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THE HINDU

TNAU sends proposal to Govt. to boost pulses production

Tamil Nadu Agricultural University has sent a proposal to the State Government to almost double pulses production in the coming season.

According to sources, the objective is to take the black gram (urad dal) production from the current average yield of 400-500 kg a hectare to 1,000 kg a hectare.

The move is in keeping with the United Nations declaring 2016 as the International Year of Pulses.

The sources said that under the proposal, the university will first take up 10,000 of the 40,000 hectare in the four delta districts (Thanjavur, Tiruvarur, Cuddalore and Nagapattinam) in the rice fallow season to double production.

The university had tasked the job of identifying the 10,000 hectares to joint directors of agriculture in the districts concerned.

In the selected lands, the university will train farmers, hand over ADT 5 and VBN 6 variety seeds and also support farmers by ensuring that they plant using seed drill, which ensures that every sq.m. of the field contained 33 plants.

During the 60-65 day growth period, the university would advise and assist the farmers on weed and nutrition management. This would be during the first cultivation season or 'Thai Pattam'.

In the next cultivation season, 'Chithirai Pattam', the university would use seeds harvested in the first season to expand the area, the sources said.

At the end of both the cultivation seasons, the university would with help from the Agriculture Marketing Department help farmers get a good price.

It would help them get the pulses polished in the mills in Thanjavur.

Jayalalithaa launches 'Amma seeds' scheme for farmers



Jayalalithaa had earlier launched Amma Canteens and Amma mineral water, among others. Photo: M. Vedhan

Implementing an announcement made in the Tamil Nadu Assembly in 2014 for farmers' welfare, Chief Minister J. Jayalalithaa has launched the scheme 'Amma Seeds' which is aimed at providing quality seeds, the state government said on Saturday.

In an official release here, the state government said Jayalalithaa had recently launched the scheme by giving away seeds to three farmers here.

She had proposed the scheme in 2014, saying quality, certified 'Amma Seeds' would be available through 'Amma Service Centres' across the state.

Jayalalithaa, fondly addressed as Amma by her supporters, had earlier launched Amma Canteens providing subsidised food and Amma mineral water, among others.

An official release said the motive of the scheme was to encourage farmers to use certified seeds.

The Tamil Nadu State Seeds Development Agency will act as the nodal body to coordinate seed farms, production units and the farmers, it added.

Further, the release said, she has allocated a sum of Rs. 5.37 crore towards expanding a scheme for urban citizens to grow vegetables at home to Tiruchirappalli and Madurai.

The scheme, which involves providing kits with necessary ingredients to people to try out vegetable farming in urban environment, has been successfully implemented in Chennai and Coimbatore following its launch last year, it said.

Under agriculture department initiatives, she inaugurated a series of buildings including dry and cold storage facilities constructed at an estimated Rs. 28.51 crore, the release added.

Grant industry status to farming, says Sachin Pilot

Congress leader Sachin Pilot says Rajasthan farmers still await compensation, says Congress leader

“If the agricultural sector has to be strengthened then agriculture must be given industry status. The BJP government in Rajasthan must gather the courage to do that,” said Rajasthan Pradesh Congress Committee president Sachin Pilot here on Sunday.

Such a bold move would bring immense relief to the farmers of Rajasthan since agriculture would then encompass loan exemption, insurance, facility for taking loans, and access to markets. It would also lead to various methods of investments, Mr. Pilot said.

The Congress leader had claimed that over 60 farmers had committed suicide in Rajasthan in 2015 as their crop was destroyed due to excessive rainfall. He said over 10 lakh farmers were still awaiting compensation from the Vasundhara Raje government.

Dalit officer case

Mr. Pilot claimed that the Raje government was anti-Dalit and alleged that it was victimising Dalit IAS officer Umrao Salodia on the basis of caste.

Irradiated papaya has high shelf life



BARC scientists have developed processing methods to make papaya a high shelf life super-food.— Photo: Special Arrangement

Some specialists feel that the terms “super fruits” and “super foods” are used by marketing gurus as promotional gimmicks. The topic became so exciting that in July 2013, the Food and Agriculture Organization organized an International Symposium on Super fruits: Myth or Truth, “to determine whether there were nutritional and agronomical evidence to support the claim of a fruit (species and varieties) being a “super fruit” and whether these were adequate to provide a definition”.

One of the papers at the symposium referred to the humble papaya as “super food for the skin”. Most super fruits, including papaya have short shelf-lives. Scientists from the Bhabha Atomic Research Centre (BARC) have developed notable processing methods to make papaya a high shelf life super-food.

They noted that papaya fruit is highly perishable resulting in around 25 per cent postharvest loss which is further enhanced during storage and transportation. They developed a novel combination technology including osmotic dehydration, blanching and infrared drying to make intermediate moisture (IM) papaya cubes to prevent these losses.

They further hygienised these cubes after packing them and exposing them to a gamma radiation dose of 2 kGy. (Gy, a unit of radiation dose, represents energy absorption of one joule per kg; kGy is 1000 Gy). In their study, they packed the intermediate moisture (IM) papaya cubes (20 pieces; approx. 50 g/packet) in low density polythene packets. Radiation processing helps to reduce the microbial load.

Believe it or not, the final product could be stored up to 60 days at ambient temperature. The unprocessed freshly cut samples get spoiled within 2 days!

Scientists secured other benefits. They demonstrated that processed IM cubes showed nearly 5-fold increase in calorific value; the per unit dry weight content of carbohydrate, protein, fibre, and functional bioactives such as ascorbic acid, carotenoids, and phenolics including flavonoids were found to increase significantly.

Researchers quantitatively demonstrated that the functional properties in terms of antioxidant capacity and antimutagenic potential were improved in the final product. Writing in *Food Bioscience journal* (Feb 25, 2015) they concluded that they could control the postharvest losses of this highly perishable fruit by transforming it into a more stable product.

“The developed product was found to be microbiologically safe and showed better nutrient content per unit mass with respect to the fresh fruit, and therefore enhanced functional properties.” They added.

The authors listed many interesting facts about papaya. Annual production of the fruit worldwide is about 11 million tons (t). India produces about 4.7 million tons. Our export is a measly 18,000 t! According to the scientists, the major reason for the marginal export is the highly perishable nature of the fruit, which is often susceptible to fungal attack during storage and transportation. The fruits need tender care in handling. . The softness that occurs during ripening of the fruit further accelerates the spoilage. Papaya has to be preserved at the right temperature. Storage below 10 degree Celsius causes chilling injury to the fruit.

According to the National Horticulture Board, the economic life of the papaya plant is only 3 to 4 years. Papaya plant needs heavy doses of manures and fertilizers. In one estimate, the NHB showed that the break-even point is reached in the 3rd year. Such considerations do come in while evaluating the financial viability of papaya cultivation.

My queries revealed that the most important aspect in the cost effectiveness of the BARC technology is that it provides a mechanism to reduce the post-harvest losses. Secondly, it makes available a convenient ready-to-eat (RTE), ambient storable, and microbiologically safe papaya cubes to the consumers. Thirdly, the product is of high calorific and nutritional value on dry weight basis compared to the raw ripe papaya.

Evidently, these attributes can compensate for the seemingly non-negligible processing cost. Also, it can provide a useful technology which will benefit the papaya farmers in due course.

The public unhesitatingly buys the insipid noodles, pastas and pizzas; they often get carried away by telling advertisements and even endlessly long controversies! It is surprising that they do not even look benignly at the genuinely nutritious products such as the papaya cubes which could be produced by the BARC technology.

K.S. PARTHASARATHY

ksparth@yahoo.co.uk

(The writer is former Secretary, Atomic Energy Regulatory Board)

RASPBERRIES



BLACK RASPBERRIES NEW SUPERFOOD

Black raspberries may be the new superfood on the block as they show greater health benefits than their better known cousins — raspberries or blackberries, said a study by the University of Agriculture in Poland.

Horticulture varsity to be set up at Mulugu



Minister for Agriculture Pocharam Srinivas Reddy inspecting Horticulture University works at Mulugu in Medak.—PHOTO: Mohd Arif

The first Horticulture University of Telangana - Sri Konda Laxman Telangana State Horticulture University - would be coming up at Mulugu under Gajwel constituency limits, being represented by Chief Minister K. Chandrasekhar Rao. Foundation stone would be laid on January 7 by the Chief Minister.

An amount of Rs. 1,832 crore would be allocated to the university in the next five years, according to sources.

Mr. Rao was also expected to lay foundation stones for the Centre of Excellence which will become a fruit and seedling research centre in the near future and a Forest College.

An amount of Rs. 12 crore was allotted for plug type rising of vegetable seedling nursery and Rs. 18 crore for the Centre of Excellence for fruit crops research.

