. Organic farming was all about judicious use of a mix containing cow dung, cow urine, organic jaggery, humus soil and flour made of assorted grams. One cow was sufficient to produce organic manure for 30 acres, he said.

Bollu Veera Raghavaiah, an award-winning organic farmer from Manikonda in Krishna district, said that organic farming process could be used for growing all types of crops such as paddy, maize, sugarcane, vegetables, grams or fruits. They not only have better nutrient value but also could be grown to bigger sizes, he said. Addressing a gathering of farmers, Andhra Pradesh Organic Farmers Federation President G. Radha Rani, said that organic farms do not need pesticides to keep away diseases and infecting insects. "The soil is rejuvenated in such a way that the micro-nutrients in the soil give the crop an immune system that has the capacity to protect itself," she said.

The convenor of the programme was K. Sambasiva Rao.

## Stray cow delivered of calf at fire station

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*The cow was being taken care of by the Fire Department staff, as nobody had come to claim it till Sunday. — Photo: G.Krishnaswamy*

PUDUCHERRY, November 11, 2013 - On Sunday evening, owner of a cow came to the fire station here to take back his animal which had meandered into the premises and gave birth to a calf.

The cow was being taken care of by the Fire Department staff, as nobody had come to claim the animal till Sunday.

Finally, the department lodged a complaint in the local police station and the owner was traced and the cow handed over to him. This is one of the few cases in which stray cattle are being restored to owners.

However, many animals are found abandoned on roads, feeding near dustbins.

Stray cattle affect traffic and residents of areas such as Lawspet and Muthialpet complain that if food or other items are left on their two-wheelers even for a few minutes, stray cattle eat them up.

#### **Cost of fodder**

According to statistics available with the government, the urban area - Oulgaret, the Boulevard and Ariyankuppam - is home to over 3,000 cows. The main reason for these cows being left to eat from dustbins is the increasing cost of fodder. According to Jeeva, who owns a cow, the feed for one cow costs Rs. 1,000 a day.

This creates a major hole in the pocket of the owner, as demand for fresh cow's milk is also on decrease.

#### **Demand for fresh milk**

Unfortunately, many people who buy fresh cow's milk are sold milk from cows that feed on paper and plastic bags. This not only affects the health of the cow in the longer run, but also quality of milk, he adds.

According to another cow owner, Rajangam, shrinking of space in urban areas has compounded the problem.

As people who earlier owned cows are no longer in a position to maintain the animals owing to space constraints, the cows are let loose on the road. These cows end up being either abandoned or sold to slaughter houses.

***According to statistics available with the government, the urban area is home to over 3,000 cows***

## Veterinarians inspect cattle for foot-and-mouth disease

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KARUR, November 11, 2013 - In their continued vigil against foot-and-mouth disease, which could fatally harm large animals, veterinarians from the Department of Animal Husbandry conducted an inspection of the animals that arrived at the famous weekly shandy at Uppidamangalam near here on Saturday and Sunday.

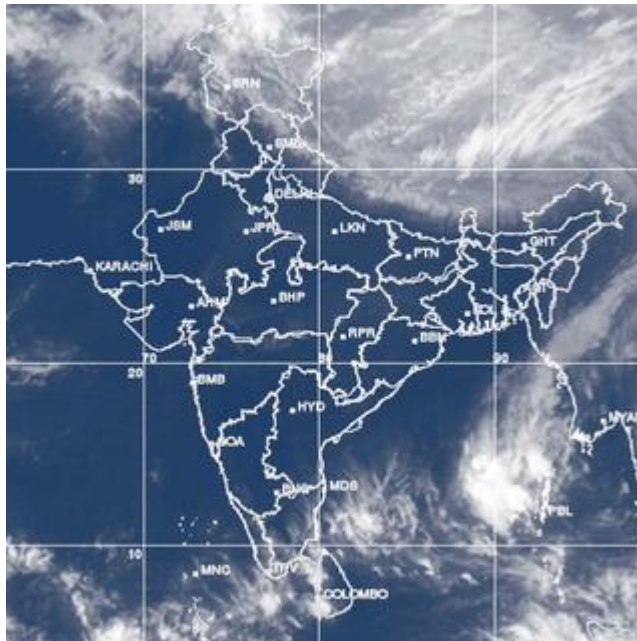
Led by the Regional Joint Director of Animal Husbandry R.Gopinath, veterinarians, including Assistant Director N.Kulandaisamy, Veterinary Assistant Surgeons M. Manigandan and Jagadeesan, conducted disease surveillance and monitoring campaign at the shandy. The exercise assumed importance as transhipped animals greatly contributed to the spread of the viral disease.

The veterinarians also inspected cattle yards in the vicinity to spread awareness among farmers on the need to prevent the dreaded disease that was spreading its tentacles in several parts of the State in the recent days.

During the campaign, they educated the farmers on the means to prevent the disease and stressed on the need to vaccinate animals against the disease. They also distributed pamphlets to the participants. They met cattle traders in the shandy and urged them to exercise caution against the disease. They advised the traders against buying or transporting affected cattle.



