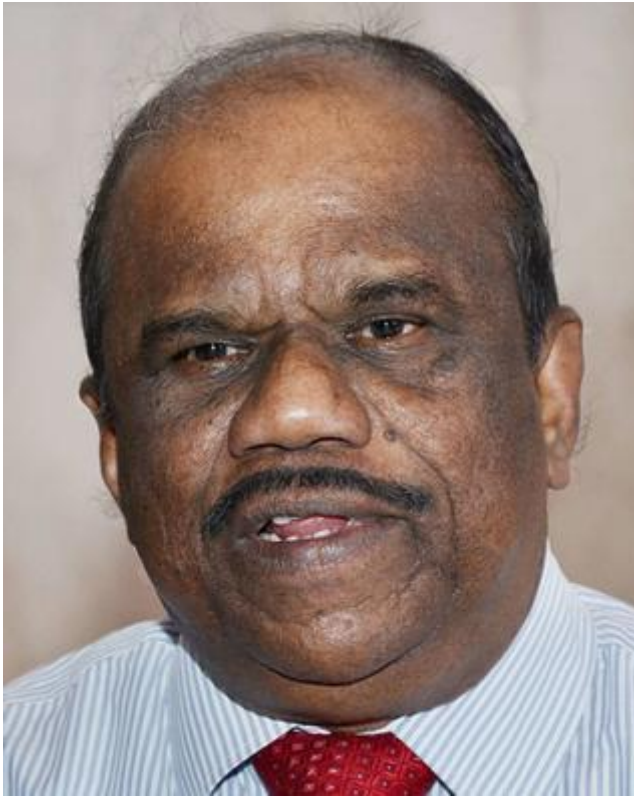


## Small machines to replace farm labour: Pillai

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*A. Sivathanu Pillai*

COIMBATORE, February 22, 2014 - Phase II of the DRDO-Bharathiar University Centre for Life Sciences at Bharathiar University has just taken off with focus on biotechnology and nanotechnology, A. Sivathanu Pillai, Chief Controller of Defence Research and Development Organisation (DRDO), and Chief Executive Officer and Managing Director of BrahMos Aerospace Private Limited, said here on Friday.

“Phase I focussed on life science and environmental projects. The centre executed these projects to completion and now the next phase has been sanctioned by DRDO. The Centre will work on the projects along with local colleges and Tamil Nadu Agricultural

University,” Mr. Pillai told reporters on the sidelines of a talk on ‘Robotics in Agriculture’ at the university.

Talking about the problems involved in mechanising agriculture in India, he pointed out that the major reason for farmers not able to adopt mechanisation in totality was because of the small land holdings.

“Machines are huge and farmers cannot use them in small holdings. If they are willing to adapt to the co-operative system of farming in which small holdings can be grouped together to make a single large unit, then these machines can be used. With dwindling farm labour, mechanisation becomes significant. To address this, small machines, which can do all farming functions like humans, are slowly gaining entry,” Mr. Pillai said.

These machines were not difficult to design and students were also involved in developing them, he said. The DRDO’s Centre for Artificial Intelligence also had such a model, he added. Speaking on the export possibility of BrahMos supersonic cruise missile, he said that though the Indian and Russian Governments had agreed on export, immediate possibility of it was not being considered.

He also spoke about the firing of the BrahMos missile from a naval warship in salvo mode in the Arabian Sea recently. “This is the first time that the missile is being fired in the salvo mode – in quick succession – from a launcher. It will be improved to fire eight missiles in succession,” he added.

# Clarion call to educate farmers for turning them into climate risk managers

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*Book on climate change released*

CHENNAI, February 22, 2014 - It is important to educate farmers and develop a cadre of climate risk managers, who would adopt practices to tackle climate change, said agriculture scientist M.S. Swaminathan.

The cadre must be created at local levels based on authentic data provided by scientists, he said, at the launch of a book *Climate Change and Agriculture in India: Studies from Selected River Basins*.

The book has studied agricultural practices in three river basins — Cauvery, Krishna and Godavari and looked at the food production systems and how they would respond to climate change, said Udaya Sekhar Nagothu, one of the three authors.

The book has looked at a multidisciplinary approach with scientists from 12 different streams offering their insights into adapting to the challenges that climate change would throw up.

K. Palanisami, lead author, said while in the 70s resources were available but capital was a constraint for the farmer, at the beginning of the current millennium, labour and water had become scarce.

While technology continues to evolve, the money to invest in technology remains scarce.

Dr. Palanisami explained the methods adopted to arrive at a crop model, factoring in the rainfall and its effect on the yield.

The scientists also quantified the loss and has prescribed an agricultural policy, he said. The authors have suggested that their model could be adopted by village clusters.

The M.S. Swaminathan Research Foundation had already started a training programme for climate literacy for farmers.

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📌 ***“Scientists quantified the loss and have prescribed agricultural policy”***

📌 ***MSSRF already started training programme for climate literacy for farmers***

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## Awareness programme on protection of plant varieties and farmers’ rights held

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*32 traditional crop varieties were registered by farmers*

DHARMAPURI, February 22, 2014 - A two-day awareness programme on ‘protection of plant varieties and farmers’ rights’ was held at the campus of the Krishi Vigyan Kendra (KVK), Pappapatty in Dharmapuri district recently.

A release from KVK said that the farmers were explained in detail about the importance of protection of plant varieties, farmer’s rights, breeders rights and researchers rights, procedure to be followed in registering a plant variety and also about crops that could be registered under the Protection of Plant Varieties and Farmers’ Rights (PPV&FR) Act, 2001.

About 32 traditional crop varieties were registered by the farmers including thuyya malli, naei kichadi, seeraga samba, mappillai samba, traditional basumathi, manasa naiyur ponni, white ponni and kattuyanam in Paddy, karusurutai, vazhaipoo kidathalai, thembusari in ragi, white cholam,, red cholam in cholam, traditional thenai, samai, panivaragu, varagu, redgram, naipayaru, mochai, avarai, rose bhendhi, local brinja, ridge gourd and

pulichakeerai. They will be sent to the Protection of Plant Varieties and Farmers Rights Authority, New Delhi for Distinctiveness, Uniformity and Stability (DUS) performance. DUS centres for different crops are operating in various places and for Paddy and Sunflower the centre is in TNAU, Coimbatore.