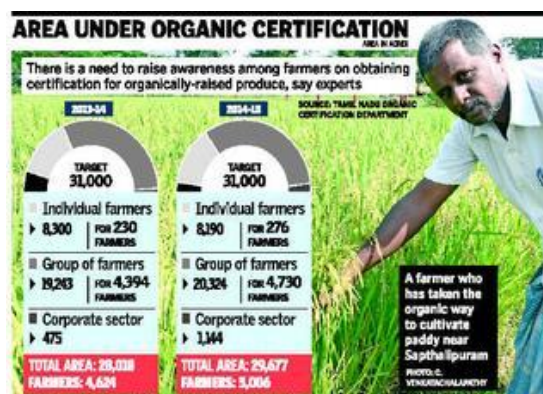
Forest Research Institute (FRI) had allocated Rs. 45.79 crore toward capital expenditure and Rs. 6.8 crore towards recurring expenditure.

These three institutes which would become backbone for farming sector in the entire State, are the dream projects of Mr. Chandrasekhar Rao. They would be coming up in about 100 acres and all arrangements on the ceremony of laying foundation stone.

Minister for Agriculture Pocharam Srinivas Reddy along with Gajwel Area Development Authority (GADA) Special Officer Hanumtnah Rao and others has visited the proposed site for the construction of university and asked about the arrangements being put in place.

Organic farming gains momentum in Vellore district

Driving force among farmers was to do away with chemical fertilizers and pesticides to provide good food to consumers



Organic farming is steadily gaining momentum among farmers in Vellore district. In the last few years, many farmers have started to move away from inorganic farming to adopt organic means of raising crops.

Yawning gaps to be addressed

Yet, officials say that a number of gaps need to be addressed. Among them is the need to raise awareness among farmers on obtaining certification for organically raised produce.

Several farmers have been creating awareness on organic agriculture in the last few years. For them, the need to do away with chemical fertilisers and pesticides to provide good food to consumers was the driving force to take up organic farming.

D. Damodaran, a farmer in Vellari village, Gudiyatham taluk, has been in agriculture for 43 years. However, he turned to organic farming nearly seven years ago with an aim to provide toxic-free food for consumers.

“In my experience, a major chunk of income, that I got from agriculture, was spent on pesticides. Hence, I took to organic farming,” he said.

To protect the crops from pests, he uses products available on his land to prepare “Panchakavya”, an organic product consisting of elements such as cow dung, cow urine.

Reduced expenses

“The crop yield in organic farming is 70 per cent, but our expenses have drastically come down due to making use of locally available resources. Organically produced vegetables, fruits and flowers are fresher and have a better shelf life than those from inorganic farming,” he added. He raises bananas, paddy, ragi and sampangi flowers.

For Annakilli, a farmer, organic farming goes back to 2001 when they formed Kalanjiam Women Farmers Group.

“About 900 women organic farmers are part of this group. Women are not recognized as farmers. We started this group to ensure food security and oppose genetically modified crops, and promote organic farming. For decades, the soil has lost its fertility due to constant use of chemical based products. Organic farming helps to restore the soil’s fertility,” Annakilli, the group’s executive member, said.

Women cultivate millets

The women have been taking up cultivation of millets, pulses and flowers on a large scale in Walajah, Arakkonam and Nemili. They have been taking up collective farming too. “Now, 100 of us have registered with Participatory Guarantee Systems India to get organic certification so that we can motivate many more farmers” she said.

Nevertheless, organic farmers, mostly, do not seek higher rates for produce and go by the prevailing market rates, they said.

“This is not a problem now as our expenses are much less. People too prefer organic produce, and we do not want to demand higher rates,” Mr. Damodaran said. Ms. Anakilli too said providing good food for consumers was of prime importance than profit for many of them.

Need for authentication

R. Jayasundar, director of Seed Certification and Organic Certification said there is a need for authentication of organically raised produce.

It is here that the Tamil Nadu Organic Certification Department comes in.

Established during 2007-2008, the department carries out inspection and certification of organic production system in accordance with the National Programme for Organic Production (NPOP) of the Central government.

It certifies crop production, food processing, organic input producing units and trade. It sees to that the products have been produced or prepared in compliance with NPOP norms.

Cotton auction fetches Rs. 1.5 crore

Cotton was auctioned for Rs. 1.5 crore at the Konganapuram branch of the Tiruchengode Agricultural Producers Cooperative Society on Saturday.

While DCH variety fetched a price between Rs. 5,400 and Rs. 6,150 per bag, and Surabi variety fetched a price between Rs. 4,400 and Rs. 5,020. More than 8,000 bags of cotton were auctioned for Rs. 1.5 crores on the occasion, society sources said.

Promoting exotic vegetables among farmers

With an objective of promoting production of exotic vegetables in the North Karnataka region, the University of Horticulture Sciences, Bagalkot, has launched an initiative to introduce exotic vegetables among farmers here.

The university, which is, on a pilot basis, cultivating these vegetables under controlled atmosphere (a poly-house), has been holding events to educate farmers about the economic importance of growing these vegetables. The university has been cultivating foreign vegetables such as broccoli, parsley, English cucumber, Chinese cabbage, red cabbage and colour capsicum.

“Growing these vegetables is not a difficult task. They are cultivated as normal vegetables; however, they should be grown in a poly-house as they do not grow under direct sunlight,” says Vasant Ganiger, Professor in Vegetable Science of the university.

Prof. Ganiger, who was present at the Krishi Mela being organised by Regional Agriculture Research Station of University of Agriculture Sciences, Dharwad, here on Sunday, said that these exotic vegetables had a great demand in star hotels.

For preparing various cuisines, star hotels use these foreign vegetables. Thus, considering the demand, farmers could cultivate these vegetable here also.

Prof. Ganiger, however, said that as cultivation requires higher investment and better marketing facility, it is difficult to convince farmers to take up cultivation of these vegetables in their farms.

“However, interested farmers can make some efforts which would eventually give them higher returns if they could find buyers,” he said.

He said that the university would help them collect required information about the cultivating methods and availability of market for these exotic vegetables, he said and added that seeds or saplings for cultivating these vegetables could be purchased from agencies.

Farm fair begins at research station in Vijayapura

UAS Dharwad is organising the two-day Krishi Mela



A variety of ornamental flowers went on display at the flower exhibition as part of Krishi Mela at the Regional Agriculture Research Station in Vijayapura on Sunday.— PHOTO: BY SPECIAL ARRANGEMENT

A two-day annual Krishi Mela (Agriculture Fair) started at the Regional Agriculture Research Station here on Sunday.

The fair has been organised by the University of Agriculture Sciences, Dharwad, to educate farmers about new research made in the field of agriculture and also to answer their queries.

This year, the theme of the fair is: Healthy soil for sustainable agriculture. The university has selected the theme this year as the focus is on soil preservation by the United Nations.

The specialty is indoor and outdoor flower exhibition along with exhibition of a variety of ornamental and farming fish.

Speaking to *The Hindu*, Vijay Kumar, head of the Fishery Research Centre of Vijayapura coming under the University of Veterinary, Animal Fisheries Sciences, Bidar, said that the government has taken this decision to hold an exhibition of fish in all agriculture fairs of the State.

“The government believes that fisheries could be promoted to ensure alternative earning for farmers who have adequate water facility or have farm ponds. These ponds could be used to raise fish which would help farmers earn additional revenue,” he said.

He said that about 40 types of fish that include the exotic, the indigenous and ornamental are being displayed at the exhibition.

Besides this, a numerous types of ornamental flowers are on display, drawing a large number of visitors, mainly women and children. The flowers have been brought from various places especially for the event.

Meanwhile, a number of people, mainly farmers, were seen inquiring about seeds, fertilizers, various farming equipment and plants.

Gurusidappa Hiremath, a farmer who came to the fair from Muddebihal taluk, said that such events helped farmers to know about the latest developments in agriculture.

“We get a chance to meet progressive farmers and agriculture experts who will guide us in improving productivity,” he said.

Various seminars and interaction sessions by experts are scheduled to help farmers.

Growers in Chitradurga reap bumper harvest of millets

They cultivated millets on 48,266 hectares in the district



The growers have got 10 to 12 quintals as yield per acre.— File photo

Growers in Chitradurga district have successfully cultivated millets on 48,266 hectares (ha) of land in this season and have got a bumper crop. This is significant in view of the heavy losses they incurred in the last four years due to adverse climatic conditions. They have got 10 to 12 quintals as yield per acre this year.

Most farmers in the district had switched over to commercial crops such as pomegranate and onion in the last five years and had incurred losses owing to adverse climatic conditions as well as the steep fall in their prices. This year, they decided to grow millets as the requirement of water will be minimum and the investment will be less too.

The farmers cultivated millets on 993 ha in Challakere; 3,521 ha in Chitradurga; 4,373 ha in Hiriyur; 31,195 hectares in Hosadurga; 7,807 ha in Holalkere; and 377 ha in Molkalmuru taluks.

Last year, the government had announced Rs. 1,800 a quintal as support price for the crop in which Rs. 1,500 was paid by the Union government and the remaining by the State government. But, the growers refused to sell the crop as they expected more support price.

This year, however, the Union government has announced a support price of Rs. 1,650 a quintal and the State government has decided to pay Rs. 450. The government has taken steps to open procurement centres at the Agriculture Produce Marketing Committee yard in Chitradurga taluk, Chikjajur in Holalkere and Hosaurga. They will function till March 31 this year.

