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# THE HINDU

## Blue Revolution can start from Kerala: Union Agriculture Minister



The [Hindu](#) Union Minister for Agriculture Radha Mohan Singh and Kerala Chief Minister Oommen Chandy at the inauguration of the Global Agro Meet 2014 at Angamaly near Kochi on Thursday. Photo: K.K. Mustafah

Kerala is the right place for a start to India's Blue Revolution, said Union Minister for Agriculture Radha Mohan Singh in Kochi on Thursday.

He said that issues related to the makeover of the fisheries sector would be discussed before the next Union Budget. He was speaking at the inauguration of the three-day Global Agro Meet and exhibition of organic products BIOFACH India 2014 at Kurkuttu, near Angamaly.

The Blue Revolution envisages transformation of the fisheries sector, chiefly marine fisheries and the Centre had appointed a committee to review India's marine fisheries policy.

Mr. Singh said that the panel, headed by B. Meenakumari, had submitted its report and that the report was now open for discussions. He called on stakeholders to forward their opinions and suggestions on the report. He said that the report's suggestions had not been implemented.

The report had come under serious criticism from the fisheries industry in the country.

Mr. Singh said that funds had been allotted for the development of several fishing jetties in Kerala and emphasised the government's concern for the fishing community.

## **KCR mulls free power to horticulture, dairies**

*Thrust to greenhouse cultivation, milk production*

In a major thrust to greenhouse cultivation and milk production, Agriculture Minister Pocharam Srinivas Reddy said that the Chief Minister was examining providing free power to horticulture and dairies.

Mr. Reddy told a press conference here on Thursday that the State government had confirmed its commitment to develop horticulture and micro irrigation in a big way by allocating Rs.785 crore in its budget. It was important, therefore, that the sector should be supplemented with free power.

In the case of dairy farming, however, the Minister said the government was serious because it wanted to supply not less than one crore buffaloes to farmers so that they increase milk production which was now just 90,000 litres a day in Telangana. The government aims to procure five lakh litres of milk a day for the processing centre of State-owned Vijaya Dairy at Lalapet.

## Plan for mega dairy

The government also wanted to establish a mega dairy to process ten lakh litres of milk a day. It had sent a proposal to the Centre to assist in the setting up of the dairy at a cost of Rs. 240 crore. The government proposed to supply two buffaloes to every household. "So, it is important that the government buy animals and provide other assistance to the sector." The government will also supply fodder and grass seed to animals at 50 per cent subsidy.

Admitting that farmers resorted to suicide due to crop loss on account of adverse seasonal conditions, Mr Srinivas Reddy said there was no way the government could stop them from sowing crop and incurring financial loss in anticipation of failure of monsoon, particularly in the case of the south west monsoon.

"The failure of north-east monsoon could be predicted and the farmers restrained from sowing but it is not so in the case of south-west monsoon because farmers always trusted it," Mr. Reddy told a press conference.

In the backdrop of failure of monsoon and the poor power position, Mr. Reddy said the government had issued an advisory to farmers to sow irrigated dry crops for rabi in a bid to check their losses. "Let us see how they react."

Mr. Reddy said the government did not have statistics to show how many farmers had committed suicide in the past few months, though all suicides were projected by the media as a result of crop loss.

## Museum of bio-diversity

*On how sacred groves are restored across the country.*

The origin of the ancient sacred groves, scattered all over India, goes back to the pre-agricultural hunter–gatherer. As he migrated in search of food, stones were left in their place of origin around which trees grew, becoming markers of identity and gradually assumed their identity as sacred groves, described today as a “patch of forest protected in favour and fear of God.”

Known as ‘pavitra vana’ in Andhra Pradesh, ‘kovil kaadu’ in Tamil Nadu, ‘deo bhumi’ in Uttarkhand and ‘K law lyngdoh’ in Meghalaya, these ancient groves dot every State representing a nurturing philosophy of eco-sensitivity and bio-diversity.

Looked after and maintained by local village communities, many of the groves today are intact while many ‘degraded’ ones are being restored by the C.P. Ramaswamy Environmental Education Centre (CPREEC), a Centre of Excellence of the Ministry of Environment, Forest and Climate Change, Government of India, set up in 1989 jointly by the Ministry and the C.P. Ramaswami Aiyar Foundation.

According to Dr. Nanditha Krishna, director, CPREEC, “In India, every village has a sacred grove. It is a whole magical, spiritual experience when you enter its precincts. So far, CPEEC has restored 52 sacred groves in Karnataka, Tamil Nadu and Andhra Pradesh. We took up restoration in a one-acre sacred grove in Pavapattu. Once intervention was done in Pavapattu and the grove left alone – in the care of the locals – it grew gradually into a 50-acre grove. Each grove is a museum of bio-diversity. Meghalaya has 54 rare and endangered plant species, while Tiruchi has rare fruit-eating bats in its sacred groves.”

The CPREEC restoration team comprises Dr. P. Sudhakaran, who ascertains which 'degraded' groves need to be restored, S. Selvapandian, who looks after the actual restoration, and M. Amritalingam, a specialist in documentation of sacred groves and their mythology. They explain that now restoration is actually done on the ground.

"We do soil testing to find out which local plants and trees can grow in a particular 'degraded' grove and talk to the elders of the village, the panchayat, etc. We involve the locals in the planting, take care of the 'restored' grove for five years and then hand it back to the village community. Gradually, the trees grow, sub-growth takes place with natural pollination, birds come in as do animals and a whole eco-system is created."

At the 'Sacred Groves of India,' exhibition now on view at the C.P. Arts Centre, Eldams Road, Alwarpet, a fascinating world of the country's eco-culture opens up for visitors. Twelve groves from different regions are presented in enormous 12x10 ft. photographic frames, creating an idyllic panorama in shades of green. The protective deity of different forests, also on view, has been crafted in three-dimension by the C.P. Art Centre's artist Venkatesh.

Meghalaya's ever green forests protected by menhirs representing ancestral spirits, Tamil Nadu's tropical, dry deciduous groves protected by Ayyanar horses, West Bengal's thick groves and beautiful kumkum spattered Bankura horses, Rajasthan's scrub tree groves full of peacocks and Goa's sacred crocodile protected evergreen forests open pathways of knowledge for the onlooker.

Strict taboos are observed in the sacred groves, according to the informative text which accompanies the visuals. No one can walk without footwear, there is no cutting of trees or lopping off of branches, hunting and poaching are prohibited as also cattle grazing, defecation, and construction inside the grove.

**The 'Sacred Groves of India' is on till  
November 15 .**

## Lakh of flowers on display at Horti Intex 2014

Lakh of flowers from India and other countries have landed in Coimbatore to give a colourful feast for the eyes of visitors at the first International Horti Intex 2014 that will begin at the Codissia Trade Fair Complex here on November 7. It will be held till November 9, a release here has said.