Tamilselvan, Programme Coordinator, KVK, explained the importance of traditional varieties and the role of KVK in the farmers development.

R.R. Susheela, Deputy Director and Personal Assistant to Collector (Agriculture) reiterated the nutritional significance of traditional varieties available with the farmers and explained on how to protect them.

Seeds of Kattuyanam, a traditional paddy variety were issued to the farmers on free of cost at the programme. Over hundred farmers participated, the release adds.

***Seeds of Kattuyanam were distributed to farmers free of cost***

## Farmers allege irregularities

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NAGAPATTINAM, February 22, 2014 - Farmers of villages in and around Kondal here in Mayiladuthurai staged a protest demonstration in front of the office of Sub-Registrar-Cooperatives levelling allegations on Friday. The protesters, all members of Kondal Primary Agricultural Cooperative Society, alleged that there had been misappropriation and embezzlement of funds meant for crop insurance and crop loans. Levelling allegations against officials, farmers demanded action, claiming funds to the tune of Rs. 1.5 crore towards crop insurance and loans for 2011-12, and 2012-13 had been misappropriated. However, Madhivaana, Sub-Registrar, Mayiladuthurai, demanded evidence from the protesters. — Staff Reporter

## Farmers walk out of meet over 'drought-hit' demand

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*'Do away with subsidies, concentrate on projects for improving groundwater level'*



*Walk the talk: Farmers staging a walkout from the grievances meeting in Pudukottai on Friday.*

PUDUKOTTAI, February 22, 2014 - Even as representatives of farmers' associations were expressing their resentment over the 'State government's failure' to declare Pudukottai as

drought-hit, a group of farmers staged a walkout at the farmers' grievances meet here on Friday.

Those present at the hall said that they too would launch a similar stir at the next meeting, if the government failed to concede their demand.

The members of the Pudukottai Mavatta Vivasayigal Mempattu Sangam (non-political), Vivasayigal Koottamaippu, and Bharathiya Kisan Sangam raised the issue at the meeting and later staged a walkout.

R.Sivasamy Servai, district president, Vivasayigal Mempattu Sangam, said that the entire district is reeling under severe drought and monsoon had failed them for the third consecutive year. Farmers have suffered severe loss and hundreds of tanks and other water sources have remained dry for a long time.

Farmers associations have brought the appalling condition to the notice of the authorities. The district administration too has sent a report on the condition. Despite all this, the State government has not announced any relief to the district in the budget, he said. Ramatheerthar, president, Vivasayigal Koottamaippu, said the government should do away with the subsidy-based schemes for farmers and instead should concentrate on executing projects for improving groundwater level. M. Sebastian, district president, Tamil Nadu Vivasayigal Sangam affiliated to the CPI (M), said that absence of any announcement in the budget for the district was a huge disappointment to the farming community. Scarcity of fodder and drinking water has hit the cattle population and has affected milk production. The district administration should once again explain the seriousness of the problem to the State government, he said. S. Ponnusamy, its district secretary, said the walkout was justified and urged the government to launch drought-relief measures on a war footing. Sundararaj of Agricultural Workers Union affiliated to the CPI warned that the union too would stage a walkout if the government did not concede to their demand by next month's meeting.

## Farmers worry about drought

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SALEM, February 22, 2014 - Discussion on drought, as a result of poor rainfall over the last two years, and the issues faced by farmers of Salem and means for working out solutions for the same stole centre stage at the monthly grievances meeting for farmers, that was held at the Collectorate in Salem on Friday.

Farmers made an appeal to the District Administration to organise special meetings to discuss the drought in which officials from various departments could elaborate on the prevailing condition.

Those owning milch animals made an appeal to the State Government-run Aavin to increase the procurement price of milk by Rs. 5 per litre.

Seeking assessment of drought, farmers suggested that the officials who are involved in the process should not be carried away by the green cover in a locality.

Based on a request of farmers, representatives of nationalised banks who took part in the meeting, promised to conduct a consultative meeting of bankers and farmers.

Earlier, officials from the Animal Husbandry Department (AHD) said that a special Gram Sabha meeting will be conducted in villages across the district on February 25.

## Farmers seek ban on seed companies, block NH-4

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*Road blocking to continue for two more days; Vehicles being diverted via Guttal*



*MLA Puttannaiah addressing protesting farmers who blocked the National Highway at Motebennur in Haveri district on Friday.*

HUBLI, February 22, 2014 - Seeking immediate ban on sale of seeds of Mahyco and Kaveri companies, adequate compensation to the farmers affected by spurious seeds, and resignation of agriculture minister Krishna Byregowda for neglecting the farmers, hundreds of farmers blocked the Pune-Bangalore National Highway no. 4 throughout the day on Friday at Motebennur in Haveri district.

The road-block was staged by the farmers under the aegis of Karnataka Rajya Raita Sangha and Hasiru Sene at Motebennur Cross in Byadgi taluk of Haveri district. The road block protest will continue for two more days (Saturday and Sunday).

The protesting farmers have parked tractors and other vehicles on NH4 and tied protest banners highlighting their demands to them. Hundreds of farmers sat on the highway throughout the day and said they would continue to do so for two more days.

#### **Vehicles diverted**

As the road was blocked since morning, vehicles coming from Harihar, Davanagere were diverted via Guttal and those coming from Hubli were diverted at Haveri towards Guttal. Consequently, Haveri witnessed traffic snags throughout the day. Some vehicles were stranded for many hours.

Addressing the protestors at Motebennur Cross, Melukote MLA Puttannaiah said the Sangha would approach the consumer court against the seed companies on behalf of the farmers.

## Godavari delta farmers set to face tough rabi

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ELURU, February 22, 2014 - Paddy growers are set to face problems for water in rabi season in the Godavari delta region in the wake of a sharp decline in the yields in the Godavari. The Godavari delta region with an ayacut of nearly 9 lakh acres comprises western, eastern and central delta systems falling under East and West Godavari districts. The West Godavari District Irrigation Advisory Board has stabilised 4.6 lakh acres with an assured irrigation facility for the rabi crop.

#### **'Turn system'**

The district administration has resorted to 'turn system' for water distribution to the stabilised ayacut through the canal network in a bid to overcome the present water stress conditions.

The Superintending Engineer, Western Circle of the Irrigation department, said that the stabilised ayacut was divided into two turns and water is supplied for five days for each turn.