These centres would purchase 50 quintals of millets from a person and it is mandatory to bring documents of farm land while selling millets. In order to avoid exploitation by middlemen, the authorities have made arrangements for online payment of bills.

The farmers will receive the amount through their bank accounts within a week after selling the crop.

Ganganna, a farmer from Hosadurga taluk, said that the farmers in the region had taken up cultivation of millets after they faced frequent power cuts and depletion in the groundwater table.

It requires Rs. 21,000 an acre to cultivate the crop.

Minimum support price announced by the govt. is

Rs. 2,100 a quintal

Procurement centres opened at three places

Payment will be made through banks

Woman entrepreneur to be honoured

The Kerala State Poultry Development Corporation Limited will honour a woman entrepreneur from Balaramapuram for reaping profits with the 'Kepeco integration scheme.'

M.S. Beena, a resident of Uchakkada near Balaramapuram, had received 7,938 chicks for rearing as part of the scheme launched by Kepco in 2006 to encourage poultry farming. Without any investment, she earned Rs.1.62 lakh by rearing the chicks for 45 days.

Under the scheme, self help groups, farmers and individuals procure day-old chicks for free and rear them under the supervision of veterinarians. Kepco also provides free medicine and feed. When the birds attain 45 days they will be procured by Kepco by paying the farmer Rs.10 per kg.

“Her only expense was for labour charge. And that she could easily gain by selling chicken manure, which is in good demand from farmers,” according to V. Sunil Kumar, Managing Director, Kepco.

A function will be held at Uchakkada on Tuesday to honour her. Minister for Agriculture K.P. Mohanan will honour her along with other successful entrepreneurs.

Krishi Pandit award

Department of Agriculture has invited applications for Krishi Pandit award for 2015-16. Last date to apply is January 31. Application forms can be had from the department’s offices in taluks, an official release said.

Workshops on organic terrace gardening



Tamil Nadu Agricultural University Information and Training Centre in terrace gardening on January 6 at Anna Nagar.

Time: Between 9.30 a.m. and 4.30 p.m.

For details, call 044 - 2626 3484

Goli Soda and The Offshoot are conducting a workshop on organic terrace garden on January 16 at Ashvita Bistro, No. 11, Bawa Road, Alwarpet.

According to press release, registration is free.

ANGRAU convocation to be held in Rajahmundry tomorrow

In a first, the agri. varsity is organising the event in East Godavari district post-bifurcation; Telangana students to attend too

The Acharya N.G. Ranga Agriculture University (ANGARU), Hyderabad, will organise its 47th convocation at Sri Venkateswara Anam Kalakendram here on Monday (January 4) . In a first, the ANGARU is organising the event in East Godavari district, post-bifurcation.

Md. Siraj Hussain, Secretary, Ministry of Agriculture, Government of India will deliver the convocation address and give away degrees to the students of both Andhra Pradesh and Telangana.

Ph.D degrees in Agriculture would be presented 30 students, while five students will be awarded Ph. Ds in Home Science, followed by 109 students in M. Sc (Agriculture), Four students in M. Sc (bio-technology), 13 students in M.A.B.M, 10 students in M. Sc(Home Science) and seven students in M. Sc (Food science and technology). Another 29 students will be also awarded degrees *in absentia* .

In undergraduate courses, a total of 395 students including 303 in B. Sc (Agriculture), 14 in B. Sc (Commercial agriculture and management), eight students in B. Tech (Food Science), 60 in B. Tech (Agriculture Engineering) and 10 in B. Sc (Home Science) will be awarded degrees.

Another 471 students will be awarded degrees *in absentia* .

Experts seek pro-ryot measures in budget

Underlining the need for pro-farmer initiatives in the upcoming 2016-17 Union budget, farmer leaders, experts and agricultural economists came up with a set of demands, during a meeting organised by Federation of Farmers Association (FFA), here on Saturday.

The meeting was held to elicit suggestions from the beneficiaries and forward the same as proposals in the Union budget.

The participants not only demanded for a 30-40 per cent hike in allocation of funds, but also urged the Central to recognise agriculture as an industry and extend the benefits offered to other sectors for its comprehensive development.

They also sought adequate funds for increasing storage facilities to safeguard farm produces.

Besides this, the members also called upon the government for interest-free loans (including education loans), total compensation for crops destroyed in natural calamities and remedial measures for problems faced by farmers when it comes to bank loans.

Water released from Poigai dam after 5 years

Collector Sajjansingh R. Chavan released water from Poigai dam in Aralvoimozhi village in Thoivalai taluk on Saturday for irrigation after a gap of five years.

Collector showered flower petals in the dam marking the release of water for irrigation. A total of 17 cusecs would be released through the water channel for the first 10 days and 25 cusecs for the next 13 days. The released water would benefit farmers belonging to Thoivalai taluk in Kanyakumari district and Radhapuram taluk in Tirunelveli district.

Farmers cultivating crops in 242 acres in Thoivalai, Chenbagaramanpudur, Aralvoimozhi and Pazhavur villages would get water through water channels and 208.23 acres of land would get water for irrigation through eight ponds along the downstream of the dam fed by the water channel. Another 497.62 acres of land would get water through eight other irrigation system ponds fed by the Poigai river.

The tail-end farmers would be benefited with the release of water from the Poigai dam. Around 28 feet of water was available in the dam on Saturday morning, the full capacity of which was 42 feet.

Former minister N. Thalavai Sundaram, Kanyakumari MLA K.T. Pachaimal and Nagercoil MLA A. Nanjil Monoharan, Executive Engineer (WRO) of PWD S.K. Subramanian, PA to Collector

(Agriculture) M. Nizamuddin, Joint Director of Agriculture Department M. Elango were present.

Farmers share success stories; inspire youth

Farm scientists, and agriculture experts stressed the importance of adopting innovating technologies to increase the productivity of farm produce, and increase profits.

They were speaking at the 'Jai Kisan Jai Vigyan' Day celebrations held at Krishi Vigyan Kendra (KVK) at Sandhiyur, near here, recently. The event was organised jointly by the Directorate of Extension Education, Tamil Nadu Agricultural University (TNAU), and the KVK Sandhiyur.

C. Rajendran, Joint Director of Agriculture (in-charge), explained the importance of quality seed production, soil health management, farm mechanisation, integrated pest and diseases management, and post harvest technologies for improving the productivity and profitability of farmers as envisaged by Vision 2023 agriculture plan.

N. Sriram, Programme Coordinator, KVK Sandhiyur, explained importance of the day, and how farmers, scientists, and extension workers worked together and achieved significant growth in the field of agriculture.

The celebration was being organised keeping in view the immense contribution made by scientific community and extension workers for promoting use of science for the welfare of farmers, he said.

A. Ponnusamy, Vice-Chairman, Panamarathupatti Panchayat Union, explained how he implemented innovative agriculture technologies on his field with the support of scientists and extension workers.

Scientific presentation on biogas for sustainable farming by the scientists from Department of Bio-energy, TNAU, formed part of the event.

Advance models of biogas plant, latest technologies on biogas, and innovative usages of biogas were presented during the programme.

Mechanisation

The final year students from Agricultural Engineering College and Research Institute, Tiruchi, presented a complete farm mechanisation solution for paddy cultivation to solve labour problems during critical field operation.

Farm mechanisation for pre-ploughing, bund forming, plastering, driverless power tiller, paddy transplanter, motorised weeder, combined harvester, and paddy straw baler were presented as video module for the benefit of the farming community.

In the seminar that followed, progressive and innovative farmers shared their experiences.

Sugavanam of Kammalapatti, shared his experience on hi-density guava cultivation techniques, mulching practices for weed management, and watermelon success stories.

Nagaran from Navapatti, explained his successful experience in castor cultivation.

He shared his innovative marketing experiences especially on castor and maize marketing for the benefit of the fellow farmers.

Rajan from Edapaddi spoke on his experience in tenai cultivation techniques.

He explained how he achieved and harvested 800 kg of tenai minor millet from 0.75 acres by using organic and innovative agriculture technologies.

Dasrathan of Yercaud spoke on samai minor millet cultivation techniques.

The chairman of Salem Kanjamalai Millets and Pulses Producers Company Limited Madheswaran shared his experience on formation of farmers producers company, and how it is going to help the farmers in future agriculture and marketing of agriculture produces.

Rain helps paddy farmers; harvest begins in Omalur

The harvesting of short term paddy raised in hundreds of acres in Omalur block is in full swing.

The harvesting is expected to be completed before Pongal festival.

The farmers of Muthunayakkanpatti, Thindamangalam, Kottai Mariammankoil, Sellapillaikuttai, Periyeripatti villages raised paddy in about 300 acres using the water from wells, and borewells.

The farmers of Omalur block in the past used to raise paddy varieties such as IR 50, IR 20, white ponni, and zeerak samba.

With the block reeling under severe drought like conditions a few months ago, they had to totally depend on well irrigation and as such they preferred the short term kuruvai, sona, ponni, rajini, and amman varieties this season, on the advice of the agriculture department officials.