# Weather



	Max	Min	R	TR
New Delhi (Plm)	27	14	0	53
New Delhi (Sfd)	26	12	0	73
Chandigarh	25	11	0	43
Hissar	25	11	0	10
Bhuntar	19	3	4	26
Shimla	15	5	tr	80
Jammu	25	10	0	140
Srinagar	15	0	0	23
Amritsar	24	11	0	100
Patiala	26	12	0	11
Jaipur	27	17	0	5
Udaipur	26	15	0	55
Allahabad	29	15	0	301
Lucknow	28	11	0	42
Varanasi	28	16	0	141
Dehradun	24	9	0	48
Agartala	30	17	0	190
Ahmedabad	30	19	0	63
Bangalore	28	17	0	104
Bhubaneshwar	29	19	0	674
Bhopal	28	17	0	26
Chennai	31	23	0	210
Guwahati	30	15	0	215
Hyderabad	29	19	0	239
Kolkata	30	20	0	530
Mumbai	33	24	0	66

Nagpur	31	17	0	168
Patna	29	16	0	194
Pune	30	16	0	25
Thiruvananthapuram	32	24	0	241
Imphal	29	10	0	69
Shillong	21	12	0	77

The columns show maximum and minimum temperature in Celsius, rainfall during last 24 hours (tr-trace)

MAINLY DRY WEATHER

**Rainfall:** Rain/snow has occurred at isolated places over Himachal Pradesh. Weather was mainly dry over rest of the region.

**MINIMUM TEMPERATURE :** The minimum temperatures changed little over the region. They were appreciably below normal in Jammu and Kashmir and Uttarakhand, below normal in Himachal Pradesh, west Rajasthan and west Uttar Pradesh and normal in rest of the region. The lowest minimum temperature in the plains was 07.5°C recorded at Nazibabad (Uttar Pradesh).

**FORECAST FOR REGION VALID UNTIL THE MORNING OF 13th NOVEMBER 2013:** Rain/snow could occur at one or two places over north Jammu and Kashmir from tomorrow onwards. Weather would be mainly dry over rest of the region.

Fog/shallow fog may occur over isolated pockets of Punjab, Haryana, Delhi, Uttar Pradesh and north Rajasthan during next two days in the morning hours.

Fall in minimum temperatures by about 02°C over many parts of northwest India during next 24 hours.

**FORECAST FOR DELHI AND NEIGHBOURHOOD VALID UNTIL THE MORNING OF 13th NOVEMBER 2013:** Mainly clear sky. Mist/Shallow fog in the morning

## Weather

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Chennai - INDIA

Today's Weather



Sunny

**Monday, Nov 11**

Max 31° | Min 23°

Rain: 0

Humidity: 89

Wind: normal

Sunrise: 06:05

Sunset: 05:39

Barometer: 1011

Tomorrow's Forecast



Partly Cloudy

**Tuesday, Nov 12**

Max 32° | Min 24°

Extended Forecast for a week

Wednesday  
**Nov 13**



32° | 23°

Partly Cloudy

Thursday  
**Nov 14**



28° | 24°

Overcast

Friday  
**Nov 15**



28° | 23°

Overcast

Saturday  
**Nov 16**



28° | 24°

Overcast

Sunday  
**Nov 17**



26° | 25°

Overcast

**THE TIMES OF INDIA**

## Sugarcane support price fixed, farmers unhappy

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**BANGALORE:** After weeks of negotiations amid farmers' protests, the Karnataka government on Sunday fixed Rs 2,500 as the minimum support price for a tonne of sugarcane.

The support price was fixed at a meeting called by the Karnataka Sugarcane Control Board and attended by ministers, officials and farmers' leaders. The farmers' association was not happy with the price and said it would shortly plan its next course of action.

"Keeping in mind the current sugar prices and the cost of production of sugarcane, the

government and board have decided to fix Rs 2,500 the minimum support price for a tonne of sugarcane," co-operation minister HS Mahadeva Prasad told reporters after the meeting.

Before the meeting with stakeholders, Prasad, sugar minister Prakash B Hukkeri and agriculture minister Krishna Byregowda held preparatory discussions with chief minister Siddaramaiah at Krishna, the CM's home office.

The issue had been hanging fire for many days as growers and factory owners couldn't find [the middle](#) ground, leading to agitations in North Karnataka.

## No let-up in cane farmers' stir

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BELGAUM: Sugarcane farmers of the district blocked the Pune-Bangalore National Highway-4 for the consecutive third day on Thursday, demanding state advisory price (SAP) for sugarcane be fixed at Rs 3,500 per ton. Thousands of farmers blocked NH-4 at Hattaragi toll-naka for around five hours.

Addressing farmers, former minister Shashikant Naik demanded that sugar minister Prakash Hukkeri resign taking moral responsibility for failing to provide a fair price for farmers. He blamed the government and the minister for delaying announcing the SAP and bowing to pressure from managements of sugar factories. He said that Hukkeri had promised to declare the SAP two days after Mysore Dasara.