### Varieties

A total of 177 varieties of flowers are on display for the three-day event that will be open to the public from 10am to 7pm on all the days.

Organiser of the event and head of the Department of Medicinal and Aromatic Crops, Tamil Nadu Agricultural University, K. Rajamani, told *The Hindu* that the flowers will be arranged in more than 25 thematic models like — bullock cart, tractor and domestic and wild animals.

The floral display is one of the three components of the event. As many as 180 stalls will display aromatic plants, herbs, and state-of-the-art technologies.

### Entry

Entry is free for farmers. Others will have to pay Rs. 30.

## Coimbatore Today

**Tamil Nadu Agricultural University:** Renewable energy resources as option for mitigating climate change, Seminar Hall, TNAU, 9 a.m.

## Farmers start transplanting nurseries

*Minister holds a review meeting with officials to take stock of flood damage*



Farm workers transplanting crop in a paddy field.— File photo

Farmers in different parts of the district have started transplanting nurseries afresh after removing the seedlings that were damaged due to the recent spell of heavy rain in the district.

Rainwater has started receding from paddy fields. According to Agriculture Department sources, the worst affected areas were Vedarnayam, Thalaignayiru, Sirkazhi and some part of Vennar division. Paddy fields in these areas were inundated with rainwater for more than 10 days. Village Administrative Officers and field-level agriculture officials have been instructed to assess the crop damage caused by the inundation of paddy fields as the northeast monsoon played havoc in different parts of the district. They have been asked to inform the ground realities to their higher-ups to take immediate action for the benefit of farmers.

Fishermen have been asked not to place fishing nets near drainage canals and bridges in order to prevent the seepage of sea water into paddy fields. In Vennar division, there was a shortfall of seedlings and steps have been taken to bring them from other divisions to facilitate farmers start replanting work.

Many farmers have started transplanting afresh at Karuvenkadai, Elankadaimanur and Sangamangalam near Nagapattinam.

The district secretary of All India Kisan Sabha V. Subramanian said most of the 'A' channels had been encroached resulting in inundation of paddy fields in different parts of the district. The government should provide relief to the farmers whose crops had been damaged so that farmers could go for transplantation afresh.

Owing to short supply of urea, the growth of crop has been affected and the district administration should take steps to ensure the supply of urea to the farmers as it was the right time to apply fertilizers for the growth of paddy crops, he said.

Meanwhile, Fisheries Minister K. A. Jayapal convened a review meeting with officials of various departments to take stock of flood damage here on Thursday. He said the heavy rain had subjected farmers to great hardship especially at Thalaignayiru, Vandal, Kunduranveli, Palayattinkarai, among other areas of the district. Seepage of sea water into paddy fields at Vandal and Thalaignayiru affected the crops.

The Minister directed Public Works Department officials to prepare a detailed estimate to strengthen banks of rivers and channels to prevent seepage of sea water so that farmers could undertake farm operations in these areas. He directed the officials concerned to monitor leak, if any, in the drinking water pipelines to prevent outbreak of any water-borne diseases.

The Minister instructed doctors of Primary Health Centres not to take leave during the monsoon season and ensure adequate stocks of medicines in their respective centres. He asked the officials to ensure the availability of essential commodities in all fair price shops. Collector T. Munusamy and District Revenue Officer A. Benjamin Babu were present.



## **Farmers advised to insure their crop**

Samba cultivation has been taken up so far on 11,000 hectares in Ariyalur district. A.Saravanelraj, District Collector, appealed to farmers in the district to insure their crop under the National Agriculture Insurance Scheme (NAIS).

The insurance cover is Rs. 12,800 per acre. Loanees and non-loanees are eligible for the insurance. Non-loanee farmers should fill the application and submit it to PACCS or concerned nationalised bank before November 15.

## **Horticulture crops to be raised on 300 ha**

Horticulture crops will be raised on 300 hectares in Ariyalur district during the year 2014-15. A sum of Rs.1.86 crore has been allotted for the district under National Horticulture Mission.

Farmers would be encouraged to grow crops such as mango, lemon, papaya, cashew, flowers, chillies and turmeric. Saplings and inputs will be given to farmers at 50 per cent subsidy.

Subsidy will be given to each farmer to a maximum of four hectares, said A.Saravanelraj, Collector, said after a field visit and interaction with farmers who had raised the horticulture crops in the district on Thursday.

Farmers of the district are showing keen interest in raising horticulture crops. For example, Ayyanar of Melakaruppur village in Ariyalur taluk has raised lemon in his field. Other crops raised by farmers are maize, red gram, maize and cotton.

Farmers have gone for drip irrigation. Gunasekaran, Joint Director of Agriculture, M.Subbaiah, Deputy Director, Horticulture accompanied the Collector during his visit.

## Govt. targets 10 lakh organic rooftop and kitchen gardens by 2017

Director of Horticulture and Plantation Crops L. Sitherasenan said that the Government planned to establish 10 lakh organic rooftop and kitchen gardens in as many houses in the State by March 31, 2017. "This will be a very big leap from the mere 15,000 plus such gardens in the State," he said.

He told *The Hindu* here on Thursday that the purpose of the scheme was to help middle and lower middle class families have a self sustainable garden with a variety of vegetables that would provide their day-to-day needs and help overcome malnutrition. "At present, there are 13,225 such gardens in Chennai and close to 2,300 in Coimbatore," he said and added that it required a mere 50 sq.ft. to establish such vegetable gardens.

The Director said that these organic gardens would help middle class families not only save a lot on purchasing vegetables, but also give easy access to consuming organic vegetables.

About the massive implementation of the scheme, he said that the State Government planned to implement it in all district head quarters and municipalities in a phased manner. "Unlike the rooftop garden scheme that has been implemented so far free of cost, the new gardens will be established with a subsidised investment from the aspirants," the Director said.

Mr. Sitherasenan added that the nominal charge collected from people would be used for providing quality certified seeds of the vegetables (of the consumer's choice) and service charge. The department would establish district level service centres to offer its service to the garden owners.

"We are planning to have a district level helpline for people to report pest attack or drop in production and to ensure that the owners don't lose their interest in these gardens.

These issues will be redressed by the department staff after they visit the garden,” he said.

Earlier that day, Vice-Chancellor of Tamil Nadu Agricultural University K. Ramasamy told reporters here that the State Government was planning to launch Government-labelled quality seeds in 2015 to end the sale of poor quality seeds –as alleged by farmers.