A few major tanks in villages such as Sellapillaikuttai, Periyeripatti, Kottagoundanpatti, and M. Settipatti got filled up a few months with the surplus water of the Mettur water scheme supplying potable drinking water to the residents of Salem Corporation limits. This helped in improving the ground water level and also the water levels in wells, and bore wells.

The farmers underwent some anxious moments after completing transplantation, due to drought like condition.

However, their hopes of a successful crop revived with various parts of the district experiencing widespread rainfall in November.

The harvesting initially commenced in Muthunayakkanpatti village a few days ago and will be completed in the other villages too before Pongal.

Over 250 plant pathologists to attend symposium

University of Agricultural Sciences, Raichur, (UAS-R) is all set to host a national symposium of Indian Phytopathological Society (IPS), an international scientific organisation for promoting the science of pathology . The two-day event, titled as Recent Trends in Plant Pathological Research and Education, is scheduled to be held at the UAS-R campus next Tuesday and Wednesday.

Addressing a press conference here on Saturday, P.M. Salimath, Vice-Chancellor of UAS-R, informed that 15 lead lectures, 25 oral presentations and 250 poster demonstrations would be organised in the event which was expected to be attended by over 250 plant pathologists, from across the country.

“Plant diseases are causing substantial qualitative and quantitative losses both horticultural and field crops. Minor pathogens are emerging as major ones under the extreme climatic variations. Indiscriminate use of chemicals has resulted in the evolutions new races and biotypes of pathogens. In this background, the national symposium is going to be organised with a purpose of taking the stock of diversity, diagnosis and management of different diseases of field and horticultural crops and explore the possibilities to address the emerging issues,” Mr. Salimath said.

As per the information provided, S.R. Niranjana, a leading pathologist and Vice Chancellor of Gulbarga University would inaugurate the event. C.D. Mayee, former chairman of Agriculture Scientists Recruitment Board, which is part of ICAR, will deliver the keynote address.

UAS-R Vice-Chancellor endorses report on Bt cotton crop loss

Farmers’ groups, team of experts criticise varsity team’s findings



P.M. Salimath, Vice-Chancellor of University of Agricultural Sciences, Raichur, addressing mediapersons in Raichur on Saturday.— PHOTO: SANTOSH SAGAR

Amidst criticisms by farmers’ organisations and experts of a report by a team from the University of Agricultural Sciences, Raichur (UAS-R), on Bt cotton destruction in Pink Bollworm pest attack in Raichur district, P.M. Salimath, varsity Vice-Chancellor, endorsed the report and said that it was objective and favoured affected farmers.

He was responding to queries on the issue at a press conference in Raichur on Saturday.

“Upon a request by the Joint Director, Department of Agriculture, Raichur, our team visited 14 villages in Raichur district. It found 70-80 per cent destruction in nine villages and around 50 per cent destruction in

the remaining five. We have submitted a report, which stated that the crop was destroyed by Pink Bollworm despite farmers having taken all precautions and followed recommended cultivation methods. The point naturally goes in favour of farmers and supports them in their claim for compensation from seed companies,” he said.

A team from University of Agricultural Sciences, Dharwad, and experts from UAS-R will revisit the cotton fields shortly and bring out a comprehensive report.

Mr. Salimath also said that the technology could not be rejected without proper investigation and research.

“Obsolete technologies need new touch to remain relevant. Farmers have reaped rich profits from Bt cotton all these years. Now Pink Bollworm has posed a new challenge. We need to develop the Bt technology to address the newly cropped up issues of rejecting the technology itself once and for all,” he said.

He denied the allegations that university scientists joined hands with Bt cotton seed companies.

“No scientist or university can join hands with corporate companies to mislead and betray poor farmers. All our efforts are farmer-centric and development-driven,” he said.

Mr. Salimath said that he had proposed to form a coordination committee of all agricultural and horticultural universities in the State which could address the common agrarian issues with a proper coordination.

“Agriculture universities need to work with proper coordination. The crops and cropping patterns in North Karnataka, including Hyderabad Karnataka, are similar and the issues are also similar,” he added.

Tips to improve cane productivity

An awareness programme on use of distillery effluent in sugarcane fields to step up soil health was held under the joint auspices of the Kothari Sugars and the Tamil Nadu Agriculture University’s Agricultural Engineering College at Kumulur near here on Tuesday.

The programme, titled as ‘Impact of post-methanated distillery effluent on sugar cane crop yield’, was aimed at sensitising sugarcane farmers to

the need for using the distillery waste in their fields to bring down the cultivation cost, particularly the expenses on fertiliser, said K. Ramasamy, Dean of the college.

Inaugurating the programme which formed part of the 'Field Day' celebrated on the occasion, he said that the application of treated distillery waste would go a long way in reducing the pH level. The distillery waste was ideally suitable for alkaline and salt-affected soil.

The productivity of sugarcane would increase through the distillery waste. He underlined the importance of conducting soil test by the sugarcane farmers.

A. Sagunthalai, a faculty member and T. Sherene Jenitta Rajammal, Assistant Professor, said that a series of research programmes had been conducted in and around Kumulur. The application of distillery effluent was being conducted in coordination with the college.

S.Pushparaj, Assistant General Manager of Kothari Sugars, and Anna Arasu, its Assistant Deputy Head, explained the chemical action in soil by the treated distillery.

Progressive farmer shows the way

She tastes success by raising capsicum in five acres in upland village



Home Minister N. Chinna Rajappa interacting with model farmer Challa Ramadevi at her capsicum garden at Valu Timmapuram in East Godavari district on Sunday.—Photo: Special Arrangement

Challa Ramadevi, progressive farmer from Valutimmapuram village of Peddapuram mandal in East Godavari district, has shown the way to her colleagues on how to make cultivation more profitable. A horticulture farmer by practice Ramadevi tried her hand in capsicum cultivation a

year ago and tasting the fruits of success now. Of her total extent of five acres of cultivable land that is more suitable for orchards in the upland village, she sowed capsicum, a vegetable which is being used in most of the households but not being cultivated by the local farmers.

“We have allocated an extent of 27 cents for the nursery, which is very crucial for the capsicum crop. Our first nursery was grown in June, 2015 and the transplantation was done in the entire five acres after 40 days that was in August,” recalled Ms. Ramadevi on Sunday, when Home Minister N. Chinna Rajappa visited her field along with officials and local elected representatives.

She invested Rs. 11.5 lakh to install stretch and drip systems in the field and spent another Rs. 30,000 towards the input costs. The Department of Horticulture has extended a 50 per cent subsidy on the equipment cost.

“The outcome was six tonnes and the earning was Rs. 2.40 lakh. After deducting the input costs, the profit from the first crop was Rs. 2.10 lakh,” Ms. Ramadevi said in a pride. In the second crop season, one and a half tonnes of capsicum was sent to the market from this field so far and the harvest would be continued throughout the winter season.

“In the local market, the price for capsicum is anything between Rs. 45,000 and Rs. 50,000 per tonne. Since there is no need of investing high amounts on labour, we can get back the investment in three years,” the farmer said. Ms. Ramadevi is not keeping the land idle between two crops of capsicum, but making better use of it by cultivating ladyfinger, another vegetable that had a huge demand in the market.

Awareness classes

Congratulating the lady for her initiative, Mr. Rajappa asked the officials of the Horticulture Department to conduct awareness classes to the farmers to, who were complaining about absence of remunerative price to sago, the tuber being cultivated in the upland mandals.

“Let them switch over to vegetable and fruit cultivation, so that there would be no dearth of market and remunerative price as well,” he said. Horticulture officer T.V. Siril and others accompanied the Minister.

Farmers in Erode district happy

Smiles are back on the faces of turmeric cultivators in the district, during the harvest season.

They are now getting the price that they had been asking for the produce all these years: about Rs. 10,000 per quintal.

The crop has been cultivated on 5,750 hectares this year, about 2,000 hectares lesser when compared to the previous year when the procurement price was in the range of Rs. 6,000 to Rs. 7,000 per quintal.

Owing to the adequacy of water, the productivity has also increased.

Farmers, who had switched over to other crops considering the procurement price as low, are ruing their decision now.

Unlike in the recent years, this time around, there has been a coincidence of a surge in productivity and remunerative price. There is a huge possibility for a quantum jump in turmeric cultivation during the current year.

“We expect the cultivation area to rise to 10,000 hectares this year,” said Prabu, Deputy Director of Horticulture, said.

Banking on the significant rise in groundwater level due to heavy rainfall from the monsoons, farmers have already started procuring seeds for planting during May.

Turmeric farmers looking at bumper harvest



The colour of the turmeric plants have turned yellow at many places, indicating that the crop is almost ready for harvesting.— FILE PHOTO

small and marginal farmers of the district expect a bumper harvest of turmeric crop thanks to the favourable climate and good northeast monsoon.