Farmer leader Sidagouda Modagi said that the price was fixed during the meeting of Karnataka Sugarcane Purchase and Supply (Control) Board (KSPSB), and the government just needs to declare it. But, as the price fixed by KSPSB is unacceptable to the factory managements, the government is dragging its feet. This, he said was injustice to the farmers.

Meanwhile, farmers announced that they would stage an indefinite dharna in front of minister Hukkeri's residence in Belgaum from November 19. Farmer leaders Shivaputrappa Jakabal, Kalyanrao Muchalambi, T T Murkatnal, Mallikarjun Jakati and Kallappa Pugati addressed the farmers. Police arrested the protesting farmers and their leaders and released them later.

Activists of Karnataka Raita Sangha, Hasiru Sene, Karnataka Sugarcane Producers Association, Bharatiya Krishik Samaj, Karnataka Krishik Samaj, Rashtriya Rait Sangh, Karnataka Navanirman Vedike, Bharatiya Kisan Morcha and North-Karnataka Farmers Organizations [Forum](#) were present.

## Cane growers' shift protest site to minister's residence

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BELGAUM: Sugar cane growers, who have been staging protests by blocking national highways, state highways and other prominent roads for the past couple of days, began an

indefinite dharna in front of sugar and [small scale industries](#) minister Prakash Hukkeri's residence.

The farmers assembled at Kannada Sahitya Bhavan and marched towards Prakash Hukkeri's residence. Though deputy commissioner N Jayaram called upon farmers to withdraw their protest saying their issues will be resolved on Monday, the farmers went ahead with their rally saying they would withdraw their protest only after the government fulfills their demands. They pointed out that the minister had assured to resolve their problems after Dasara celebrations, but had not kept his promise.

The farmers want government to implement State Advisory Price (SAP) and fix a minimum of Rs 3,500 as scientific price for sugarcane. "Until and unless government fulfills farmers' demand, we are not going to withdraw our protest," said former district in [charge minister Shashikant Nayak](#). Nearly 300 farmers took part in the protest. Police made elaborate security arrangements around the minister's residence.

## Himachal sets up first bird ringing station

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*A bird ringing station, where a ring will be put on birds' legs to study their migration pattern in the western Himalayas, has been set up by the state wildlife wing in the Great Himalayan National Park in the Kullu Valley*

SHIMLA: A [bird ringing station](#), where a ring will be put on birds' legs to study their migration pattern in the western Himalayas, has been set up by the state wildlife wing in

the [Great Himalayan National Park](#) (GHNP) in the [Kullu Valley](#), officials said here on Sunday.

The ringing station, first of its kind in Himachal Pradesh, has been opened at Sairopa, located on the outskirts of the national park and some 250 km from here, assistant conservator Satpal Dhiman told IANS.

He said the station has so far put metallic rings on 260 birds of different species. "Each bird has been given a unique number and Bombay Natural History Society (BNHS) stamp," he said.

One of the richest bio-diversity sites, the Great Himalayan National Park is home to the elusive and critically endangered western tragopan, along with four other spectacular pheasants, the snow leopard and the mighty Himalayan brown bear.

Notified in 1999, the park spreads over an area of 754 sq km. It supports 31 mammal



species, 203 bird, 44 butterfly, three reptile, nine amphibian and 127 insect species, besides 425 species of plants.

Another wildlife official said recently a two-week programme was organised to train wildlife employees in bird ringing.

Francis Buner, a senior conservation scientist with the Game and [Wildlife Conservation Trust](#), and T H Walker of the British Trust of Ornithology imparted training to the staff in bird identification and ringing.

Both trusts are Britain based independent leading charitable research institutes.

"The ringing centre will help attracting bird watchers and ringers from western countries besides providing an excellent communication and knowledge transfer platform between the state and international species and conservation experts," said the official.

A large number of birds, including the Himalayan griffon vulture, the lammergeier, the golden eagle, the Eurasian woodcock, the solitary snipe, the wood pigeon, the snow pigeon, the slaty-headed parakeet, the collared owlet and the rock eagle owl, can be spotted flitting throughout the GHNP.

The GHNP is one of the only two national parks in the world with a population of the brilliantly plumaged western tragopan. The Machiara National Park in Pakistan also supports this species.

Another endangered pheasant, the cheer, is also found in the GHNP's grassy slopes. Other pheasant species, the monal and the koklas, are in abundance in the temperate zone, while the kaleej occurs in small numbers below 2,000 metres.

Starting at an altitude of 1,700 metres, the highest peak within the GHNP approaches 5,800 metres.

Park authorities said the best sighting of wildlife can be made in autumn (September-November) as animals start their seasonal migration to lower altitudes.

## Mamata guards her potatoes, Orissa on a slow burn

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The humble potato comes a poor second to pricey onion in State matters. But that was before Mamata Banerjee wielded the knife.