## Horticulture can bridge malnutrition gap'



Tamil Nadu Governor K. Rosaiah (third left) giving away the HSI Shivashakthi Life Time Achievement - 2014 award to Vice-Chancellor of Bihar Agricultural University M.L. Choudhary at the 6th Indian Horticulture Congress - 2014, in Coimbatore on Thursday in the presence of Secretary for Department of Agriculture and Co-operation for the Government of India, Ashish Bahuguna (second left), founder of MSSRF M.S. Swaminathan (right) and Vice-Chancellor of TNAU K. Ramasamy (left).— PHOTO: S. SIVA SARAVANAN

“Despite the country’s agricultural produce exceeding necessity, India has the most number of persons suffering stunted growth and children suffering malnutrition. Horticulture could play a vital role in bridging the malnutrition gap,” says Ashish Bahuguna, Secretary for Department of Agriculture and Co-operation, the Government of India.

Mr. Bahuguna was addressing the gathering at the 6th Indian Horticulture Congress – 2014 (IHC-2014), organised by the Horticulture Society of India, here on Thursday.

He was of the opinion that malnutrition was primarily due to conservatism showed to food security. “Malnutrition can be overcome by improving the availability of fruits and vegetables,” he said.

“Horticulture and the livestock industry contributed to 70 per cent of agriculture’s share to the GDP, at 35 per cent each. As most horticulture crops require less water, nutrition from the soil and lesser labour, the sector is poised for great growth,” he added.

Noting that a major share of the country’s workforce was depended on agriculture, he expressed the need for the workforce to diversify to horticulture, livestock, dairying and fisheries. He also said that agriculture should be made attractive to draw youth and farmers, who were quitting agriculture, into the other varied forms of agriculture.

Governor of Tamil Nadu K. Rosaiah said that the production of 268 million tonnes in 2012-13 helped horticulture surpass the country’s agricultural produce of 262 million tonnes in that year, for the first time. He said that this made India the second largest producer of fruits and vegetables in the world – next only to China.

The Governor said that Tamil Nadu’s diverse agro-climatic conditions had made the State account for 18.1 per cent of the country’s flower production, 8.2 per cent of fruit production and 4.9 per cent of the vegetable production of the country. “The State is the largest producer of loose flowers in India with a 3.12 million tonnes,” he added.

Founder of M.S. Swaminathan Research Foundation M.S. Swaminathan stressed on the need for a shift from food security to nutrition security. “This could be attained by an agriculture and horticulture mix,” he said. According to him, challenges agriculture faces are preventing food loss, vulnerable climate change, market volatility and the shrinking land resources.

Chairman of IHC-2014's organising committee K.L. Chadha and Vice-Chancellor of Tamil Nadu Agricultural University K. Ramasamy also spoke. Lifetime achievement award and awards for recognising progressive horticulture farmers and entrepreneurs were given away in the event.

## kochi today

Department of Agriculture; Kerala State Industrial Development Corporation: Global Agro meet, panel discussion on Kerala agriculture – a way forward, opening remarks by Irrigation Minister P.J. Joseph, 9.30 a.m., valedictory function, Governor of Kerala P. Sathasivam to address; Adlux Convention Centre, Karukutty; 5 p.m.

## Use of agrochemicals up 170 times since 1960: expert

*Global usage of insecticide is 44 per cent; it is 60 per cent in India*



Scientists urge the farmers to shift to organic farming practices as the chemical fertilizers cause severe side effects.— Photo: A. SHAIKMOHIDEEN

Though the farmers are being urged to desist from using chemical fertilizers and pesticides, known for adverse side-effects, the per-hectare use of agrochemicals in farming activities of the country has increased 170 times since 1960s, faculty member of Sri

Paramakalyani Centre of Excellence in Environmental Sciences, Alwarkurichi, A.G. Murugesan has said.

The renowned toxicologist was addressing the UGC Research Outreach Workshop on 'Sustainable livelihood' held at SPKCES, a satellite centre of the Manonmaniam Sundaranar University at Alwarkurichi, on Wednesday. The event was attended by farmers, representatives of rural local bodies, irrigation management associations, school teachers, research students and the general public.

According to Dr. Murugesan, the country's farming system was once closely associated with the lives of the agriculturists and a sustained socio-economic progress could be witnessed in the society. But starting from late sixties, the uncontrolled use of agrochemicals to increase food crop productivity caused a range of adverse side-effects.

"The average application of 0.55 kg of chemical fertilizer / ha in 1950 has now increased to 90.12 kg / ha. Similarly, the production of chemical pesticide that stood at 20,000 tones between 1955 and 1970 in the country, has now crossed 50,000 tonnes. Though we are using 234 types of pesticides, 46 per cent of them are registered pesticides. The toxic effect of the pesticides has killed over 8 lakh people across the globe since 1966," Dr. Murugesan said.

Another alarming fact he revealed was the uncontrolled use of chemical pesticides in the country. While the global usage of insecticide stands at 44 per cent, it has crossed 60 per cent in India.

"Besides having carcinogenic effect on the growers and the consumers of the produce, it will also cause other ailments including reproductive and developmental problems, genetic defects, neurological defects, kidney malfunction and hormonal change in human beings. The bio-accumulation of pesticides is

tremendously increasing not only in food products but also in human bodies and other non-target animals,” Dr. Murugesan warned.

The need of the hour is to move to organic farming pattern by promoting plant-based pesticides and fertilizers, which will be economical as the farmers can prepare it with locally available raw materials like neem, turmeric, vasambu, cow dung, vermicompost, panchakavyam etc.

“By telling the farmers about the advantages of organic farming practices and the evils of chemical fertilizers and pesticides, the local body heads should discuss these issues in gram sabha meetings,” Dr. Murugesan appealed. Faculty member P. Ravichandran spoke on the preparation and use of natural dyes in mats, wood carvings and fabrics.

Slideshows and lectures on fish culture, organic fertilizers, environmental challenges due to the use and throw plastics, application of nano science in agriculture, bio fertilizers and conservation of fresh water fishes in local streams and waterbodies were also arranged.

## Intercrops get more income for farmers

*Multi-cropping pattern rejuvenates soil health*



Handful: A farmer showing groundnut, an intercrop, on his field at Chellakutiur near Vedasandur in Dindigul district.— PHOTO: G. KARTHIKEYAN

Intercropping has become a potent tool for small and tiny farmers to increase income and to bring down production cost.

With no additional investment, farmers of Chellakuttiyur near Vedasandur have been making a decent income through adoption of intercropping pattern. “I have raised red gram as intercrop to groundnut crop. Groundnut can be harvested in 105 days and red gram in 135 days. After harvesting the first crop, residual effect of the groundnut crop in the soil will enhance the yield of red gram,” said farmer P. Muthusamy.

“I need not add any input to raise red gram. It grows with the water and fertilizers given to the main crop,” he adds.

Red gram has been raised in four to five rows on the groundnut field as intercrop as well as bund crop. Red gram as intercrop will give one-third of the total yield as a main crop with no investment.