According to official sources, 6,600 cusecs of water is presently available in the Godavari river in the form of self-yields and the quantum being released from the Sileru after use for hydel power generation. At least 8,000 cusecs of water is required to save the standing crop in the three delta regions.

The irrigation authorities at the Dhavaleswaram Barrage are releasing only 3,280 cusecs into the western canals meant for the fields in West Godavari district, against the requirement of 4,000 cusecs. Consequently, the farmers in the tail-end areas and high-level patches are already feeling the effect of the water crisis.

Transplantation in the delta area was completed by February 5 and the crop is in a tillering stage now. The MTU-1010 variety was raised as a principal variety in the delta which takes 120 days for harvesting.

Although rabi season is prone to water crisis every year, the Sileru, a tributary of the Godavari which flows through the Telangana region, comes to the aid of the delta farmers at a time when the crop is in at a critical stage.

"Such hopes have become bleak now with the creation of the Telangana State. We do not know how to save our crops in this season," says a worried M.V. Suryanarayana Raju of the Godavari Delta Parirakshana Samithi.

A series of cyclones caused extensive crop damages in the kharif season in the Godavari delta which brought the elected representatives and the administration under tremendous pressure from farmers for the ayacut stabilization in full during the rabi regardless of portends from the irrigation personnel over the water crisis in the river.

# Agriculture Minister to visit district

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MANGALORE, February 22, 2014 - As many as three Ministers will tour the district over the weekend. Minister for agriculture Krishna Byre Gowda is scheduled to visit the city for the Kambla programme to be held in the city at 8 p.m. on Saturday, and will return Bangalore at 8.30 a.m. on Sunday, said a release.

## MEDAL OF HONOUR

Pratham Kumar, Physical Education teacher at Sarojini Madhusudan Kushe School, has been awarded the 'Medal of honour' by the Bharat Scouts and Guides, Karnataka division. The award was given to him at a district scouts and guides meet held recently, said a release.

## SPECIAL PACKAGE

### FOR DK

The eight constituencies of the district will get a Rs. 5 crore special package for fixing roads and construction of bridges in the constituency. The MLAs of the district have also asked Chief Minister Siddaramaiah to ensure the Paschima Vahini Scheme, which will see a total of 707 vented dams and 74 salt water check dams on the West-flowing rivers in the three coastal districts, is implemented at the earliest, said a release.

## COMMISSION MEMBER VISITS

National Minorities Commission member Mabel Rebello will be visiting the city on February 25 and 26. At 11 p.m. on February 26, she will be accepting grievances and complaints from the minority community at Government Circuit House, said a release.

## BLOOD DONATION DRIVE

Red Cross along with King Maruti Fit Multi Gym will organise a one-day blood donation drive starting at 9 a.m. on Sunday at Global Multispeciality Hospital in Urva. For more details, contact, 9740938228, 9591252917, 9448116122.

# Ministry for fishermen's welfare sought

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PUDUCHERRY, February 22, 2014 - *National Fishermen Forum plans nationwide campaign*

The National Fishermen Forum has urged the Centre to set up a separate Fisheries Ministry for fishermen welfare.

Speaking to reporters here on Friday, M. Ilango, chairman of the Forum, said that though various fishermen's associations across the country had been demanding for a long time that the Centre create a separate Ministry for Fisheries and Fishermen Welfare by bifurcating the Agriculture Ministry, the demand had not been fulfilled yet.

Similarly, several parties had committed to working towards the creation of Fisheries Ministries. It had not made any impact on the Union government either. Fishermen across the country had been facing lot of problems, domestically and externally. Incidents of arrest of Indian fishermen by neighbouring countries including Sri Lanka and Pakistan on the charge of crossing the maritime boundary were on the rise. If there was a dedicated Ministry for Fisheries, it would be easy for the fishermen to approach it seeking immediate attention on issues. A separate Ministry would be more efficient at working out plans and programmes to increase marine wealth. If there were conflicts, they could be attended to immediately, Mr. Ilango said.

The Forum had planned to undertake a nationwide campaign to urge political parties to include the demand of creating a separate Ministry for Fisheries in their election manifesto. Office-bearers of the Forum would visit 13 coastal States and Union Territories to learn about grievances and demands of all fishermen.