Over the past couple of days, the West Bengal Police, directed by the Chief Minister, has seized thousands of trucks carrying potatoes to neighbouring states such as Orissa, Jharkhand and Bihar. Mamata's provocation

was the rise in the price of the vegetable back home. However, while potato prices have stabilised to some extent in Kolkata, they have shot up to more than Rs 35 a kilogramme in many of the neighbouring states because of her move. The first sign of a retaliation came Saturday when protesters in Orissa blocked over 40 trucks near Dantan on the border between the two states. The trucks were carrying onion, fish and other items to West Bengal, and the blockade continued for several hours. According to sources, while Orissa CM Naveen Patnaik has requested Mamata to resume the supply of potatoes, she has not responded so far.

Orissa Chief Secretary Jugal Kishore Mohapatra said he had also had a discussion with his West Bengal counterpart. "The Chief Secretary assured us of lending all possible help. I understand a political decision on this has to be taken," said Mohapatra.

Bengal is the largest supplier of potatoes to Orissa, and everyday over 350 to 400 truckloads from the state carry the commodity to Orissa on a regular basis.

Hopeful of a solution after a meeting in Bengal Monday afternoon, Orissa State Food Supplies and Consumer Welfare Secretary Madhu Sudan Padhi said since potato is not covered under the Essential Commodities Act, the government had no other option but to depend on the traders.

"We are trying to get some potatoes from Kanpur and also from within Orissa. But the situation will improve only when supplies resume from Bengal," he said.

Mamata's words last week, while inaugurating a Jagaddhatri puja in Burrabazar, Kolkata's wholesale market hub, were clear: "I will not allow our own people to be deprived of potatoes while traders gain by sending these to other states. Potatoes will go to other states only after our own people are catered to properly."

Additional DGP, Enforcement Branch, M K Singh confirmed that over 900 trucks carrying potatoes produced in Bengal to other states had been stopped at the border. However,

potato movement from any other state like Jharkhand or Bihar to states in the Northeast was not stopped, he said.

The truck drivers and traders were not booked but their vehicles diverted.

The Bengal administration has also moved over 1,450 truckloads of the vegetable from cold storage in south districts to all over the state to stabilise the prices.

It is expected that the government may ease its crackdown after the emergency meeting called of the Essential Commodities Price Monitoring Task Force Monday.

Leaders from own Trinamool Congress fear that Mamata could face charges of flouting the principles of federalism, of which she is an ardent advocate, with her actions.

About a month back, Mamata had similarly picked up a quarrel with Jharkhand over release of water from DVC dams, which had left several Bengal districts inundated. Jharkhand had argued that the dams were almost at bursting point and it had no alternative but to release the water.

With inputs from Debabrata Mohanty in Bhubaneswar

## Cow's milk may cure stomach cancers

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In some good news for milk lovers, a peptide derived from cow's milk has been found to be a potent killer of the human stomach cancer cells, scientists claim.

New research from researchers in Taiwan indicates that a peptide fragment derived from cow's milk, known as lactoferricin B25 (LFcinB25), exhibited powerful anticancer capability against human stomach cancer cell cultures.

The findings provide support for future use of LfcinB25 as a potential therapeutic agent for gastric cancer. "Gastric cancer is one of the most common causes of cancer-related mortality worldwide, especially in Asian countries," said Wei-Jung Chen, of the Department of Biotechnology and Animal Science of National Ilan University, Taiwan.

Investigators evaluated the effects of three peptide fragments derived from lactoferricin B, a peptide in milk that has antimicrobial properties. Only one of the fragments, LFcinB25 reduced the survival of human Gastric Adenocarcinoma (AGS) cells in a dose-dependent and time-dependent manner.

Under a microscope the investigators could see that after an hour of exposure to the gastric cancer cells, LfcinB25 migrated to the cell membrane of the AGS cells, and within 24 hours the cancer cells had shrunken in size and lost their ability to adhere to surfaces.

In the early stages of exposure, LFcinB25 reduced cell viability through both apoptosis (programmed cell death) and autophagy (degradation and recycling of obsolete or damaged cell parts).

At later stages, apoptosis appeared to dominate, possibly through caspase-dependent mechanisms, and autophagy waned. "This is the first report describing interplay between apoptosis and autophagy in LFcinB-induced cell death of cancer cells," said Chen.

The research also suggested a target, Beclin-1, which may enhance LFcinB25's cytotoxic action. Beclin-1 is a protein in humans that plays a central role in autophagy, tumour growth, and degeneration of neurons.

The investigators found that cleaved beclin-1 increased in a time-dependent manner after LFcinB25-exposure, suggesting to the authors a new approach in drug development that may boost the anticancer effects of LFcinB25.

"Optimisation of LFCinB using various strategies to enhance further selectivity is expected to yield novel anticancer drugs with chemotherapeutic potential for the treatment of gastric cancer," said Chen. The study was published in the Journal of Dairy Science.

## THE NEW INDIAN EXPRESS

### Hot Western Ghats drive out butterflies

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*K Mani, Biologist, said the presence of the butterflies in large number would indicate that the vegetation was intact and healthy. If the butterflies were not showing up, it revealed that the change in climate was affecting their movement.*

From September to December every year, several people throng the hillocks of Western Ghats, especially Anaikatty to view the beautiful butterflies found all over the place. However, this year visitors were disappointed as the butterfly population saw a drastic decline.