Unlike Erode, Coimbatore, and Salem districts, where turmeric is a major crop, it is cultivated in a few pockets of the district, including Uppiliyapuram, Thathaiyengarpettai, and Thuraiyur blocks. About 350 hectares have been brought under turmeric cultivation this season that starts in May and ends in February. Of 350 hectares, Uppiliyapuram alone accounts for more than 60 per cent of turmeric cultivation in the district.

It is mainly due to the presence of alluvial soil in the region. The proximity of farmers to Salem and Erode, which are known for turmeric cultivation, is also cited as the reason for Uppiliyapuram farmers preferring turmeric cultivation. The colour of the plants, which had looked green till a few weeks ago, has been changing to yellow. The leaves are also drying, which is a sign of crop maturity.

With the prevailing climate suitable for the last stage of the crop, farmers expect good yield.

“We did not get expected rain during the last monsoon. However, it was not poor. We have managed to save the crop by harvesting rainwater. I expect good yield this year,” said M. Rajendran of Sopanapuram near Uppiliyapuram, who has raised turmeric on his two acres of land.

P. Ravichandran, Assistant Director of Horticulture, said it was expected that the after-process yield would be around 1.5 tonnes per acre. It was termed as good as far as the cultivable condition in Tiruchi district.

He said the area coverage, which had reached around 1,000 hectares when price of turmeric was hovering around Rs. 17,000 a quintal a few years, had come down to 350 hectares this season mainly due to price instability. However, it was likely to go up in the next season as the price of turmeric had stabilised.

We did not get expected rain during the last monsoon. I expect good yield this year.

M. Rajendran of Sopanapuram

Rains hit areca nut production at foothills of Kolli Hills



A man plucking betel nut from a tree in Karavalli at the foothills of Kolli Hills in Namakkal district.— PHOTO: S.P. SARAVANAN

Though recent rains had cheered up farmers across the district, farmers at the foothills of Kolli Hills were dejected by the drop in production of areca nut (betel nut).

The crop is cultivated on about 900 acres in Vendangi, Karavalli and other areas at the foothills as favourable weather prevails over the year and also due to availability of water. The trees blossom in May and later the flowers grow as nuts and finally the harvest is done in December and January. Due to heavy rains in November and December, the nuts had withered leading to drop in production. The usual yield from a tree is about 40 to 50 kg in December and January.

This time, the yield had dropped to less than 35 kg, said T. Sakthivel, a farmer of Vendangi. He said that due to increase in production in other States, the price of areca nut had also reduced this year. “Usually, it is sold for Rs. 200 per kg. But now it is around Rs. 150 to 170 per kg,” he added.

Farmers also said that fruit rot disease resulted in drop in production this year. The areca nuts that dropped prematurely from the trees cannot be sold in the market and hence it was a loss to us, said another farmer. Many said that after harvesting the nut, they would dry it, boil and roast it and sell in markets in Karnataka as they get reasonable price there.

They urged the government to fix reasonable price for the products so that they could continue with the farming. After planting saplings, nut bearing starts after five years and the number of harvests is usually thrice a year. Nuts from the tree are cultivated for about 23 years and later the trees are replaced with new saplings.

Banana growers on slippery ground



With the festival season round the corner, there has been marginal rise in the prices of banana at the Tiruchi wholesale market which has witnessed a glut in the last few weeks.— PHOTO: A. MURALITHARAN

After a steep fall over the past couple of months, banana prices have gradually started looking up in the Tiruchi market, a major wholesale market for the fruit in the State, according to traders.

However, growers say that increase has been only marginal and they were incurring heavy losses. Prices of the fruit slipped because of a glut in the market and poor demand since November. The rain and flood triggered a fall in demand. At the same time, farmers had to harvest the fruit as they started ripening. They had to dump the produce at whatever prices.

“Banana growers in the district have suffered heavy losses. In many villages, the price of poovan variety banana has fallen to as low as Rs. 20 to Rs. 30 a bunch, an unprecedented fall. The price of nendran variety too has fallen sharply. Farmers had invested about Rs.2 lakh an acre to raise the crop,” said A. Nagarajan, State president of the Farmers wing of the Tamil Mannila Congress. Traders at the Vazhakkai Mandi at the Gandhi Market, one of the largest auctioning centres in the State where a large number of farmers sell their produce every day, reported that the prices of

different varieties of banana has been gradually appreciating at the wholesale market over the past few days.

They concede that the prices of the fruit had slumped almost to an all-time low over the past couple of months. “It was true that there has been a slump in prices. But things are looking up over the past few days ahead of the Pongal festival. We expect the price to go up as demand picks up and this should bring some good tidings for farmers,” said K.P. Palanivel, president, Plantain Traders Association of Gandhi Market.

Tiruchi and Karur are major banana growing districts. About 15,000 to 25,000 bunches of different varieties of banana are brought to the market and sold at the open auction.

The volume of trade goes up during festival season. Major temples such as Sri Dhandayuthapaniswamy Temple in Palani and Guruvayur Sri Krishnan temple make their bulk purchases here for panchamirtham and other requirements.

On Saturday, good quality Poovan variety was being sold between Rs. 150 to Rs. 350 a bunch and rasthali between Rs. 100 to Rs. 400, karpooravali between Rs. 50 and Rs. 400 and Monthan between Rs. 100 and Rs. 350 a bunch, according to Mr. Palanivel. However, medium and poor quality bunches were being sold in the range of Rs. 30 to Rs. 50 a bunch.

However, Mr. Nagarajan said appreciation in the prices of banana varieties has been only marginal. “The increase is just about 10 per cent over the prices that had prevailed over the past two months. Good quality normally fetches about Rs. 400 a bunch. Farmers are still selling the produce at a loss,” he said.

Mr. Nagarajan said the government should promote industries producing value added products from banana in the Tiruchi region to protect farmers from price fluctuation. He demanded the setting up of a cold storage at the Gandhi Market for the benefit of farmers.

In many villages, the price of poovan variety banana has fallen to as

low as Rs. 20 to Rs. 30 a bunch, an unprecedented fall

NOT A ROSY PICTURE

The picture has been gloomy for the growers since last November

Poovan variety prices had collapsed to Rs. 30 to Rs. 40 a bunch a few weeks ago

In the last auction, the price of good quality poovan touched Rs. 350 to Rs. 450 a bunch

Farmers say they had invested about Rs 2 lakh per acre and are suffering heavy losses

Glut in the market and poor demand because of excess rain blamed for this

Tank silt put in fields improves output



The study by a team of researchers from the University of Michigan, U.S, pointed out applying silt in farms helped improve output by 500 per cent.

A team of researchers from the University of Michigan (UoM), U.S, have found that application of silt removed from irrigation tanks in their farm fields has improved production of crops cultivated by farmers even up to 500 per cent.

It was one of the preliminary findings of a pilot study conducted by a multidisciplinary team of 16 students from eight schools of UoM in two villages of Adilabad and Karimnagar districts as part of their research work.

Funded under Dow Sustainability Fellows Program, they are working on “De-silting Irrigation Tanks: The Sustainability of Decentralised Resource Distribution and Big Data + Small Farmers: Leveraging Data Science to inform best farming practices in India in line with Mission Kakatiya” from April last.

“We are yet to quantify the high-resolution survey data collected across a timeline with 200 data points with pre and post silt-application references completely. We are working on models for best farming practices so that their usage is scaled up,” Adithya Dahagama, a student of School of Natural Resources & Environment of UoM, who was on a visit to the study area earlier this week told *The Hindu* .

Impact of silt application

The study found that the variation in production of cotton, for example, was very high from 2 quintals per acre to 15 quintals in the fields, where the silt was not applied and the ones where the fertile soil was applied. However, it was also found that 97 per cent of the decision-making by farmers with regard to selection of crops, seed, application of fertilisers and pesticides was disconnected to the soil condition and expert advice. “Except for stray instances, most of the farmers have never got any soil test done”, Mr. Adithya said.

Initially, the UoM students conducted a preliminary survey on 1,100 farmers in 40 villages of Adilabad, Karimnagar and Warangal districts early last year. Later, they took up the pilot study in Chandaram of Laxettipet mandal of Adilabad district and Golivada village of Ramagundam mandal in Karimnagar.

“Our discussions with some policy makers of Telangana have helped us identify newer ways to integrate ongoing government programmes like Mission Kakatiya, Grama Jyothi, and Digital India to address challenges faced by farmers today,” Kavya Vayyasi, another student involved in the study said. The objective of the study was to enhance site-specific decision-making of small farmers as it has the potential to save up to 30 per cent in input costs and improve yields by 40 per cent, Mr. Adithya noted.

TAMIL NADU

Implementing an announcement made in the Tamil Nadu Assembly in 2014 for farmers’ welfare, Chief Minister J. Jayalalithaa launched the ‘Amma Seeds’ scheme which is aimed at providing quality seeds, the state government said last week. An official release said the motive of the scheme was to encourage farmers to use certified seeds.

Poor price a concern



A sugarcane field in Salem.— File Photo: P. Goutham

Despite good yield, thanks to the widespread rainfall received by the district in the last two months, the poor price fixed by traders has proved a matter of concern for the sugarcane farmers of Omalur block.