***Office-bearers will visit 13 coastal States and Union Territories to learn about grievances of fishermen***

# Don't leave paddy land fallow: HC

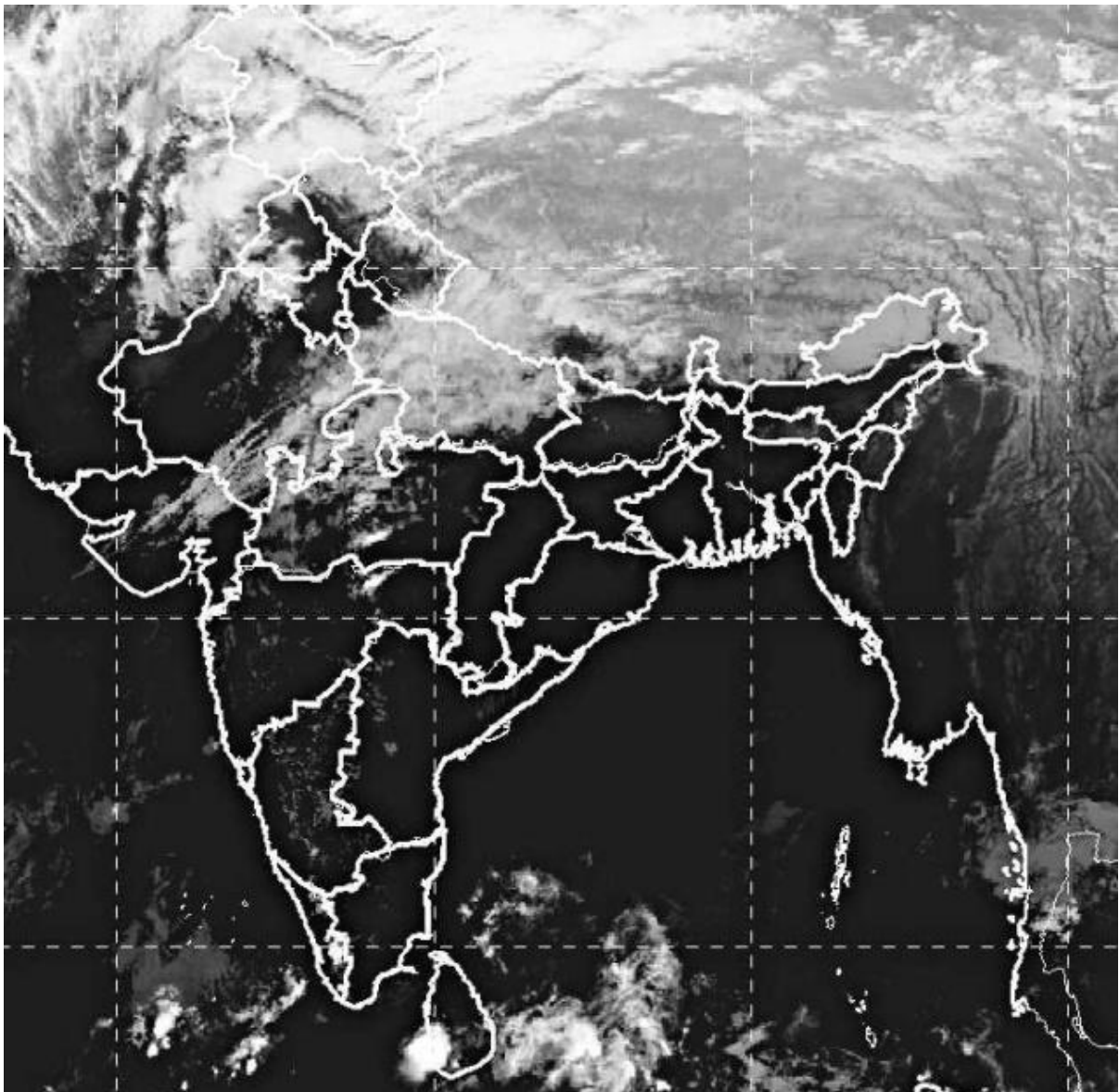
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KOCHI, February 22, 2014 - The Kerala High Court on Friday held that the local-level monitoring committees under the Kerala Conservation of Paddy Land and Wetland Act should put to use if the land sought to be reclaimed was found to be cultivable paddy land. Justice Vinod Chandran made the observation while disposing of a writ petition filed by Adani Infrastructure and Developers Private Limited and its sister companies against the State government action in confirming the Land Revenue Commissioner's order rescinding the permission given by the RDO for reclaiming the paddy land bought by the company at Kizhakkambalam in Kochi.

The court observed that the paddy land included in the data bank should not be left uncultivable. That would not achieve the avowed objectives of the Act. The court said that it had earlier directed the government to rectify the anomalies in the Act.

## Weather

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INSAT PICTURE AT 11-30 hrs. Observations recorded at 8-30 a.m. on February 21.

# Water level

The water level in Periyar dam stood at 110.50 feet on Friday with an inflow of 75 cusecs and a discharge of 75 cusecs. The level in Vaigai dam was 34.04 feet with an inflow of 43 cusecs and a discharge of 40 cusecs. The combined storage in Periyar credit was 853 mcft.

The water level in the Mettur dam stood at 50.47 feet on Friday against its full reservoir level of 120 feet. The inflow was 171 cusecs and the discharge 600 cusecs.

Water level in the Papanasam dam on Friday stood at 56.70 feet (maximum level is 143 feet).

The dam had an inflow of 152.78 cusecs and 604.75 cusecs of water was discharged from the dam.

The level of Manimuthar dam stood at 74.92 feet (118 feet). The dam had an inflow of 54 cusecs and 330 cusecs of water was discharged.

**Kanyakumari** - The water level in Pechipparai dam stood at 12.90 feet, 42.44 feet in Perunchani, 4.56 feet in Chittar I, 4.65 feet in Chittar II, 3.80 feet in Poigai and 51.18 feet in Mamabazhathuraiyaru.



## Weather

Chennai - INDIA

Today's Weather



Sunny

Rain: 0

Humidity: 74

Wind: normal

**Saturday, Feb 22**

Max Min

28° | 22°

Sunrise: 06:28

Sunset: 06:16

Barometer: 1015

Tomorrow's Forecast



Partly Cloudy

**Sunday, Feb 23**

Max Min

30° | 22°

Extended Forecast for a week

Monday

**Feb 24**



31° | 22°

Partly Cloudy

Tuesday

**Feb 25**



25° | 23°

Cloudy

Wednesday

**Feb 26**



26° | 24°

Overcast

Thursday

**Feb 27**



26° | 23°

Overcast

Friday

**Feb 28**



26° | 23°

Cloudy



## Research at DRDO could help agriculture sector: Brahmos chief

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COIMBATORE: Laboratories under the [Defence Research and Development Organisation](#) (DRDO) are in the process of making products that could help soldiers who do duty in extreme conditions like deserts and the higher reaches of the Himalayas, said A Sivathanu Pillai, CEO of Brahmos Aerospace. He was delivering a lecture at the [Tamil Nadu Agricultural University](#) (TNAU) on Friday about technological developments in the areas of agriculture and food processing.

"Various developments are being made by the laboratories which could benefit both our soldiers as well as the general public. Unless they have a certain exclusive element, these technologies are sold in the open market," he said. For instance, the [Defence Food Research Laboratory](#) at Mysore has developed food preservatives that will help keep the food fresh. This includes coconut jelly and several other products, many of those have been released to the open market. They are also in the process of developing food products that will help soldiers to have more energy from a minimum quantity of food. They have made several interesting products which has caught the attention of people, he said.

Pillai also indicated that they are encouraging the development of small machines in the field of agriculture. "We are unable to introduce machines for agriculture as in India we have more of small land holdings where the present machines will not be of much use. To counter this, smaller machines are being developed by many individual inventors. Our labs help to promote those technologies," he said. He said these innovations could change the character of agriculture in the country. "Many of these technologies could reduce or even help avoid human labour," he said. Such techniques are the need of the hour, he said.

## University of Agricultural Sciences to set up food processing lab

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HUBLI: Chew on this. The [University of Agricultural Sciences \(UAS\)](#), Dharwad, is planning to soon set up a food processing laboratory on its premises.

UAS began offering a four-year B Tech course on food technology last year and has small-sized laboratories to students at present.

It has now earmarked around Rs 2 crore to develop a food processing laboratory to enhance the quality of the food technology department and to provide hands-on training to students.