Environmentalists attribute the sudden change in climate for the disappearance of butterflies that fly in large numbers across the hills, roads and forest.

K Mani, Biologist, said the presence of the butterflies in large number would indicate that the vegetation was intact and healthy. If the butterflies were not showing up, it revealed that the change in climate was affecting their movement.

Anaikatti is the migratory path of the butterflies when they move from the South East of the Nilgiris plateau to the North West. However, lack of rainfall due to the north-east monsoon, low soil moisture and forest fire could have caused the reduction. He said there were 96 species of butterflies in the region. However, any change, man-made or natural would affect their activities.

Renowned photographer K Jayaram, who has been picturing the butterflies, said the lush green cover on the other side of Western Ghats would have allured the butterflies and fulfilled their food requirements.

## Phailin hit farmers to get Rs 100 crore package

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The State Government on Saturday announced an additional benefit of Rs 100 crore under the special package for the cyclone and flood-affected farmers.

Demonstration of groundnut cultivation will be conducted in 40,000 hectares of farmers fields to increase productivity and two lakh families will be provided fruit sapling kits in the affected districts for sustainable livelihood, Agriculture Minister Debi Prasad Mishra told reporters.

The Government will provide assistance of Rs 3,000 per hectare for demonstration of groundnut crop. Responding to a query, the Minister said the Government has decided to take up rabi cultivation in over 33,68,000 hectares out of which 5.71 lakh hectares would be covered for oil seed cultivation. Groundnut cultivation has been planned on 2.4 lakh hectares.

Stating that the groundnut seed requirement of the State is about 2.75 lakh quintals, the Minister said measures have been taken to supply 2.10 lakh quintals of seeds through the Odisha State Seeds Corporation and Odisha Agro-industries Corporation at a subsidised rate of Rs 38 per kg.

Seed treatment campaign will be taken up in the affected areas covering one lakh hectares of paddy and two lakh hectares of pulses and oilseeds crops.

The Government will provide assistance for treatment of saline soil for oil seed crops over 50,650 hectares. Gypsum will be supplied to the farmers at Rs 20 per 50 kg bag.

Two lakh families will be provided 10 fruit saplings at a cost of Rs 5 per kit and four seedlings of coconut will be given to one lakh families free of cost, Mishra said.

Replying to a question, the Minister said over 15 lakh farmers of the costal districts have lost their coconut trees under the impact of the cyclone Phailin. The Coconut Development Board has estimated the loss at Rs 316 crore.

Chief Minister Naveen Patnaik had announced a special package of Rs 453 crore for farmers, fishermen and weavers community on October 21. The special package will benefit over 17.38 lakh farmers, Mishra said.



# Business Standard

## Edible Oil Outlook: Short-term spikes may not sustain

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### **Soya oil along with crude palm oil accounts for a large part of India's edible oil consumption, trading as well as imports**

A record acreage in Maharashtra and Madhya Pradesh had led to a build-up in expectations of a higher soybean crop after the sowing process. However, due to very heavy rains during the pod filling stage in Madhya Pradesh and some parts of Vidarbha (Maharashtra), a larger than expected damage was caused to the soybean crop. On account of this, we have seen a sharp drop in production, as well as quality issues in the new crop of soybean. Crushers from Madhya Pradesh are these days seeking Maharashtra's crop due to quality issues.

The [soymeal](#) produced by the low quality crop of Madhya Pradesh has led to rejection of export shipments. At the same time, oil produced out of these low quality beans contains high free [fatty acid](#), leading to lower realisation for the crushers in Madhya Pradesh. Soya oil availability has taken a huge hit because of the quality issues of soybean, leading to a rally in soya oil prices. Crushing of soybean produces soya oil while leaving by-products like soymeal and cakes.

Indian [edible oil](#) availability can improve as cotton crop is in great shape and supplies of cotton seed oil is likely to hit the market by the second half of this month. On the international front, India imports more than 90 per cent of its soya oil requirement from Argentina. Argentine farmers have continued to hoard a huge chunk of soybean, estimated at 17-18 million tonnes, as against seven to eight million held by them last year, leading to tight FOB (free on board) prices at Argentine ports. Expectations of a good crop in Argentina can lead to farmers releasing their hoarded stock, which can soften Argentine soya oil FOB prices.

In the short term, with the recent depreciation in the rupee, quality issues of soybean will remain supportive for soya oil prices which can test Rs 780 per 10-kg pack. But from three-month horizon expectations, due to a surge in imports from Argentina in December and with domestic crushing likely to gain momentum, we see a cap on any major upside in soya oil prices.

On the one hand, we have seen weather woes have led to a major rally in soya oil prices. Similar is the case with [crude palm oil](#). With weather anomalies causing harvest delays, there has been a spike in crude palm oil prices. Strong import demand from the European Union and lower stocks of palm oil have added fuel to the fire. October (data awaited) could see a drop in production by six to 10 per cent as against a rise earlier, which will be followed by a seasonal declining production trends. Though we have seen a gradual rise in stocks in September, we are still below the record stock number of 2.63 million tonnes seen last year. Malaysian stock piles as on September, stood at 1.78 million tonnes against 2.48 million in

the corresponding time last year.