A large number of farmers have raised sugarcane on hundreds of acres in Omalur and the surrounding villages of Kottai Mariammankoil; Muthunayakkanpatti; Palakuttapatti; Semmankoodal; Kadaiyampatti and Kanjayakkanpatti. The good condition of the standing crop brought much joy to the cane farmers.

The cane crop season commenced in the Tamil month of *Panguni* and the full sized canes are ready by the months of *Margazhi* and *Thai*, well ahead of the Pongal festival. The farmers incur an expenditure of Rs. 1.5 lakh for raising the cane on one acre.

The high expenditure is due to the increased wages they have to pay to the farm workers. With the Mahatma Gandhi National Rural Employment Guarantee Scheme attracting a large number of workforce, the farmers have to pay higher wages to the available workers.

The joy of farmers due to good condition of standing crop is short lived, as the price fixed by the traders is not up to their expectations and very much on the lower side.

A section of the farmers of these villages complains that the local traders have fixed a meagre price of Rs. 5 per cane this season. The same cane was procured by traders at Rs. 15 during the last season.

This has caused much concern to the farmers, as they have to somehow dispose off the cane by Pongal festival.

The farmers have demanded the government to come to the rescue of the small cane farmers. They have also demanded the government to include farm activities in the implementation of MNREGS so that the farmers can get cheap labour at their doorstep.

The cane farmers are sitting with their fingers crossed as the next few days will prove crucial for marketing the cane.

High demand for Salem coconuts

A large number of coconuts of Thammampatti and surrounding villages are being sent regularly to Gujarat, Maharashtra and Telangana States.

The Thammampatti and the surrounding villages of Gangavalli; Vazhapadi; Veeraganur; Sentharpatti; Odiyathur; Naduvalur; Koodamalai; Malliakkarai; Keeripatti; Kondayampalli; Thedavur have been major coconut production centres of the western region. A large number of farmers have raised coconut groves in these villages.

Coconuts are regularly sent to other States from here at least thrice a week.

A majority of the farmers have leased out the coconut trees for plucking coconuts. They employ workers on daily wages for de-husking of the fruits using de-huskers. The workers are paid Rs. 40 for de-husking 100 fruits.

The workers from Vazhapadi and Belur are engaged in the de-husking work for many years. Later, the fruits are separated at the mandis and transported to various States in lorries.

Periasamy and Govindarajan, workers involved in de-husking for more than a decade, said that each worker can de-husk about 1,200 fruits a day for which they earn Rs. 500.

Turmeric marketing complex to open today

The Rs. 19-crore state-of-art turmeric marketing complex established on a 10-acre at Karumandisellipalayam is all set to start functioning from Monday.

Such a market has been the demand of turmeric cultivators for long, since the produce could be stocked in the godowns which has an overall capacity to store 15,500 tonnes. The complex has a transaction shed, office building, bank building, separate rest houses for traders and farmers, drying yard, weigh bridge, canteen, and huge parking space for vehicles.

The auction of turmeric will first be conducted at the new facility and then at Semmampalayam, which was hitherto managed by traders and would henceforth be administered by Regulated Market Committee.

About 200 bags have already arrived at the complex, secretary of Erode Regulated Marketing Committee R.N. Muruganatham said.

Farmers oppose locations for proposed CETPs

The farming community in the district has opposed the choice of locations identified by the Tamil Nadu Pollution Control Board for establishing Common Effluent Treatment Plants (CETP), with an apprehension that the proposed facilities in the midst of cultivable areas will pollute ground water.

The TNPCB has reportedly purchased land at Murungathozhuvu village for the CETP in Chennimalai, at a location close to the dyeing cluster in Bhavani town, and in an area situated between Kalingarayan canal and Cauvery River for the industries in Erode.

As for Perundurai town, the CETP, in all likelihood, would be located inside the SIPCOT Industrial Estate, it is learnt.

The CETPs are meant to be constructed by the Tamil Nadu Water Investment Corporation under the Rs. 700 crore scheme of the State Government for addressing pollution in Erode, Tirupur, Salem and Namakkal districts where small units have been struggling to comply with the Zero Liquid Discharge norms.

The fear of the farmers is that, even after the Reverse Osmosis process, the effluent with concentrated chemicals would find its way into the ground, apprehension TNPCB officials explain is unfounded.

The locations were finalised considering the natural gradient and gravity, and the ease in conveying effluent water.

A suitable location within the reach of clusters, and closer to water bodies due to their low-level location, has been the criteria.

The system of water treatment through ZLD mechanism is such that not a drop will get into the ground, official sources said.

In Chennimalai town, the industrial units are scattered and, hence, there is no scope for laying pipelines to the CETP.

The combined usage of water is three lakh litres per day, of which 10 per cent would be conveyed to the CETP sites in tanker lorries, the sources said.

According to TNPCB sources, public opposition to sewage treatment plants and CETPs is not unusual. In the absence of CETPs, industries operating on a small scale would face closure, the sources said.

In fact, industrial units would not be able to make illegal discharges once the CETPs become operational since the effluent flow would be metered, and monitored online, the sources said.

In any case, the farmers would be involved in consultations before the CETP project takes shape, the district administration has reportedly assured.

Training in organic agro input production

The ICAR-Krishi Vigyan Kendra Ernakulam, attached to the Central Marine Fisheries Research Institute (CMFRI), is conducting an entrepreneurship development programme for Jeeva Kudumbasree micro enterprises at Airapuram on organic agro input production and marketing.

The programme, being sponsored by the Kudumbasree Mission, Ernakulam, is meant to impart training to ten women from Mazhuvannur panchayat to undertake production and marketing of organic agro inputs, says a press release here.

The long-term aim of the enterprise development programme is to form a model for empowering similar Kudumbasree groups in the State to produce or source and supply quality agro inputs required for organic farming in their respective regions with technology backup from the KVK, Ernakulam. This will simultaneously ensure livelihood opportunities for groups of women while ensuring quality inputs for organic farmers. The objective of KVK is to ensure availability of quality

agro inputs like manures, bio-pesticides, seeds, planting materials at reasonable price available at different locations in the district, the press release adds.

Mapping New York's trees

A web developer plots location of trees from 168 different species

The 600,000 trees that line the streets of New York City have been mapped, revealing a diverse array of greenery in the midst of one of the world's largest cities.

Jill Hubley, a web developer who lives in the New York borough of Brooklyn, used official city data to create a visualization of where each of the 600,000 trees, which cover 168 different species, are situated.

The map shows some striking differences in the types of trees across New York, with silver maples popular in Queens but very sparse in Manhattan.

Pin oaks are widely distributed, although the London plane tree, a hybrid of the native sycamore and the oriental plane tree, is the greatest in abundance across the five boroughs. Other species mapped include poplar, English oak and ginkgo. Hubley said she was inspired after seeing a hand-drawn map of Central Park's trees but wanted to do something for the internet.

“Initially I was only going to do Brooklyn but I decided it would appeal to more people if I did the entire city, so I brought in all of the data,” she said. “In the end, that was absolutely the right decision, because there are striking, distinct patterns within each of the boroughs. Urban forests are vital to cities, and New York is doing a great job with tree stewardship.”

In November, New York City's mayor, Bill de Blasio, symbolically posed with a shovel to celebrate the planting of the one millionth tree in the Million Trees NYC initiative, which has exceeded its planting target two years ahead of schedule. The city has yet to allow people to interact directly with its trees, however, unlike the Australian city of Melbourne, which has instructed officials to pretend to be trees in response to emails sent by the public to individual trees they were fond of .

Hubley has created a number of visualizations of New York's environment, including a map of toxic spills in Brooklyn and the location of New York state dams.

“I’m interested in the relationship between green spaces and urban infrastructure, biodiversity within urban centers, and a host of other concerns,” she said. “I hope that my visualizations will serve as vehicles for discovery, or as a means to magnify a particular issue.”(c) Guardian News & Media Ltd

Mangrove forest on chopping block again

Ayiramthengu was restored by the government eight years ago



The Ayiramthengu mangrove forests at Alapad panchayat in Kollam district, restored by the government eight years ago, is now being destroyed by a government agency for another scheme.

Environment activist V.K. Madhusoodanan said that in the past couple of weeks at least 10 acres of the restored mangroves had been razed using earthmovers to lay a road and construct a sluice across a canal to link the estuarine island of Ayiramthengu with three such islands in the adjacent Alappuzha district for a tourism project. The work is being carried out by the Agency for Development of Aquaculture Kerala (ADAK).

Pearl spot hatchery

The government had handed over the entire island to ADAK for raising a pearl spot (karimeen) hatchery. An ADAK authority who did not wish to be quoted said that the road was being laid under a plan approved by the government.

The irony is that the 50-acre Ayiramthengu mangrove had served as the biggest pearl spot natural hatchery before its destruction, Mr. Madhusoodanan said.

After the tsunami in December 2004, the importance of mangrove forests as an effective natural barrier to sea surges gained recognition. But the paradox at Ayiramthengu is that it is the restored mangroves of an area devastated by the tsunami which is being wantonly destroyed.