As a main crop, red gram yield per acre is 400 kg and as inter crop it is 150 kg. Water, fertilizers and other inputs supplied to groundnut will automatically be grasped by red gram, said Deputy Director of Agriculture M. Thangasamy.

“Our aim is to propagate leguminous crop as inter crop among farmers so that they could earn more without incurring expenditure,” said Joint Director of Agriculture N. Sampath Kumar. Moreover, multi-cropping pattern would rejuvenate soil health and retain its nutrient values.

The demand for small grains was increasing owing to change in eating habits and health consciousness of the present generation. Increasing production of small grains would be beneficial to farmers and will also meet the growing demand, says Mr. Kumar.



## Centre of Excellence for fruits to come up in capital

A Centre of Excellence for fruits, vegetables and flowers will be set up in Thiruvananthapuram at a cost of Rs.18 crore under the Indo-Dutch Action Plan, said a press release from the organisers of the three-day Global Agro Meet and exhibition of organic produces and products at Karukutty, Angamaly, on Thursday.

The Union government would give Rs.8 crore and the State government would provide the remaining amount, the press release said.

### Awareness campaigns

The centre will conduct trainings and awareness sessions on poly-house cultivation. The inputs needed for poly-house farming such as hybrid seeds and fertilizers will also be provided by the centre.

Poly-house cultivation is one of the flagship programmes in the current State Plan. "Poly-house farming has the capability to increase crop yields by five to ten times," said K. Prathapan, Mission Director of the State Horticultural Mission, which will implement the project.

### Tech transfer

The Netherlands will transfer the required technology for the centre. Experts from the Wageningen University, The Netherlands, along with Kerala Agricultural University will train master trainers in poly-house farming.

***The Centre will give Rs.8 crore and the State government will provide Rs. 10 crore***

## Tobacco production likely to go up

*Expected excess production in other countries may be a dampener*

**MARKET MATTERS**

- Ryots produced **124 million** kg of tobacco in Prakasam in **2014**
- Domestic traders saddled with 25 million carryover stock
- Excess production anticipated in Tobacco-exporting countries of Zimbabwe, Brazil in 2015
- Anticipating lesser demand in the global market during **2015**, tobacco major ITC cut down its requirement by **20 million** kg to **90 million** kg

**NO ALTERNATIVE**  
We have no alternative but to grow tobacco in view of depressed market condition for Bengal gram for the last three years

**FARMERS UNDER ONGOLE I AUCTION PLATFORM**

Vexed with a poor market for Bengal gram crop for three years in a row, farmers in Prakasam district cultivated 124 million kg of tobacco as against the authorised crop size of 90 million kg and ended up getting a better average price of Rs 109 per kg last year. Even as farmers began tobacco cultivation in southern Light soil (SLS) areas with optimism, their counterparts in southern black soil (SBS) are adopting a wait-and-watch attitude in view of cyclone threat.

The sowings are expected to be completed during December. “We have no alternative but to grow tobacco in view of depressed market condition for Bengal gram for the last three years,” farmers coming under Ongole I auction platform said.

But the situation is not going to be rosy due to anticipated excess production in tobacco-growing countries. The main exporting countries including Zimbabwe and Brazil have a carryover stock of over 75 million kg and are expecting a bumper crop in 2015, according to Indian Tobacco Association sources.

Domestic Traders are saddled with 25 million kg carryover tobacco stock with farmers growing unauthorised crop of about 40 million kg last year over and above the crop size of 172 million kg fixed by the Tobacco Board, the sources say.

Anticipating lesser demand in the international market during 2015, tobacco major ITC had cut down its requirement by 20 million kg to 90 million kg. “This has never happened before in the past. In this situation, farmers in the state will not be able to attract buyers even for the authorised crop of 172 million kg in the coming year,” ITA former President Bellam Kottaiah explained.

Envisaging a tough year head for tobacco growers, Virginia Tobacco Growers Welfare Association President Ch. Sessaiah said farmers would not be able to market any unauthorised crop like in the previous years.

“Farmers should reduce tobacco production by half to scrape through during this season,” felt former Tobacco Board member Ch. Ranga Rao.

## **Officials brief farmers of ways to control wilt, leaf spot disease**

*A team of horticulture and revenue department officials inspect affected crop*



Need-based: Deputy Director of Horticulture S. Raja Mohamed inspecting the affected banana crop in a farm at Brahmadesam near Ambasamudram in Tirunelveli District.

Officials attached to the Department of Horticulture have started visiting the banana plantation in the district following recent rains to brief the growers on the measures to be taken to protect their crop from diseases that may be caused by rainwater stagnating in the ranches.

Since the stagnant water may cause diseases like wilting, leaf-spot diseases etc. resulting in huge loss to the farmers, the horticulture department has commenced this exercise.

A team of horticulture officers, led by S. Raja Mohamed, Deputy Director of Horticulture, Tirunelveli, and the revenue department officials inspected the 'Nendran' banana crop in Brahmadesam, East Ambasamudram in Ambasamudram block and Pallkkal in Pappakkudi block recently. As the prevailing agro-climatic conditions and the water stagnating in the fields may cause diseases such as wilting, 'sikatoka' leaf spot diseases in banana, the growers need to take certain prophylactic measures to safeguard their crop.

"We happened to see similar condition prevailing at Ambasamudram, Pappakkudi, Cheranmadevi and Kalakkad blocks in Tirunelveli district. Hence, the farmers should take immediate prophylactic measures to prevent diseases that would arise out of the prevailing agro-climatic conditions," said Mr. Raja Mohamed.

After affecting the lower leaves, yellow streaks would appear prior to the drying of leaves of banana. "Close planting and growth of weeds further facilitate the spread of the disease," he added.

As a prophylactic measure, farmers have been advised to drain the water stagnating in the field first, remove the wilted and affected leaves in separate baskets without leaving it in the same field as it would enhance the spread of the disease. The affected leaves should be either buried or burnt somewhere else.

Then the affected plants should be sprayed with chemicals such as copper oxy chloride (2 kg), carbondazim (500 gram) or mancozeb (1.25 kg) per hectare along with an adhesive.

“This will provide effective remedy to the diseases that might affect the banana crop during this season,” Mr. Raja Mohamed said.



[Ditch ready-to-eat meals to avoid high calories: Survey](#)



Do you want to help trim yours and your family’s waistlines? One can save over a month’s worth of calories every year by ditching

'ready meals' and instead taking a Do it Yourself (DIY) approach to making common foods. The research by e-tailer AppliancesDirect found that the average family stands to save 240,000 calories, the equivalent of 32 days' recommended calorie intake for a family of four, by home-making meals, instead of relying on shop prepared versions, reports femalefirst.co.uk.