Soya oil, along with crude palm oil, accounts for a large part of India's edible oil consumption, trading and imports.

Due to weather woes in the short-term, crude palm oil prices may also remain supportive but we are still in a high cycle of palm oil production at the moment. It's because of excess rains and mild cyclones that we have seen harvesting delays of FFB's ([fresh fruit bunch](#)). Going forward, the demand for palm oil is likely to see a setback in the winter season. In the short-term, rallies to the tune of Rs 580-585 per 10 kg pack shouldn't be ruled out but once the production cycle revives due to moderating weather anomalies the medium term trend shall remain bearish.

## Soybean crushing down on low supplies during October

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**Indian Oil Year starts with the arrivals of new soybean crop in October and goes on till September next year**

[Soybean](#) crushing activity was down almost 35-50% in first month of the oil year (October 2013) compared with the corresponding period last year, said experts.

[Indian Oil](#) Year starts with the arrivals of new soybean crop in October and goes on till September next year.

"We feel around 5.5 -6 lakh tonne soybean was crushed in October which is less than 2-3 lakh tonne compared with what is generally crushed during this time," said Rajesh Agrawal, coordinator and spokesman, Soybean Processors Association of India.

Weak and low quality supplies due to rains during the harvesting time are seen as the major reasons behind low crushing, said traders.

All India soybean supplies were not more than 7 lakh tonne in October which is generally 10-12 lakh tonne every year, added Agrawal.

Crushers feel the activity may show some improvement in November but are worried about smooth supplies in the coming days.

"Farmers may decide to hold back their produce in expectations of better prices," said a major crusher from Dewas near Indore.

Around 55-60% oilseed crushing units of Madhya Pradesh are in and around Dewas near Indore.

Madhya Pradesh is the largest soybean producing state in India. Low crushing would also

affect availability of soyoil and [soymeal](#) in the domestic markets. "Soyoil and soymeal supplies were not encouraging in October which has led to price rise in both the commodities," added the crusher. Crushers feel soybean prices may keep getting support on supply front but lower soy product demand due to higher prices may put some pressure on prices in November.

## THE HINDU Business Line

### Tea prices continue to slide at Kochi auction

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**Kochi, Nov. 10:** Kochi tea auction continues to witness a declining trend with prices of almost all varieties quoting lower.

In sale no 45, the quantity on offer in the dust CTC grades was 11,81,500 kg.

The market for select best was irregular and sometimes sold around last. Others tended to ease by Rs 3-5. It also witnessed more withdrawals compared to last week.

Exports continued to be less and were confined to medium and plainer teas.

There was also a subdued demand from upcountry buyers.

The arrival in orthodox grades was low and the quantity on offer was 5,000 kg.

Exporters absorbed a small quantity of orthodox dust offered in the sale.

In the best CTC dusts, PD varieties quoted Rs 96/116, RD grades fetched Rs 105/136, SRD ruled at Rs 112/146 and SFD stood at Rs 116/156.

The leaf sale witnessed a mixed trend and the quantity on offer in orthodox grades was 176,000 kg.

The market for good liquoring Nilgiri brokens, whole leaf and fannings was fully firm to dearer.

Clean black well made bolder brokens, TFBOP, TFP barely remained steady. The quantity on offer in CTC grades was 77,000 kg.

The market was lower by Rs 3-5. It also witnessed heavy withdrawals.

In the dust varieties, Manjolai SFD quoted the best prices of Rs 158 followed by Manjolai FD at Rs 157.

In the leaf grades, Chamraj FOP- (s) (green tea) fetched the best prices of Rs 315 followed by Kodanaad FOP at Rs 270.

### Mixed trend in N. India tea sale

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**Kolkata, Nov. 10:** At Sale 45 at Kolkata tea auction last week, the average price of the Orthodox variety continued to slide while that of CTC was marginally up.

According to J Thomas & Company Pvt Ltd., the tea auctioneers, the Orthodox was at Rs 182.18 a kg lower than the previous week's (Sale 44) Rs 194.74 ; the corresponding prices of the CTC were Rs 145.33 (Rs 144.44). An estimated 71.89 per cent (67.66 per cent) of the Orthodox and 71.01 per cent (73.2 per cent) of the CTC volumes offered were sold.

The total offerings (packages) at three North Indian auction centres at Kolkata, Guwahati and Siliguri were 4,81,285 compared to 2,72,201 in the corresponding sale (No. 45) of last year.

Offerings at Kolkata comprised CTC/Dust 1,46,166 (No Sale), Orthodox 52,647 (No Sale) and Darjeeling 11,956 (7,326). The corresponding offerings at two other centres were: Guwahati 1,63,046 (1,54,843) and Siliguri 1,07,470 (1,10,032).

Liquoring Assam CTC teas maintaining quality were irregularly lower. Remaining Assams were easier, particularly fannings. Hindustan Unilever was fairly active. Western India supported the liquoring teas. Exporters operated mainly on the large broken.

Orthodox tippy teas sold well in line with quality. CIS and West Asia shippers operated.