Dr A K Rokhade, nodal officer, B Tech (food technology) programme, explains that the laboratory would come up in a separate building on campus, being constructed at a cost of Rs 1 crore. "The laboratory will provide practical knowledge to food technology students like food products, focus on research areas of small fruits, cereal bars, soya products and probiotics."

UAS has set aside Rs 68 lakh for laboratory equipment. "We are using a special grant

sanctioned by the [Indian Council of Agricultural Research](#) as well as the university's funds," says Rokhade.



## Flowering livelihood

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Baburao Lahane, 40, of Pochade village in Thane district, no longer worries about the chill or intermittent rains. The sale of jasmine (mogra) flowers is consistent through the year and fetches him Rs 1.8 lakh. He has 800 trees flowering on 30 guntas of his 2.5-acre plot and wants to plant more.

Lahane was among 11 tribal families who had offered to undertake cultivation in 2005 when Pune-based BAIF Development Research Foundation, a voluntary organisation set up by Mahatma Gandhi disciple Dr Manibhai Desai in 1967 to promote sustainable livelihood in rural India, introduced low-cost floriculture in wadi plots in Thane. BAIF's associate organisation MITTRA (Maharashtra Institute of Technology Transfer for Rural Areas) selected farmers who had enough sources of water.

Farmers in Vikramgad had never undertaken floriculture as a traditional activity, says Sudhir Wagle, additional chief programme coordinator, BAIF, Nashik. There was therefore reluctance, before the economic returns were explained at meetings, Wagle says.

Families were provided planting material, fertilisers and insecticides. Each selected family planted 200 plants of jasmine on 500 sq metres at an investment of Rs 2,500. The first harvest went on sale in six months and fetched the families net returns between Rs 21,000 and Rs 25,320, says G G Sohani, president, BAIF. Today over 500 tribal families are now engaged in floriculture and around 79 million tonnes jasmine worth Rs 1.31 crore have been sold in the Dadar market since 2007, Sohani adds.

The initiative has also bagged awards, a recent one at the second Bihar Innovation Forum supported by the World Bank and implemented by Bihar Rural Livelihood Promotion Society.

The floriculture and wadi project has helped bring down the rate of migration, says Sohani. Most of the seven tehsils of Thane district have a predominantly tribal population, who are dependent on subsistence agriculture. Crops can be grown only during the kharif season. During the off-season, the tribals used to migrate to towns and cities in search of wage labour.

Says Sunil Kamdi, 33, of Dengahimet village, "Now I earn Rs 12,000 every month. Earlier I had to travel at least 50 km to work as a labourer and then return home late at night. Now I have planted 317 jasmine trees," says Kamdi.

Sohani concedes that small farmers in remote areas cannot get high prices for jasmine flowers as these have to be delivered fresh every morning at wholesale markets in cities.

The logistics and cost of transportation are considerable; most wadi plot-owners in Thane live in villages that do not have a direct bus or train connection to Mumbai or Nashik, the nearest cities. Initially, farmers and cooperatives tried selling flowers in Nashik, but realising that the best returns can be got from the Mumbai market, a process was set up for daily delivery of flowers from interior regions of Thane district to the metropolis.

The flower growers set up Vrindavan Pushpa Utpadak Sangh, an informal organisation.

Collective marketing of flowers in Dadar market (160 km away) was initiated during September 2007. The flowers are harvested from about 5 to 7 am, Lahane says, then taken to collection centres in the village. The accumulated produce from various villages is transported to Dadar.

"My jasmine flower trees have ensured that I have a fixed salary every month. What else do I need?" says Lahane.

# Too much chana on MP's plate

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The more the farmer produces the lower the price he gets, and vice versa. Chickpea growers have been reminded yet again of this well-worn truism with the market rate of chana crashing on projections of a bumper crop in Madhya Pradesh, which accounts for a very high proportion of the national output.

Hovering in the range Rs 2,300 to Rs 2,500 per quintal, the rate is much lower than the minimum support price of Rs 3,100, the first time this has happened in nearly a decade. Rates in states such as Maharashtra, Rajasthan, Karnataka and Jharkhand have not come below the MSP. The MP government has never been required to procure gram from farmers because the market rate in the last decade has always been higher than the MSP. In 2011-12, for example, it had reached Rs 4,500 per quintal.

With just days to go for the crop to be harvested and brought to mandis, there is no clarity if and when procurement of gram will begin. National Agriculture Cooperative Marketing Federation of India (NAFED), the nodal central agency for handling procurement, is yet to hear from the central government.

Estimates by various agencies suggest the produce in MP could be about 47 lakh tonnes. Cultivated over nearly 35 lakh hectares this year, the crop involves about 28 lakh farmers. Of this, the government could end up procuring up to 15 lakh tonnes if the projections hold and the rates don't go up.

In a state used mainly to procuring wheat and paddy, procurement of gram will be a first, a venture that will entail its own set of problems such as starting the registration process afresh, arranging jute bags and finding storage space when the available facilities are already under strain. For wheat, MP has an elaborate process of procurement, with farmers registering in advance and get SMS alerts on when to arrive at procurement centres.

"Due to increase in acreage and favourable weather, the eventual yield of gram in MP could end up the highest in recent times. In the absence of market intervention (such as procurement) farmers may resort to distress sale," said an official with the Directorate of Pulses Development, which functions under the Ministry of Agriculture.

Concerned over the low rate and the possible distress sales by farmers, state government officials have already met their counterparts in the agriculture ministry. Chief Minister Shivraj Singh Chouhan has called on the prime minister and the union finance minister and urged them to begin procurement of gram and to increase the credit limit of NAFED to Rs 5,000 crore.

Principal secretary (cooperation) Ajit Kesari said the state government gave its estimates to NAFED at their last meeting. He attributed the 24 per cent higher projected yield to a 10 per cent increase in acreage in the state. According to him, gram procurement could go as high as 20 lakh tonnes.

Should the Centre give the go-ahead, Kesari said, state agency MP State Cooperative Marketing Federation itself could begin procurement of gram along with that of wheat, which starts March 18. Unlike wheat, the gram will be procured only at 500 mandis and upa-mandis in keeping with NAFED guidelines.