The statistics indicate Britain is a nation of false foodies which, despite being obsessed with cookery shows like the "Great British Bake Off" and "Masterchef", has the highest ready meal consumption in Europe. "Obesity rates have never been higher and that is largely due to our lifestyles. Our grandparents were brought up on single-ingredient whole foods and we should eat more like them," said Nik Litwinenko-Jones, lifestyle nutritionist at Quality for Life Fitness.

"Yet now it's too easy to opt for ready-meals packed with long lists of ingredients – as a rule the longer the list the more you should avoid. These meals have best before dates of many weeks, meaning they are packed with salt, sugar and preservatives, increasing your risk of life-threatening illnesses such as Coronary Heart Disease and Type II Diabetes," added Jones.

More than 65 percent of Britishers admit to eating ready meals five times per week, while 57 percent buy readymade fruit juices or smoothies three or more times per week. But not only are these pre-prepared products often laden with excessive sugar, salt and fat, statistics indicate they are also much more expensive.

By switching to home-prepared foods instead, the statistics show that the average family could save almost 2,000 pounds per year, the cost of the average family holiday.

- See more at:

<http://indianexpress.com/article/lifestyle/health/ditch-ready-to-eat-meals-to-avoid-high-calories-survey/#sthash.aW3UDvKD.dpuf>



Chennai - INDIA

### Today's Weather

Sunny

Rain: 0

Humidity: 55

Wind: normal

### Tomorrow's Forecast

Friday, Nov 7

Saturday, Nov 8

Max 32°  
Min 22°  
Cloudy

Max 32°  
Min 22°

Sunrise: 06:04

Sunset: 05:40

Barometer: 1011

### Extended Forecast for a week

Sunday  
Nov 9

Monday  
Nov 10

Tuesday  
Nov 11

Wednesday  
Nov 12

Thursday  
Nov 13

31° | 22°  
Cloudy

35° | 27°  
Partly Cloudy

35° | 27°  
Sunny

35° | 27°  
Partly Cloudy

35° | 27°  
Partly Cloudy

# DECCAN Chronicle

## Selective lifting irks farmers



Cotton growers staged a protest at the cotton market yard against the CCI not lifting their produce

**Khammam:** The cotton growers are fuming at the Cotton Corporation of India (CCI) officials for rejecting nearly 75 per cent of their produce on the grounds that it is of inferior quality. They staged a protest at the cotton market yard against the CCI not lifting their produce. In the last three days, nearly 90,000 bags reached the cotton market yard in Khammam.

On information, revenue divisional officer Vinay Krishna Reddy rushed to the market yard and asked the CCI officials to lift the crop. CCI officials argued that much of the cotton brought had moisture content over 10 per cent which they can't buy. G. Sankar Naik, a farmer of Tirumalayapalem, said it was not fair on the part of the CCI to stop lifting cotton citing moisture content. "We want the CCI to buy cotton with high moisture content at a lower price," he said.



## Rain activity declines in Tamil Nadu



Tamil Nadu would remain unaffected as the present direction of the wind is northerly and northwesterly. (Photo: DC/File)

**Chennai:** The met department's prediction that rainfall activity will gradually subside during the course of the week has turned out to be right. For the past few days, no rainfall was recorded in Chennai.

Noting that the deep depression, initially feared to develop as a tropical cyclone, formed in south east Bay of Bengal, is becoming weak, S.B. Thampi, deputy director general, regional meteorological centre, said.

“Over the next few days, it will move and cross as a low pressure system by coastal Andhra Pradesh.” The met department is continuously monitoring it, he added.

He said that Tamil Nadu would remain unaffected as the present direction of the wind is northerly and northwesterly, while the state will only receive rain from the system if the winds blow in an easterly direction.

However, he added that there might be isolated instances of rain in the state for the next couple of days. Till Wednesday, the state recorded 267.6 mm rainfall, well in excess of the expected 220.3 mm.

# THE HINDU BusinessLine

## Oilmeal export dips 42% in Oct

| <b>Slipping trend</b> |                 | <b>(figures in tonnes)</b> |                 |
|-----------------------|-----------------|----------------------------|-----------------|
|                       | <b>2014</b>     | <b>2013</b>                | <b>% change</b> |
| <b>July</b>           | <b>1,25,042</b> | <b>182,133</b>             | <b>-31</b>      |
| <b>August</b>         | <b>136,325</b>  | <b>317,161</b>             | <b>-57</b>      |
| <b>September</b>      | <b>102,389</b>  | <b>301,717</b>             | <b>-66</b>      |
| <b>October</b>        | <b>218,307</b>  | <b>375,535</b>             | <b>-42</b>      |



Higher soya prices lead to disparity in global market

**Mumbai, November 6:** Delay in crushing and higher soyabean prices resulted in oilmeal exports dropping by 42 per cent in October. Shipments fell to 2,18,307 tonnes from 3,75,535 tonnes in the same period a year ago.

Soyameal exports have dropped in the last six months due to lower crop. This has led to a disparity in soyameal prices in the international market. However, export of rapeseed meal have increased to 7.05 lakh tonnes from 5.61 lakh tonnes in the last seven months, according to data from the Solvent Extractors' Association.

Exports more than doubled in October compared with 1.02 lakh tonnes shipped in September. This was largely due to sharp increase in export of rapeseed meal which increased to 1.33 lakh tonnes against 58,567 tonnes in September. Similarly, soyameal exports trebled to 29,071 tonnes from 868 tonnes in September.

In the first seven months of the financial year, exports were down 42 per cent to 11.88 lakh tonnes (20.33 lakh tonnes).

Shipments are down 32 per cent at 34.86 lakh tonnes (51.29 lakh tonnes) in the oil year ended October, largely due to 50 per cent drop in soyameal exports.

Average prices of soyameal in October dropped to \$485 (Rs. 29,585) a tonne from \$569 a tonne in September, while rapeseed and castorseed meal prices remained stable. Rupee depreciated to 61.37 against dollar from 60.90.

South Korea and Iran, both leading buyers, reduced their imports to 5.68 lakh tonnes (6.39 lakh tonnes) and 1.82 lakh tonnes (6.04 lakh tonnes), respectively. South Korea imported 3.15 lakh tonnes of rapeseed meal, 2.50 lakh tonnes of castor meal and 1,744 tonnes of soyameal.

Kandla port handled 9.06 lakh tonnes of oilmeal exports accounting for 76 per cent of the total exports. It was followed by Mumbai Port including JNPT 1.21 lakh tonnes (10 per cent), besides Kolkata and Mundra ports managing 64,096 tonnes (5 per cent) and 63,666 tonnes (5 per cent), respectively. Bedi accounted for three per cent of exports.

## **As tea prices drop below Rs. 100/kg, growers seek relief**

**Kochi, November 6:** Kanan Devan Planters Association has urged the Union and State Governments to put in place immediate relief measures to safeguard the tea plantations from the crisis the industry is facing.