Illicit breweries

Soon after the ban on arrack in 1996, the mangrove forest became a safe haven for illicit breweries.

The trees were felled and used as firewood for breweries. In 1998 the government announced a restoration programme. A Fisheries Department team under the K.M. Lethi, the then Deputy Director (Fisheries), camped at Ayiramthengu and planted nearly 10,000 red mangrove saplings.

Red mangroves were selected because Ayiramthengu used to be the State's biggest natural habitat of this mangrove species.

By 2008, Ayiramthengu regained its past glory in 25 acres. But two years later destruction restarted when the State Fisheries Resource Management Society began dredging the area to create ponds for a fish hatchery under an aquaculture programme. In 2013, the island was handed over to ADAK.

India seeks to lead developing nations at WTO

In the pipeline are visits by Mr.Modi to African countries starting with Kenya likely next month

Starting with a proposed visit by Prime Minister Narendra Modi to Africa in February, India plans to play a leadership role at the World Trade Organisation (WTO) negotiations to boost the trade prospects of the developing and poor nations. To forge strong alliances on the "development agenda" of the WTO's ongoing Doha Round of talks, the government will, in the coming months, also hold a series of "strategy workshops" of stakeholders, inter-ministerial and Centre-state discussions in addition to summits with African countries and other developing country groups.

Significantly, in this regard, in the pipeline are visits by Mr.Modi to African countries starting with Kenya likely next month, high-level sources in the government told *The Hindu*.

“We will soon set up occasions like the recently held Africa Summit in India. The Prime Minister does an outstanding job of flagging the common interests of the developing world during such occasions,” a senior official said, adding that a “collaborative approach” with African countries would be central to India’s future strategy at the WTO.

The move comes in the backdrop of widespread criticism by the Opposition and civil society groups that the NDA government had failed to protect the interests of India and the developing world at the Ministerial Conference (WTO’s highest decision making body) held in Nairobi last month for negotiations on an agreement to lower global trade barriers.

Strategy workshops

“The Commerce Ministry [the nodal body at the Centre for WTO-level negotiations] will, in a few days, hold the first of the ‘strategy workshops’ to take inputs from the Permanent Mission of India to WTO, Ministries at the Central government level and other stakeholders to take a deep dive on the outstanding issues [of the ongoing Doha Development Round talks of the WTO] and come up with an initial game plan,” a senior official said.

Biswajit Dhar, a trade expert and professor at Jawaharlal Nehru University, said: “Over the years, the alliance that India had with leading developing countries such as South Africa and Brazil on WTO issues weakened to the point that at the Nairobi conference one could not see any coordination between these countries. Therefore, now at this critical juncture, it is left to India to do the agenda setting along with these and other countries.”

The Nairobi Ministerial Declaration reaffirmed the pre-eminence of the WTO as the global forum for trade rules setting and governance, but noted that there was a lack of consensus on the part of the WTO’s 162-member countries on the way to take forward the Doha Development Agenda (DDA).

The Ministerial Declaration only said: “We recognise that many members reaffirm the DDA, and the Declarations and Decisions adopted at Doha and at the Ministerial Conferences held since then, and reaffirm their full commitment to conclude the DDA on that basis.”

Biraj Patnaik, Principal Adviser to the Commissioners of the Supreme Court on the Right to Food, said India should adopt a three-pronged strategy.

This includes ensuring that the Trade Facilitation Agreement (TFA), aiming to ease customs rules and expedite trade flows, does not come into effect till all the Doha Round issues are sorted out.

The TFA, which is being pushed mostly by rich countries, will come into effect only when two-thirds of the WTO's members or 108 of the 162 member countries, ratify it. As of now, 63 countries have done so. India is yet to ratify the TFA.

Official sources said that India will shortly hold meetings with a group of 47 nations including China and Kenya that had issued a statement on the opening day of the Nairobi Ministerial Conference saying that only a comprehensive conclusion of the DDA, with economically meaningful and balanced outcomes, will provide impetus to global trade liberalisation and facilitation and also, significantly, correct the development deficit in the rules resulting from the previous rounds of multilateral trade negotiations.



From plate to plough: A new budget in the new year

The farmers are under severe stress, with profitability in farming falling alarmingly. FY17 budget must boldly address the agriculture crisis.



What are the key issues in the farm sector and what can the FM and his team do in a year's time? In brief, farmers are under severe stress, with profitability in farming falling alarmingly.

Finance Minister Arun Jaitley and his team are beginning pre-budget consultations with various stakeholders for the upcoming FY17 budget. Generally, the consultations start with agriculture, slated for January 4.

It's good practice and courteous to invite farm experts and farmers' representatives. Often, one finds these meetings full of anguish on the farmers' side, while sometimes very sanguine suggestions also come from farm experts. But no more than 5 per cent of these suggestions are ever reflected in the budget. Would this year be very different?

What are the key issues in the farm sector and what can the FM and his team do in a year's time? In brief, farmers are under severe stress, with profitability in farming falling alarmingly. The BJP manifesto had promised to raise profitability levels in agriculture to 50 per cent above costs, when these were hovering around 20-30 per cent in most crops during the UPA's terminal years. But the reality now is that profitability has plummeted to less than 5 per cent in major crops, and is negative for others. The high hopes that farmers had of the NDA government are fast dissipating. Consequences of this should be clear from the panchayat election results in Gujarat, where the BJP lost almost 75 per cent of the seats.

The writing is already on the wall, and if ignored, the next casualty may be Punjab, where farmers are already up in arms. The FM should visit Amritsar, the constituency he unsuccessfully contested from in 2014, and talk to basmati farmers. He will know what's happening on the ground. It's not just basmati or common rice. You talk to cotton farmers from Punjab to Gujarat, and they are in serious trouble. So are sugarcane farmers in UP and Maharashtra. It's all-pervading gloom in agriculture today. Back-to-back droughts and tumbling commodity prices (except perhaps tur dal) have already broken farmers' backs. It's time the Centre paid heed to farming policies.

The prime minister is now exhorting the bureaucracy to make transformational changes in policies and programmes, since he realises piecemeal changes will not take his government far. But transformational changes were already suggested last year by the Shanta Kumar panel for food and fertiliser subsidies and restructuring the Food Corporation of India's role. The key recommendations were to move towards cash transfers and outsource much of the storage functions to the private sector. If these suggestions were implemented in earnest, one could have plugged massive leakages in the PDS, saved large resources that could have been ploughed back into irrigation, raised productivity and moved towards better drought-proofing. Although the PM and FM have received positive responses to DBTs, and have tasted success in cooking gas, it requires a bolder effort and courage to convert food and fertiliser subsidies to DBTs. That's been missing so far.

Food management remains in a shambles, with high levels of inefficiency and leakage. The FCI is demoralised due to mounting arrears that have crossed Rs 70,000 crore. The fertiliser industry is now almost sick, with no major fresh investments. Production is stagnating and imports rising. The reason, again, is high and unpaid bills, crossing Rs 40,000 crore. The budgetary allocation for these two subsidies hovers around Rs 2,00,000 crore. Another Rs 1,10,000 crore remains under the carpet as unpaid bills. The FM should be transparent in bringing this total of Rs 3,10,000 crore into the budget as explicit subsidies. He should then see where the fiscal deficit actually stands.

The PM and FM also talk of financial inclusion as the central policy pillar of their transformational strategy. The Jan Dhan Yojana was great in opening accounts. But if half of those accounts don't show any transactions, that platform remains underutilised. It's worth leafing through the latest report on financial inclusion by the RBI, which also talks of moving various farm subsidies towards DBT and going for more science-based crop insurance systems.

The existing crop insurance system system isn't serving peasants well. It needs to be recast. Crop damages need to be assessed in a few days with the help of automatic weather stations (AWS), satellites, drones and low-earth orbits (LEOs). Compensation should be sent directly to farmers' accounts, with digitised farm records locked-in with Jan Dhan accounts, Aadhaar and mobile numbers. The FM and his team know all this. I had the privilege of making a special presentation to them on this. I also hear of favourable responses, but progress so far has been very slow. If these were normal times for the peasantry, it wouldn't have mattered much. But farmers are under severe stress. Delay not only means heavy political damage but also bad implementation of good policies.

Last, water is going to be increasingly critical for drought-proofing Indian agriculture. All sources of irrigation will have to be tapped. It may be worth noting that the time taken to complete major and medium irrigation schemes funded through the Rural Infrastructure Development Fund (RIDF, under Nabard) is much less than for those funded by the state. A transformational strategy could be doubling the allocation under the RIDF. Agri-market reform is another transformational strategy that the government needs to work on for unifying markets.

There's enough consultation material with the FM to revive agriculture. What is needed is the courage to implement and to go beyond the courtesy of the consultative process.

‘Maharashtra govt to set up new integrated textile park in Beed’

Fadnavis was speaking at the book launch ceremony of Swabhimani Shetkari Sanghatana (SSS) leader Sadabhau Khot.