Retired director for agriculture G S Kaushal blamed the crash in rates to the import of pulses that have flooded the market. He cautioned against the estimated projections, however, saying untimely rains and hailstorms could take their toll on the yield. "In any case, the mere announcement that the government will begin buying gram at the MSP will take the rates up because farmers will not sell at the prevailing rate," he said. He also blamed a cartel of traders and businessmen and vested interests for projecting higher yields to bring down rates. "Once the rates are down they buy and hoard to maximum profits."

Bharatiya Kisan Sangh leader Suresh Gurjar said the government should stop importing pulses because such imports distort local rates. "Farmers from countries that give high subsidies dump their produce in India and make money at the cost of our farmers," he said. The BJP government is putting pressure on the central government for an early announcement of dates for gram procurement because it does not want to lose its grip over

its core constituency of farmers in the election season. Should the central government refuse or delay an announcement related to procurement, the state will be in a bind. Officials and politicians have been seeking to create an impression that MP will buy the gram if the Centre refuses to do so. The truth is, procuring 15 lakh tonnes needs close to Rs 5,000 crore.

## More than just honey

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Beekeeping has come to mean more than producing honey in Punjab, the country's largest producer in any case. Some 33,000 beekeepers have diversified into allied products such as royal jelly, bee venom and beeswax, besides breeding queen bees and renting bee colonies for pollination of crops. And these have been fetching them returns several times what honey does, they say.

The average honey yield in Punjab is 35 kg per bee colony per year, with a maximum 80,000 bees. The average national yield is 15.32 kg per colony per year and the average international yield 28.

It is in producing other high-value products that Punjab has ground to cover. Apart from Punjab Agricultural University (PAU), the agriculture department and Krishi Vigyan Kendras disseminate beekeeping techniques. The government formed in August 2013 the Punjab Beekeeping Development and Promotion Board, chaired by CM Parkash Singh Badal, and which has trained around 2,200 beekeepers.

Sarwan Singh Chandhi, winner of a state award for honey production, has been breeding and supplying queen bees to many states. "I imported a queen bee producing kit from UK and started producing queen bees. There is only one queen bee in a colony, which can have a maximum 80,000 bees," says Chandhi, also president of Progressive Beekeepers Association.

A colony comprises the queen, worker bees and some drones, which mate with the queen and die. The queen has a lifespan of two to five years, a worker bee of 45 days and a drone of two to three months.

A "queen kit" can produce 200 to 300 queen bees in 20 days and each can fetch Rs 200 to Rs 500 depending on the season, spring being the best. This means the farmer can earn Rs 40,000 to Rs 1.5 lakh from the queen bees bred.

"If we can earn Rs 2,000 per year per box from honey, we can earn lakhs per box per year from queen bees and royal jelly," says Chandhi. For honey producers, the government has asked its horticulture department to add a 25 per cent subsidy to the 50 per cent given under the National Horticulture Mission. But Chandhi says, "We need imported equipment which is costly. The government should subsidise imports too."

"The Beekeeping Board estimates that the present four lakh bee colonies can be increased to 10 lakh. Punjab has a potential for other valuable hive products including 780 tonnes beeswax, 270 tonnes propolis, 40 tonnes royal jelly and 45 kg bee venom," says horticulture director Dr Lajwinder Singh.

"Except a few, beekeepers produce only honey in Punjab but now we are training them on high-value products," says Dr Chaman Lal Vashisht, beekeeping expert and coordinator of the board.

Royal jelly is used in medicine, cosmetics and as a dietary supplement. Its price from country to country varies from Rs 4,000 to 5,000 a kg, and Rs 1.5 lakh to 1.8 lakh if processed or frozen. Half a kilo royal jelly can be extracted from a box per year. China and Taiwan are major exporters.

Madan Sharma, general secretary of Progressive Beekeepers Association, who started producing bee venom for the first time in the state, says he bought the equipment for Rs 40,000 and can produce half to one gram venom a day but would need more equipment and government support to improve. Bee venom's price varies from Rs 10,000 to Rs 12,000 a gm and it is used to treat 64 ailments, says Dr Vashisht.

Sharma says everyday around 25 gm pollen can be collected from one colony and they sell at \$ 900/kg, said experts. Propolis is used in human and veterinary medicine and its price varies from Rs 500 to Rs Rs 2,000 a kg.

Pawan Kumar of Hajipur village in Hoshiarpur district, who produces beeswax along with honey, says the former is used in making candles, shoe polish, cosmetics, crayons, metal casting, vehicle and floor polish, varnish, gum, carbon paper, electrical appliances, fabric industry, and food processing and packaging. It sells at Rs 300 to 350 per kg. It can be eaten too, he says.

He also provides 175 boxes of bees to farmers in Rajasthan for pollination. Honey bees are good pollinating agents. In India, there is a great demand of bee colonies for pollination of apples, other fruits and hybrid vegetables and oilseeds.

“Bee pollination results in a yield appreciation for citrus, guava, litchi, sunflower, berseem and raya,” says Dr Naresh Gulati, deputy director, Agriculture Development and Technology Agency.

## THE HINDU Business Line

### A nasty Budget for the fertiliser industry

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The subsidy allocation does not take the impact of a possible gas price hike and rupee depreciation



Bleak prospects Price reforms to correct nutrient imbalance are long overdue V. Raju

The Finance Ministry has been consistent in providing grossly inadequate funds for fertiliser subsidy in recent Budgets. This year's Vote-on-Account is no exception. But there is a major change in context: the possibility of an increase in gas prices. The Government has simply not

factored this in.

#### Gas effect

A drastic increase in the basic price of domestic gas with effect from April 1, 2014, will deliver a body blow to the urea fertiliser sector. If the basic price is increased, there will also be an increase in transportation tariff and local taxes.

An increase in basic price of more than \$4 per million BTU (British Thermal Units) will have an impact of almost Rs. 10,000 crore on supply of 31.5 MMSCMD (million metric standard cubic metres per day) of domestic gas to the fertiliser sector.

The fact that domestic gas price is denominated in dollars will add to the woes of the urea industry; the depreciation of the rupee vis-à-vis the dollar will add to the rupee cost of natural gas.

In view of the artificially low retail price of Rs. 5,360 a tonne urea, it is expected that there will be an over 5 per cent growth in demand next year. This will necessitate the additional import of about 1.5 million tonnes of urea. At prevailing CIF price of \$350 a tonne, it will entail a total additional subsidy of almost Rs. 3,000 crore next year.