There was some Continental interest on the tippy teas. Hindustan Unilever operated selectively.

Selected Darjeeling whole leaf grades maintaining quality sold around last. Tata Global was selective. Selected liquoring fannings readily absorbed by traditional exporters.

## Tea prices hit new low at Coonoor auction

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**Coonoor, Nov. 10:** Prices hit a new low at Sale No: 45 of Coonoor Tea Trade Association auction averaging Rs 72.13 a kg. This was the lowest average so far this calendar. Prices crashed when the producers attempted to increase the sale volume in the backdrop of unsold teas piling up in the last few weeks. Nevertheless, teas worth Rs 3.10 crore remained unsold as there were no takers for as much as 23 per cent of the offer despite shedding Rs 3 a kg over last week.

Crosshill Estate tea topped CTC market at Rs 175 a kg. In all, 25 marks got Rs 125 and more. Chamraj topped orthodox market at Rs 225 . In all, 28 marks got Rs 125 and more.

Pakistan was selective in a wide range Rs 60-96 a kg and the CIS, Rs 60-73. As too many teas were chasing too few buyers in the global market, importers were choosy and showed little interest to bid high at Coonoor auctions.

As North India has 53 million kg more teas than last year, upcountry buyers have found teas there cheaper than in Coonoor auctions. So, domestic demand was inadequate at high bids. Quotations held by brokers indicated bids ranging Rs 57-60 a kg for plain leaf grades and Rs 100-130 for brighter liquoring sorts. They ranged Rs 57-63 for plain dusts and Rs 120-165 for brighter liquoring dusts.

# Tomato likely to remain steady

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**Karnal, Nov. 10:** Tomato prices are likely to rule around current levels with marginal fluctuations and the quality of the stock will also be good in the coming days, said trade experts.

Low availability of stocks pushed tomato prices up by Rs 400-500 a quintal for the different varieties on Sunday.

Vikas Sachdeva, a trade expert, told *Business Line*, that low arrivals of the stocks mainly pushed tomato prices. Good quality of the stocks is also a reason behind the uptrend in tomato prices, he added.

Local arrivals have started with small consignments and we have to wait for another couple of weeks for the arrivals to start in full swing, he said.

Arrivals are likely to improve and prices may drop by almost 50 per cent by the end-November, said market experts.

Around 500 crates (of 25 kg each) of different varieties of tomato arrived at the Karnal vegetable market and were quoted between Rs 5,000 and Rs 6,000.

Around 800 crates of varieties such as 524, Abhilash, Nasik, Himsona and Hybrid were received in the markets of Karnal district. Of the total arrivals, around 30 per cent was of medium quality while the rest were of superior quality.

Prices of superior quality improved by Rs 500 and quoted at Rs 5,950-6,000 while those of medium quality produce went up by Rs 400 to Rs 5,000.

Domestic demand is also expected to remain steady in the coming weeks, said trade sources.

# Tight supply pushes spot pepper to historic levels

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**Kochi, Nov. 10:** Spot pepper prices touched a historic high of Rs 499 a kglast week on continued tight supply, while ungarbled pepper rose to Rs 479 leaving the impression that it might move up further in the coming days.

On the spot, only two tonnes of farm grade pepper arrived and three tonnes of the material were traded. There were no sellers. Those having some pepper in the plains were quoting Rs 470-480 for lower grade material. Buyers were looking for high bulk density material at higher prices but there were no sellers, market sources told *Business Line*.

Upcountry dealers were active. Some of them were looking for cheap material.

According to the trade, some 300 to 400 tonnes of pepper from the stocks held in the warehouses for long are understood to have been cleared by the FSSAI authorities and if they were released that might provide some relief to those who were running around for the material, they said.

Strong demand amid tight supply has already been pushing the prices up from early last week. The rise has been accelerated further by bullish activities by those owning the material, they said.



Current upsurge in prices might give them also some relief, they pointed out. If the claims of growers in several parts of Kerala and Karnataka are to be believed, then the next crop would also be much less than what it was last season.

In Kerala the growers attributed it to incessant and protracted rains and the consequent diseases, while their counterparts in Karnataka said their vines give good yield only in alternate years. In the international market also the prices are ruling firm in all the other origins due to short supply, they said.

On the NMCE, Nov and Dec contracts increased by Rs 1,700 and Rs 2,200 respectively last week to Rs 49,200 and Rs 49,500 a quintal on Saturday. Total turn over increased by 19 tonnes to 63 tonnes. Total open interest remained unchanged at 14 tonnes. Meanwhile, on the IPSTA platform Nov and Dec contracts ended at Rs 48,000 each up by Rs 700 and Rs 300 respectively.

Spot prices shot up by Rs 2,100 a quintal to Rs 47,900 (ungarbled) and Rs 49,900 (garbled) last week on strong demand amid tight availability.

Indian parity in the international market was at \$8,350 (c&f) Europe and \$8,650 for the US and remained above other origins. Others origins, except for Brazil were reportedly hovering at around \$8000 a tonne, they said.