Fall in prices, increase in wages and high cost of fertilisers is taking back the industry to its worst-ever period tea growers had experienced at the beginning of this century, BP Kariappa, Chairman of the Association, said in a statement.

Tea prices in the South are unviable with the average price up to September dropping below Rs. 100 from Rs. 115 per kg during the same period a year ago, down 13 per cent. At the same time, wages have gone up by 19 per cent in Kerala. The increase in wages coupled with spiralling costs of other inputs have crippled the tea plantations, which is on the verge of collapse. In addition to the basic wages, the organised plantation sector spends additional 75 per cent for discharging the obligation of social costs. The recommendations and assurances given by many expert committees for reimbursing part of the expenses incurred for social costs still remain in paper, he said.

An unfavourable tax environment further aggravates the situation where the cost structure already places the products on a weak grounding *vis-a-vis* the competition. He pointed out that plantation

tax for an amount of Rs. 700 per yield is levied whereas this tax does not exist in any other State.

## **Agriculture I-T**

Likewise the agriculture income tax is levied at the rate as high as 50 per cent in Kerala against nil in Tamil Nadu. While 30 per cent is levied in Karnataka, Assam and West Bengal. Apart from this, the basic land tax increase from Rs. 200 to Rs. 500 per hectare has also an impact on the sector, he said.

Kerala has the highest plantation wages coupled with a variable DA which is revised quarterly. This had an impact on wages, which increased by 18.34 per cent in the past two years, whereas the tea prices dropped 13 per cent, he said.

## **Despite offers below Rs. 500/10 kg, no takers for palmolein**

**Mumbai, November 6:**

The edible oils market was dull on Thursday due to scattered physical volume amid weak overseas futures market. NCDEX and Bombay commodity exchange was closed due to *Guru Nanak Jayanti*. Ruchi and Liberty kept prices unchanged, while Allana lowered prices by Rs. 2-5 for soya and palm oil. Malaysia crude palm oil futures closed lower for the third consecutive day, tracking losses in world commodities markets. Sources said during the day about 150-200 tonnes of palmolein changed hands at Rs. 495. Resellers offered palmolein at Rs. 497-498 but there were no demand. At the end of the day, Liberty quoted palmolein at Rs. 512-514, super palmolein at Rs. 540 and soyabean refined oil at Rs. 615. Ruchi was quoting palmolein Rs. 512, soyabean refined oil at Rs. 601 and sunflower refined oil at Rs. 631.

Allana quoted palmolein Rs. 507, super palmolein at Rs. 550, soyabean refined oil at Rs. 610 and sunflower oil at Rs. 645. Vikram global commodities (P) Ltd quoted Rs. 635 for Malaysian super palmolein November delivery

Malaysia crude palm oil November contracts closed lower at MYR 2,219 (MYR 2,228), December at MYR 2,230 (MYR 2,258) and January at MYR 2,223 (MYR 2,252).

In Mumbai nominal spot rates ( Rs. /10 kg) were: groundnut oil 860, soya refined oil 610, sunflower expeller refined 585, sunflower refined 635, rapeseed refined oil 733, rapeseed expeller refined 703, cottonseed refined oil 615 and palmolein 505.

## Prospects improve for mustard , oil

Indore, November 6:

### PROSPECTS TURN BULLISH FOR MUSTARD

Weak arrival and improved buying lifted mustard oil prices in mandis across Madhya Pradesh with price in Indore on Thursday being quoted at Rs. 672 for 10 kg (up Rs. 5). Amid decline in arrival, mustardseed in the physical market was quoted higher at Rs. 4,200 a quintal (up Rs. 100 from last week). A lower carryover stock and report of decline in sowing area could result in a uptrend in mustard prices in the coming days. last year. Our Correspondent

## As crude oil plunges, shale sharks count on OPEC's weakest links

Libya, Venezuela, Iran and Ecuador will have a tough time tackling the current situation

**November 6:** Here's why the US shale upstarts just might win a confrontation with Saudi Arabia as oil sinks: While the Arab nation is as flush with cash as ever, the finances of some fellow

Organisation of Petroleum Exporting Countries (OPEC) members are deteriorating quickly.

Venezuela, for example, has burned through billions of dollars, leaving its foreign reserves near a decade-low, to stave off default. In Nigeria, officials are struggling to stem a selloff in the currency that has left it at a record low.

Those financial strains have Venezuela calling for action to prevent further declines in oil prices, while a Libyan representative said the 12-member OPEC should cut its output target. When executives at American shale companies talk about having more staying power in a price war than some of the Saudi partners, these countries, along with places like Ecuador and Iran, are the key weak links in question.

Saudi Arabia and the oil-rich Gulf monarchies can afford to take the long-term remedy as they have enough cash reserves, Theodore Karasik, senior adviser at Risk Insurance Management, said by phone from Dubai on Wednesday. Libya and Venezuela, on the other hand, need a quick intervention by OPEC.

Brent crude, the international benchmark, plunged 29 per cent since June to \$82.54 a barrel on Thursday as the shale boom lifted US production to the highest in at least 31 years and global demand slowed. At this price only Kuwait, Qatar and the United Arab Emirates will earn enough to balance their budgets, while Iran, Iraq and Algeria need at least \$100, the International Monetary Fund said in a November 2013 report.

### **Higher costs**

Shale oil drillers will be hurt by the fall in crude prices before members of OPEC because their costs are higher, said the groups secretary-general, Abdalla El-Badri. As much as 50 per cent of tight oil output will be out of the market at current prices, he said at a conference in London on October 29.

Executives at several large US shale producers, including Chesapeake Energy Corp and EOG Resources Inc, vowed to maintain, and even raise, production as they reported earnings this week. They say their success in bringing down costs means they make money even if prices slump further.

The average price of OPEC's main export grades fell below \$80 a barrel for the first time in four years on November 4, the group said by e-mail. The group will decide on future production quotas when it meets in Vienna on November 27.

OPEC members' fiscal break-even levels, the price at which their budgets are balanced, are more important for determining members production policies than the cost at which they can pump oil, according to analysts at Commerzbank AG and IHS Inc.

### **Venezuelan Discomfort**

OPEC members are countries, not companies, so they don't look at the profitability of wells, they look at their revenue for a fiscal or current account standpoint, Jamie Webster, a Washington, DC-based analyst at IHS, said by e-mail. Crude production costs are a secondary matter.

Venezuela, which gets 96 per cent of its dollar earnings from oil, loses \$700 million a year for each \$1-a-barrel price drop, according to state-run oil company Petroleos de Venezuela SA. The country is almost certain to default on its foreign-currency bonds, Harvard University economists Carmen Reinhart and Kenneth Rogoff said last month.