There will be additional subsidy implication on the entire import of about 9.5 mt if the rupee depreciates vis-à-vis the dollar.

Incidentally, international urea prices bottomed out in 2013-14 and it is likely they will go up from the present level.

The use of P&K fertilisers has been falling in the last few years due to high retail prices.

Prices increased mainly due to two reasons: large reduction in subsidy under nutrient-based subsidy (NBS) and depreciation of the rupee in the last three years.

**Negative growth**

However, the international prices of raw materials, intermediates and finished products for P&K fertilisers also seem to have bottomed out this year. Farmers must be cushioned from any increase in international prices and the impact of depreciation of the Indian currency.

There must be a serious effort to correct the nutrient imbalance. The retail prices of these fertilisers must be kept at the current level in order to encourage their use for balanced fertilisation and soil health.

A conservative growth of 4 per cent in the consumption of these fertilisers will result in an increase of Rs.1,000 crore in subsidy for them. Therefore, even if one does not take into account depreciation, there can be a net increase in subsidy for P&K fertilisers.

### **What is required**

Mainly taking into account the impact of an increase in gas price, higher consumption of fertilisers and minor increase of Rs. 350 per tonne on fixed cost for existing domestic production, there will be an increase of at least Rs. 15,000 crore in fertiliser subsidy for 2014-15 over 2013-14. These figures do not take into account unpaid dues under various heads such as non-revision of energy cost for 2013-14, freight bills, difference in total concession and on-account payment, and so on. Some of these dues have been pending for more than a year.

In other words, a Rs. 15000 crore increase in subsidy next year is a very conservative estimate. Therefore, the requirement of subsidy only for 2014-15 should be about Rs. 83,000 crore ( Rs. 68,000 + Rs.15,000 crore).

A carryover of Rs. 32,000 crore from this year to the next added to this figure makes it Rs. 1,15,000 crore — the amount that should have been allocated for fertiliser subsidy in the Budget Estimate for 2014-15.

Thus there is under-provision of at least Rs. 47,000 crore. The budgeted provisions will be exhausted in the first quarter of 2014-15 after clearing the arrears of 2013-14 and on-account payment for 3-4 months. The finance minister seems to have made a quarterly budget rather than an annual one as far as fertiliser subsidy is concerned. He has left a huge gap between requirement and provision for fertiliser subsidy.

Ironically, for the last three years, the government has been expressing its intention to bring reforms in the urea sector. This year too, in the section on the Fiscal Responsibility and Budget Management Act 2013, it says: "On fertilisers, nutrient based subsidy regime has been working well in the P&K sector. What is now urgently required are certain pricing reforms in the urea sector with an immediate price correction for urea. This is not only essential from viewpoint of the size of the subsidy bill but also from the viewpoint of balanced use of N, P & K nutrients."

These intentions are not matched by action. The present level of subsidy on urea is about 70 per cent of its domestic cost of production.

In the absence of any significant increase in the retail price of urea and a drastic increase in the gas price, urea will be subsidised by more than 80 per cent of its cost of production.

Ten years of inertia over urea pricing have led to nutrient imbalance. The inadequate allocation for fertiliser subsidy over the years has brought the industry to the brink of sickness.

The writer is the Director General of the Fertiliser Association of India

# Fertiliser subsidy may touch Rs. 90,000 cr in 2014-15

Surging fertiliser subsidy		(In ₹ crore)	
Year	Amount	Year	Amount
2005-06	18,460	2010-11	62,301
2006-07	26,222	2011-12	70,013
2007-08	32,490	2012-13	65,613
2008-09	76,603	2013-14	67,971
2009-10	61,264	2014-15	67,970

All figures are actual except for 2013-14 (revised estimate) and 2014-15 (budget estimate)

**New Delhi, February 21:** Fertiliser subsidy is estimated to rise to Rs. 90,000 crore for the 2014-15 fiscal. This is 30 per cent more than the estimate made in the interim budget. The estimate is based on the carry-over from the current fiscal and new demand for subsidy.

To meet the subsidy requirement, approximately Rs. 25,000 crore will be needed. However, this is still lower than the industry's calculation. The interim budget has provided for Rs. 67,970.3 crore which is almost flat compared with Rs. 65,971.5 mentioned as revised estimate for the current fiscal.

There is no mention about carry-over of fertiliser subsidy in the interim budget. At the same time, there is also no extra provision for repayment of Rs. 9,000 crore worth of special banking arrangement (ad hoc cash arrangement against subsidy due). This amount is due to be paid in April out of the provision for next fiscal.

## Global prices

When asked about the flat provision, a senior Finance Ministry official said: "Since urea prices have dipped in the international market so have nutrients prices, which is why there is no change in the estimate."

He also said that any increase in international prices could be compensated by savings from decontrolled fertiliser. Domestic production of urea is around 22 million tonnes (mt), while consumption is pegged at 29 mt.

The shortfall is mainly met through imports. In international market, urea prices dipped to around \$300 a tonne earlier in the fiscal year, but now it is around \$350-360. Meanwhile, industry estimates total subsidy due for the current fiscal at Rs. 1.09 lakh crore. This means the carryover will be a little over Rs. 39,000 crore (which also includes Rs. 9,000 crore of special banking arrangement).

## Production cost

So, effectively, the Government will be left with around Rs. 29,000 crore, until and unless the full budget – likely to be presented by the new Government in July – increases the estimate.

The industry is also worried about the impact of gas prices on production costs of urea. Now, the option is to decontrol urea prices. There is very little room available for raising prices of non-urea complexes such as di-ammonium phosphate as their consumption is on decline.

During first six months of the current fiscal, the consumption of non-urea complexes was down 17 per cent, while urea sales were up 11 per cent.

## Business Standard

### Potato gains by 0.6% on rising demand

Supported by rising domestic demand and limited arrivals from producing regions, [potato prices](#) traded higher by 0.63% to Rs 1,207 per quintal in futures trade today.

At the [Multi Commodity Exchange](#), potato for delivery in far-month April gained Rs 7.60, or

0.63%, to Rs 1,207 per quintal in business turnover of 115 lots.

The potato for delivery in March traded higher by Rs 3.40, or 0.54%, to Rs 1,190 per quintal in 135 lots.

Analysts attributed the continued rise in potato futures to rising demand against limited arrivals from producing regions.