In Sri Lanka, the increase was up to 4 per cent and in Vietnam it was 2 per cent. In Lampung, local price of black pepper increased to IDR 75,500 from IDR 74,000/kg last week.

## Sugar industry says exports crucial to reverse current bearish trend

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**Losing out:** Exports are currently not viable from India, but sugar can be pushed out, provided there is some support from the Government.

**New Delhi, Nov. 10:** While the Food and Agriculture Organisation (FAO) has struck a bullish note on sugar in its recent outlook, the Indian industry is striking a

different note.

The industry feels that unless 3-4 million tonnes are shipped out of the country, sugar prices are unlikely to stabilise, reversing the downtrend.

FAO last week said that global sugar prices would rise in the coming days on unfavourable weather conditions impacting harvest in Brazil, the largest sugar producer.

### **Global prices**

“Sugar quotations increased by 9 per cent from July to October 2013. Although early in the season, the size of the production surplus remains uncertain, indications are that it will be much smaller than early estimates and not as large as the past two years. If these early assessments prove true as the season progresses, it will certainly lend some upward support to world sugar quotations,” it said.

Global raw sugar prices averaged 19.31 cents a pound during January-June, down 20 per cent over the corresponding period a year ago. However, in September, prices averaged at around 17.4 cents a pound and rose to around 18.7 cents a pound in October.

FAO estimates the global sugar output for 2013-14 at 180.2 million tonnes, marginally higher than last year. It expects bulk of the growth in global output to come from developing countries, such as India, Thailand and Pakistan.

However, FAO said: "India's competitiveness on the international market is being constrained by rising production costs and falling world prices, which may limit further gains in world markets". It has pegged India's sugar output at 25.5 million tonnes for the 2013-14 season, while forecasting exports at 2.1 million tonnes.

### **Unviable exports**

The Indian industry has begun the 2013-14 season with a huge opening balance of 8.5 million tonnes, which is weighing on sugar prices that are in the bearish phase.

Mills are under pressure to liquidate stocks – that's resulting in excess market supplies dragging the price. "Exports are currently not viable from India, but sugar can be pushed out, provided there is some support from the Government, say, in terms of transport subsidy for both inland and oceanic freight," said Abinash Verma, Director-General of Indian Sugar Mills Association.

The Government had provided export subsidy in 2006-07 to ship out about 60 lakh tonnes of sugar. Mills in coastal areas then received a subsidy of Rs 1,350 a tonne, while those in the hinterland got Rs 1,450 .

"A subsidy of Rs 1,000-1,500 is good enough to help us export the surplus sugar," said Verma. Also, the Government could help millers by providing interest-free loans to tide over the current crisis.

Earlier, the Government had extended such interest-free loans in 2007-08 to an extent of Rs 3,500 crore.

Sugar mills currently owe about close to Rs 4,000 crore to farmers for cane purchases made last year. Crushing for the current season is yet to start, as mills are seeking clarity on cane pricing, while farmers are demanding a higher price for their produce. An estimated half a million tonne raw sugar from the new crop has already been contracted for exports, mainly from Maharashtra.

## Met says rains may lash South from Thursday

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**Thiruvananthapuram, Nov. 10:** Powerful Pacific typhoon Haiyan made a calamitous landfall over the Philippines and later barrelled into Vietnam across the South China Sea on an eventful day on Sunday.

The killer storm seemed to have cast a decisive spell on neighbouring Bay of Bengal too as an existing low-pressure area struggled to hold itself together.

### **FAILS TO INTENSIFY**

Contrary to expectation, the 'low' did not undergo a round of intensification on Saturday. India Met Department expects it would do so only by Monday.

All indications continue to suggest that the system would take the whole of this week to wind its way towards the Tamil Nadu/Sri Lanka coast.

The European Centre for Medium-Range Weather Forecasts says the system will crawl over the coast in a spurt of rainfall around Chennai-Puducherry belt by Saturday.

Significantly, the European agency expected the system to intensify one more round just ahead of the landfall.

#### **RAINS SCALE-UP**

This should help it push in the rains to interior Tamil Nadu. Neighbouring Kerala will have already received some showers from a rain wave emerging from seas south of Sri Lanka.

In its forecast, the Met Department said thundershowers would break out over extreme south peninsular India from Thursday. The rain may scale up later over coastal and south Andhra Pradesh and Tamil Nadu.

Climate Prediction Centre of the US National Weather Services is of the view that southern Indian peninsula will make limited gains from the system. Some rain will get directed north-east towards Andhra Pradesh and Odisha coasts under influence of concurrent western disturbances moving across northwest and east India.

#### **COLDER IN NORTH**

In the North, minimum temperatures ranged from 10-15 deg Celsius over plains of North-West, adjoining central and east India.

The lowest minimum in the plains of 7.5 deg Celsius was reported at Najibabad in west Uttar Pradesh.

Fog to shallow fog was observed over isolated pockets of Punjab, Haryana, Delhi, Uttar Pradesh, Manipur and Tripura overnight on Sunday.

The Met Department said that fog to shallow fog conditions would prevail over some parts of Gangetic plains during morning hours of next three days.

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