### **Ecuador's deficit**

Venezuelan officials are already uncomfortable and they really run into trouble if prices fall closer to \$80 a barrel for a sustained period, Risa Grais-Targow, a Eurasia Group analyst, said by



phone from Washington. The country needs \$162 a barrel to balance its budget, according to Deutsche Bank AG.

Venezuela is not in any immediate risk of default, Sebastian Briozzo, director of sovereign ratings at Standard & Poors, said in an interview. The fall in oil prices is very serious for Ecuador's economy, said David Rees, an emerging-market economist at Capital Economics in London.

## Value addition

The business of antiques is thriving in India. Be it a traditional brick-and-mortar model or an e-commerce site, the patina of success is now clearly discernible

Near the Wellington Fountain Circle (Regal Circle) in south Mumbai's Colaba stands a grand Gothic building marked by pointed arches, turrets and black stone façades. Built sometime in the mid-19th century, the Waterloo Mansion, now called the Indian Mercantile Mansion, is one of the most photographed architectural marvels of the city, featured even in postcards of the early 20th century. And it is under its hallowed roof that one of India's oldest antiques shops, Phillips Antiques, found a befitting address.

Originally set up by a British family in 1860, the shop was bought as a 'going concern' by the great grandfather of Farooq Issa. Today, it houses pieces of history in the form of Oriental and European porcelain and pottery, brass toys, Victorian coloured glass, Tanjore glass paintings, sea charts, historical maps and town plans, besides a range of colonial and ethnic furniture.

The erstwhile Maharajas and royal families were the biggest patrons of antiques in the 1950s. But by the late '70s — after the abolition of privy purses in 1971 — they had become sellers, giving a new lease of life to the business of antiques in the country. While no industry statistics are available due to the unorganised nature of the business, antiques worth billions of dollars are sold every

year in the domestic and exports markets. And the business is increasing.

“The domestic market is growing tremendously. More people are now aware (of their value), and the emerging middle-class is spending a lot on buying vintage artefacts for their homes,” says Sunny L Malayil, who co-owns Crafters Antiques in Kochi’s Jew Town with brother Johny.

The duo joined the trade nearly a quarter-century ago, after their family business of spices began to slow down. When they started, 95 per cent of their sales came from exports. “But today, domestic demand alone is 80 per cent,” says Malayil.

The first item that the brothers sold was an 80-year-old cash box, which was bought from a tharavadu — a traditional family house in Kerala. These homes were grand, with one or more courtyards, intricately carved furniture and decorative articles.

With the decline in the joint-family system, these belongings found their way to the market, and were bought regularly by antiques dealers. “Kerala has a rich craft tradition, especially wooden craft, which is centuries old.

Families own items like wooden heads of cows and horses, statues and other knick-knacks. A lot of that has come to the stores,” says Deepak Srinath, founder of Phantom Hands, India’s first antiques and vintage collectibles e-commerce venture.

In Kochi, for instance, Jew Town, which lies between the Mattancherry Palace and the Paradesi Synagogue, is a hub of antiques sellers.

When local Jew settlers, whose history dates back to 700BC, began to move back to Israel in the 20th century, their old household items, including furniture and vessels, flooded Jew Town with antiques. Not surprisingly, row upon row of shops here sell antiques alone — from furniture and crockery to paintings and

silver ornaments. All of which eventually find their way to dealers and collectors across India and abroad.

### Open source networks

Issa of Phillips Antiques and Srinath of Phantom Hands travel to Kochi and other hubs like Jodhpur, Pondicherry and Chettinad in search of 'hidden gems'. The Chettiars, for instance, had trade relations with other countries.

From their travels, they brought back enamelware from Sweden, lacquer boxes and wooden chests from Burma, besides other gems, artefacts and statues. "You find an international flavour of antiques in Chettinad," says Srinath.

Issa says he sources antiques from collectors, auctions, estates, royal families and even old homes in the countryside. Among the main draws at his upmarket Colaba store, which can well be called a museum, is an exquisite doll's house in silver, complete with silver chairs, a dining table, sofas and beds, which once belonged to a princess. A queen's palanquin procured from Bengal was also a major attraction, until it was acquired by a family in Pondicherry with a house large enough to give it pride of place.

Srinath, however, stays away from such privately owned legacies. "People we deal with are all first-generation collectors. We don't want to get into any family disputes at all." He sources his vintage artefacts from collectors and other antiques dealers with whom he has built a rapport over the years. While Phantom Hands was only launched in 2013, Srinath and his wife Aparna Rao have been decorating their home with such collectibles over a period of time.

"Once we launched the site, collectors started approaching us to sell their things. With time, either the tastes of collectors change, or they have space or cash constraints, compelling them to dispense with the artefacts," says Srinath, formerly an investment banker with Allegro.

He cautions, however, that entering the business of antiques is not without its perils. “It is not something someone can get into and start sourcing immediately.

Most antiques dealers are third- or fourth-generation operators, and their relationships with suppliers go back 100 or more years. Their supply chains are well-entrenched,” he says.

A fourth-generation antiques dealer, Issa, for instance, depends heavily on the business relationships his forefathers built over 100 years. Moreover, dealers and collectors have always worked within a tight, well-networked community that is hard to breach for a new entrant.

Antiques — loosely defined as any item over 100 years old, of historic, artistic, cultural or religious significance — are becoming rarer by the day and cannot be legally exported.

They have to be registered with the Archaeological Survey of India (ASI). Articles that are 30 to 100 years old are classified as vintage, and these are the ones in demand now.

“Things have changed. Buyers don’t look only at the age of an artefact now. It is more about design and aesthetics. Most of the things sold today are vintage,” says Issa. Almost 90 per cent of the Phantom Hands inventory is also vintage — belonging to the early 20th century.

### Keeping the faith

Rehan Khan, the chief executive of a pharmaceutical multinational, who is also an angel investor in Phantom Hands, began by collecting vintage carpets and rugs almost two decades ago, when he was working across the US, Germany and Sweden, among other countries. He moved to India six years ago. “Most of the good carpets have long left the country. I now focus on beautiful vintage items across genres — furniture, contemporary art and items of religious and historic significance.”

Khan, like most collectors, is choosy the about people he sources his items from in a marketplace flooded with fakes and knock-offs. “There is a market but no way to cater to it in an ethical way. When a lot of people are making copies (of originals), how do you do it in a trustworthy way? Can you tell the history and provenance of an item? A buyer needs to know that.”

And that is exactly why Khan agreed to fund Phantom Hands, which works with experts to ensure that each and every product it sells online is bona fide. Srinath says, “We always work with dealers who are trustworthy and come with good credentials.”

Srinath has taken it a step further by roping in as team members antiques dealers, subject experts as well as academicians who can judge if an object is kosher. Since antiques belong to several categories, one person cannot be an authority on everything from vintage watches and coins to fans and bicycles. “When we are not sure, we write to relevant experts all over the world to get their validation,” says Srinath.