## Turmeric futures down 1.7% on increased supply

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[Turmeric](#) prices fell by 1.66 per cent to Rs 7,122 per quintal in futures trading today as speculators trimmed positions on increased supplies from producing belts against low demand in the spot market.

At the National Commodity and Derivatives Exchange, turmeric for delivery in April fell by Rs 120, or 1.66 per cent, to Rs 7,122 per quintal with an open interest of 16,950 lots.

The May contract lost Rs 116, or 1.59 per cent, to Rs 7,176 per quintal in 4,180 lots.

Analysts attributed the fall in turmeric prices at futures trade to trimmed positions of speculators, triggered by increased supplies from producing regions against low demand in the spot market.

## Coriander declines 1.14% on sluggish demand

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[Coriander](#) prices declined by 1.14 per cent to Rs 9,188 per quintal in futures trading today on slackened demand in the spot market against increased supplies from producing regions.

At the National Commodity and Derivatives Exchange, coriander for delivery in May declined by Rs 104, or 1.14 per cent, to Rs 9,188 per quintal with an open interest of 22,030 lots.

The April contract moved down by Rs 92, or 1.03 per cent, to Rs 9,050 per quintal in 45,800 lots.

Market analysts said sluggish demand in the spot market against increased supplies from producing regions mainly pulled down coriander prices at futures trade.

## Chana sheds 0.4% on weak demand

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[Chana](#) prices moved down by 0.40 per cent to Rs 2,979 per quintal in futures trade today as speculators offloaded positions on weak trend in spot market on sluggish demand against adequate supplies.

At the National Commodity and Derivative Exchange, chana for delivery in April moved



down by Rs 12, or 0.40 per cent, to Rs 2,979 per quintal with an open interest of 86,600 lots.

The May contract traded lower by Rs 12, or 0.39 per cent, to Rs 3,027 per quintal in 26,690 lots.

Analysts said speculators offloading their positions due to sluggish spot market demand against adequate supplies from producing regions which kept pressure on chana prices at futures trade.

## NAFED procuring oilseeds and pulse crop ruling below MSP

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The National Agricultural Cooperative Marketing Federation of India ([NAFED](#)) has started procurement of many oil seed and pulses crops after the market prices of many of them have crashed below the minimum support price. This is under the price support scheme of NAFED.

Already 2.33 lakh metric tonne of groundnut has already been procured from Gujarat and Rajasthan as the market prices are ruling below [MSP](#) of RS 4,000 per quintal. The market prices are ruling in the range of RS 2,955-3,000 per quintal.

Similarly, it has started procurement of gram, sunflower and tur or arhar.

The prices of gram and tur are ruling around Rs 2,500-3,000 per quintal and Rs 3,900-4,000 per quintal as against MSP of Rs 3,000 per quintal and Rs 4,300 per quintal respectively. However market data shows that prices of tur and gram have gone up to around Rs 6,000 per quintal and Rs 3,500 per quintal in far flung areas.

Price of sunflower is ruling around Rs 2,800-3,500 per quintal as against the MSP of RS 3,700 per quintal.

The procurement is mainly going on in Maharashtra, Gujarat, Rajasthan and Andhra Pradesh, said sources. .

Many crops of [oilseeds](#) and pulses are ruling below MSP due to bumper crop and flat demand. Moreover in oilseeds, much of the domestic edible oil demand is met by cheap imports of soybean refined oil.

Meanwhile, in order to facilitate efficient procurement, NAFED has urged the State Governments to notify the crop calendar defining the size of crop, area sown, expected quantum of arrivals with peak harvest period for procurement, average yield district-wise, details of documents to be collected from farmers, etc. This would help in preparatory arrangements and commencing immediate procurement, as and when required, without any loss of time, said officials.

These suggestions were made in the interstate conference on price support scheme of kharif crops- oilseeds and pulses for 2013-14 towards end of the last year.

Besides, it has suggested an allocation of revolving funds by State Governments to their State Level Supporters to make prompt payment to farmers and creation of suitable infrastructure etc. warehouses, availability of transport at remote centres, provision of facilities for farmers to arrange inspection & up-gradation of their produce, if required, at APMCs.

Further the states have been urged to adequately publicise MSPs of notified crops, name of purchase centres and timely execution of agreement and the need to abolish/ reduce cess, mandi fee, VAT etc. by State Governments on PSS purchases, in order to reduce the cost to PSS operations.

In the meeting, many of the states with acreage of oilseeds and pulses had intimated the NAFED of possibilities of procurement under price support scheme as prices were expected to rule below the MSP.

## NCDEX plans to launch tur, urad and rice futures

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Following favourable intention shown by the commodity derivatives markets regulator Forward Markets Commission (FMC), the agri-centric National Commodity & Derivatives Exchange ([NCDEX](#)) is planning to apply for approval of the re-launch of futures trading in [tur](#), [urad](#) and [rice](#).

“We are planning to apply for approval of the contract within seven – 10 days,” said Samir Shah, managing director of NCDEX.

This comes in the wake of the FMC chairman Ramesh Abhishek stating in Panji on Thursday that the regulator is considering favourably to bring back futures trading in tur, urad and rice shortly.

When pulses prices started hitting the roof in 2006-07 owing to short supply, critics blamed futures trading for the price rise, resulting in the FMC’s banning trading in these commodities in 2007. Subsequently, the government set up a committee headed by [Planning Commission](#) member [Abhijit Sen](#), which reported future trading has connection with price rise. The committee found that the price movement of any commodity depends on demand and supply and that future trading cannot be blamed for the same.

During the past six years, regulation has improved significantly with a more vigilant regulator and checks and balances in place.

“Future trading in pulses was demanded by commodities participants, being one of the most popular contracts at the NCDEX before suspension. There is good scope in this segment as a lot of import is happening in India, which needs to be hedged. Locally also, pulses have been a widely traded commodity segment,” said Ashok Mittal, CEO of Emkay Comtrade, a commodity broking firm.

NCDEX is currently working on the draft of contract specification, which will be ready in some time. According to an official, the exchange had approached FMC earlier with the proposal.

“During the past six years, FMC has taken many positive steps to tighten the loopholes. Hence, pulses will be one of the successful contracts unlike other re-launched contracts that failed to attract participation,” said Mittal.

India imports around three million tonnes of pulses annually from various parts of the world including Australia, Myanmar and other origins.

Other exchanges including MCX may follow suit.

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