A third of his company’s sales now comes from export markets in the US, Europe and Australia.

While objects range from ₹12,000 to a few lakhs at Phantom Hands, a lithograph of a British soldier, for instance, can be bought for ₹3,500 at Phillips. “It is a misconception that antiques cost lakhs of rupees. Many items can be bought for a few thousand,” says Issa. And that is precisely why young professionals are making a beeline for vintage artefacts.

“They are the emerging category of clientele — professionals, who are doing well, are mostly in their early-to-mid-30s and setting up their first home. While 80 per cent of the furniture they buy will be from stores, they do want to have one or two pieces that will stand out,” says Srinath.

They are, as Issa says, taking baby steps in the vast world of antiques: “Over the years, as they become more affluent, they will perhaps start investing in unique objects.” Quite like the high net-worth individuals who invest in antiques today, apart from serious collectors, who tend to focus on one or two categories such as coins or watches or furniture of a particular style.

Khan, meanwhile, remains bullish about the future of antiques in India. He cites the example of China, where individuals are buying back Chinese antiques from all over the world as their purchasing power increases. “Most countries become more focused and proud of their history with an increase in affluence. In 20 years, we will see this happening in India as well,” says Khan, who collects a noodle-maker from Assam with as much fervour as a sandalwood walking stick from Mysore or intricately carved legs of a charpoy from Gujarat. “Articles I collect today are vintage, but two decades from now, they will be antiques.”

For collectors like Khan, this is not merely a business, or an investment that can give quick returns like mutual funds: “It is a way of preserving our history, culture and anthropology.”

And for Issa — whose children are keen on joining the business as well — it is a way of life.

## **Time for another Green Revolution**

Now that the gains from the first round have petered out, we need to embrace biotech to boost farm productivity

As India seeks to ignite the next agrarian revolution, it must try and absorb some of the lessons of the Green Revolution. Currently, agricultural productivity and growth vary from State to State, resulting in regional disparities. Through targeted policymaking, investment in rural infrastructure and research, and ongoing

support to farmers, we can level out these inequities and ensure that we get it right.

The Green Revolution of the 1960s had a phenomenal impact on food production in India. It resulted in a record grain output of 131 mt in 1978-79 and catapulted our country into the league of the world's leading grain producers. Similar agricultural techniques implemented globally showed us a way out of food crises in countries across the world.

For example, the International Maize and Wheat Improvement Center in Mexico and the International Rice Research Institute in the Philippines developed new high-yielding varieties of wheat and rice that significantly boosted output and alleviated crop shortages in certain parts of the world.

### **Hitting a plateau**

However, the effects of the Green Revolution in India have plateaued since then. Though India is now self-sufficient in many aspects of food production, it still relies on imports for crops such as pulses and oilseeds, where production has not kept pace with demand from a burgeoning population.

The agriculture sector currently lags growth in other fields and the income gap between farmers and non-farmers is widening. Hence, the need of the hour is to infuse fresh energy to drive the next phase of growth in agriculture .

Though the Green Revolution was a game changer, investment in key areas including machinery and irrigation systems to support the cultivation of high yielding crop varieties was not adequate. As a result, the effects of the revolution were not uniform, resulting in imbalanced growth in many regions.

The second agricultural revolution that we now have to ignite should build on the good work initiated by the first one while filling some of its gaps. The goal is not just to make India self-sufficient in food production but to enable surplus production that will allow it to become an exporter of food.

According to the agriculture ministry, India achieved an agricultural growth rate of 3.64 per cent against a target of 4 per cent growth over the 11th Plan period. The increase in total planted area under major crops (foodgrains, oilseeds, cotton, and sugarcane) by around 9 per cent since 2000-01 to 170 million hectares in 2011-12 reflects increased irrigation availability leading to increased cropping intensity.

### **How to secure food needs**

Another fact that would support India's case to be a major force in world trade is that according to the US department of agriculture, India has emerged as a major agricultural exporter, with exports climbing from just over \$5 billion in 2003 to a record of more than \$39 billion in 2013.

Ashok Gulati, renowned agricultural economist and chair professor, agriculture, at the Indian Council for Research on International Economic Relations has also called for revolutionary methods to dramatically boost food supply for the nation's 1.2 billion people.

According to the International Center for Agricultural Research in the Dry Areas, drylands produce half the country's cereals, 77 per cent of its oilseeds and 85 per cent of its pulses. Implementation of new and efficient irrigation methods, better watershed management and maintenance of vegetation cover in catchment areas, are all important steps in the quest to match water availability to crop needs, and thus the development of crop varieties tolerant to water stress (abiotic stress) is required to optimise water utilisation.

Good infrastructure is an extremely important factor for agricultural development, as it directly impacts the degree to which farmers can access institutional finance and markets, as well as their ability to boost yield. Agricultural infrastructure has the potential to transform the current landscape of subsistence farming into one defined by modern, commercial farming.



Public investment in infrastructure such as irrigation, power, roads, food storage, watersheds, dams and agricultural research, including agri-biotechnology, will signal a commitment from the Government to transform the face of Indian agriculture and empower our farmers to compete globally. The role of agriculture in improving rural lives and securing India's food needs should not be underestimated.

Clearly, a priority for the Government should be to refocus policymaking energy on this sector — in terms of providing support and infrastructure. A recent Crisil report predicts that slowdown in other sectors may lead more people to reconsider agriculture as a primary source of income.

### **Refocus on agriculture**

The Government seems to have understood the priorities for the agriculture sector, especially its call for optimum use of water through 'per drop, more crop' and need for related research technology to the sector by taking research initiatives from 'lab to land' to increase farm productivity.

Also, the Government's Digital India campaign is another encouraging step to transform India into a digitally empowered society and knowledge economy. eKranti, which is one of the pillars of the campaign that also focuses on technology for farmers with real-time price information, online ordering of inputs, and payment with mobile banking, will enable farmers to take informed decisions.

Biotech food crops are also critical for enabling the success of this next revolution. Although sometimes misrepresented, these crops have been proven to significantly improve yield through high levels of disease and pest resistance, improved weed management, abiotic stress tolerance and nutrient-use efficient crops.

It's important to note that according to the 2013 report of the International Service for the Acquisition of Agri-biotech Applications, a record 18 million farmers grew biotech crops worldwide and the biotech crops hectares increased more than 100-fold from 1.7 million hectares in 1996, to over 175 million hectares in 2013.

Some 7.3 million Indian farmers cultivated a record 11 million hectares of Bt cotton with an adoption rate of 95 per cent. If all the other necessary inputs and infrastructure are in place, biotech crops can be vital to the kind of sectorial transformation that we have to achieve for meeting our food needs.