Chief Minister Devendra Fadnavis during the release of SSS leader Sadabhau Khot’s book, in Pune on Sunday. (Express Photo)

IN order to improve the economic condition of farmers and usher in the processing of agricultural produce, the state government will soon be setting up its second integrate textile park in Beed. Chief Minister Devendra Fadnavis Sunday said the government will make special efforts to increase the usage of indigenous seeds in the state.

Fadnavis was speaking at the book launch ceremony of Swabhimani Shetkari Sanghatana (SSS) leader Sadabhau Khot.

“The state government has already announced the setting up of an Integrated Textile Park in Amravati and recently Raymond has declared its intention to do the same. It will help in generating more employment opportunities,” said Fadnavis.

Fadnavis said that although the state produces 31 per cent of total cotton produced in the country, only 25 per cent is processed and treated. Processing of agricultural produce, he said, allows more economic strength to the farmers.

Fadnavis while talking about the present drought situation in the state said that through the state government’s flagship program of Jal Yukta Shivar, 24 TMC of water has been conserved in the state in the last one year. “This costed only Rs 1,400 crore. During the previous government’s regime, such conservation would have costed almost double,” he said.

Making a strong case for decentralised water resources, Fadnavis said that big dams have only managed to give water to a handful of people.

“The present crisis in front of the government is due to wrong policies and that has to be corrected,” he said.

Another scheme the state government has started to help the distressed agricultural community is the streamlining of the distribution of agricultural pumps. He said that the state government has decided to clear all pending applications. “In the last five years, there was a huge backlog of pending applications of agricultural pumps. We have decided to start a system in which no one has to wait for allocation of such pumps any more,” he said.

Although Rs 7-8 crore is distributed as crop loans every year, Fadnavis said that not even 25 per cent is spent to improve the infrastructure of the farms. “Crop loans are for short terms but some portion of it should be used to improve the infrastructure of the farms. That will help in improving the level of agricultural practices in the country,” he said.

Vegetable prices almost double as water scarcity becomes severe

Among vegetables, prices of cluster beans, green chillies, bottle gourd, bitter melon, cabbage, brinjal, ivy gourd (tondli), etc. have seen a steady rise



A quintal of bottle gourd had cost Rs 2,000 on December 30, 2014, but went up to Rs 2,500 on December 30, 2015.

Prices of vegetables in Pune over the last few weeks have witnessed a steady rise with some being almost doubled compared to last year.

Further increase in prices is expected as water scarcity takes a toll on cultivation.

After tomato, it's the turn of coriander, fenugreek (methi), radish and lime to pinch the pockets with prices almost doubling. Records show that on December 30, 2014, the average price of a bundle of coriander at Pune APMC was Rs 3, while on December 30, 2015, it had shot up to Rs 12 per bundle.

Similarly, prices of lime, raddish and fenugreek have witnessed manifold increase both in retail and wholesale. Price of a bundle of fenugreek on December 30, 2015, was Rs 5, which has shot up to Rs 10 in wholesale.

Lime, which was priced at Rs 350 per gunny bag last year has shot up to Rs 700 this year.

Among vegetables, prices of cluster beans, green chillies, bottle gourd, bitter gourd, cabbage, brinjal, ivy gourd (tondli), etc. have seen a steady rise. Green chillies which had cost Rs 3,000 per quintal on December 30, 2014, had climbed up to Rs 4,000 per quintal on December 30, 2015.

A quintal of bottle gourd had cost Rs 2,000 on December 30, 2014, but went up to Rs 2,500 on December 30, 2015. Price of brinjal has also shot up from Rs 3,500 per quintal to Rs 5,000 during the same period. Price of ivy gourd, a staple Maharastrian diet, has climbed from Rs 3,000 per quintal to Rs 4,000. Tomato continues to remain dear, with prices showing no correction.

Vilas Bhujbal, a trader from Pune Maketyard, said that the price rise is due to a dip in arrival of vegetables. He said that this is due to the sudden cold spell which has destroyed much of the crop in the area.

“Sudden dip in temperature takes a toll on growth of vegetables leading to dip in arrival. Although the temperature has improved over the last few days, much of the vegetables have been destroyed. Prices would remain high for the whole of January,” Bhujbal said.

Pune, Nashik, Beed, Solapur, Ahmednagar and Nashik are the main cultivators of vegetables. While final estimates of the present rabi season, which would determine production in the upcoming months, is yet to come, the first estimates show a considerable dip in areas of cultivation across the districts. For example, in the last rabi season, beans were cultivated in 100 hectares in Ahmednagar, while this year, it was 75.

Shriram Gadve, President, Vegetable Growers Association of India, said that on an average, the area of cultivation has gone down by 10-15 per cent. “Drought has taken a severe toll across the area and want of water has reduced the area of cultivation,” he said, adding that chances of price correction in the near future are slim.

El Nino not yet done, could cause more damage in coming months



A powerful El Niño is blamed for what could be India's worst drought in three decades. (Representative photo)

Expect Santa Claus to show up in Bermuda shorts this year, said a weatherman in a pre-Christmas update in Maine, the northeastern-most state in the US, which should have been quite cold then but wasn't. In neighbouring Vermont, an all-time high December temperature of 20 degrees Celsius was recorded.

The fingerprints of El Niño — a disruption of the ocean-atmosphere system in the tropical Pacific — were seen all over the world last year. It led to heat waves caused by delayed monsoon in India. Here, rainfall in August was 22.54% below normal, making it the driest month of the monsoon season.

It also triggered rare winter floods that have killed at least 28 people in Missouri and Illinois since last weekend, drops in Pacific island sea levels, droughts in South Africa and a record-breaking hurricane season in the eastern tropical Pacific.

Around the world, production of rice, wheat, coffee and other crops was hit by droughts and floods, leading to higher prices.

The latest satellite imagery released by Nasa suggests that over the next few months, the current El Niño conditions could even rival the intensity of 1997-98 — which saw deadly heat waves in Australia, devastating forest fires in Indonesia and flooding in Peru and California, killing 23,000 people worldwide.

The National Oceanic and Atmospheric Administration's Climate Prediction Center has dubbed the 2015-2016 system "one of the top three strongest El Niños since 1950". Environment and Climate Change

Canada's assessment is also along those lines, and says this season's "event is predicted to be one of the strongest in recent decades".

The initial impact may have been felt already — forget about a White Christmas, cities from New York to Toronto celebrated the holidays with relatively mild weather.

Delhi, too, witnessed a warmer-than-usual December heading into cozy January days. But meteorologists are cautious about linking this to El Niño, which means 'little boy' in Spanish. "In terms of meteorology, Delhi is a small portion. A direct impact is not something we really see here. Also, a direct connection between a weak winter and El Niño has not been demonstrated so far," said a senior Met official.

As of early 2016, El Niño's impact on Britain and the rest of Europe was also not clear, though some evidence suggests it may have played a part in the extreme rainfall in north England and Scotland. Across Europe, 2015 was one of the warmest on record, but experts believe it is difficult to predict exactly how each El Niño event will unfold.

According to aid agencies, the weather cycle on record may increase the threat of hunger and disease for millions. Regions, including the Caribbean, Central and South America, will be hit in the next six months.

"There is a greater than 90% chance that El Niño will continue through Northern Hemisphere winter 2015-16, and around an 85% chance it will last till early spring 2016," a Climate Prediction Centre bulletin released in September said.

Nepal, where earthquakes in April and May claimed over 9,000 lives, could also bear the brunt of the weather system. "It could result in less rainfall this monsoon and there could be drought-like conditions in some parts," said Dr Rishi Ram Sharma, director general of Nepal's hydrology and meteorology department. Nepal has already witnessed a rise in the El Niño index in the last two months of 2015 and if that pattern continues till June-July (when the monsoon starts), there would be deficit rainfall.

How 'golden spice' saffron helps keep liver cancer at bay



Researchers at United Arab Emirates (UAE) University have found that a biomolecule found in saffron is good for your liver. (Shutterstock)

One has known that saffron is used as a taste enhancer, famous for its flavour. Now, new research shows that the humble saffron can protect people who are at the risk of developing liver cancer. Researchers have found that a biomolecule found in the golden spice is good for your liver. A saffron-based ‘crocin’ can protect people against a deadly form of liver cancer, they have added.

New study led by professor Amr Amin from the United Arab Emirates (UAE) University has unravelled mechanisms by which saffron-based ‘crocin’ protects against hepatocellular carcinoma (HCC).

“The aims of this study were to examine the chemopreventive action of saffron’s main biomolecule -- crocin -- against chemically-induced liver cancer in rats and to explore the mechanisms by which crocin employs its anti-tumour effects,” the authors noted.

The team investigated the anti-cancer effect of crocin on an experimental carcinogenesis model of liver cancer by studying the anti-oxidant and anti-inflammatory activities of crocin in vivo. To further support the results, in vitro analysis was also carried out.

“We assessed the effects of crocin on HepG2 cells viability by treating them with various concentrations of crocin. In addition, effects of crocin on cell cycle distribution of HepG2 cells were investigated,” the team elaborated.

The findings revealed the anti-proliferative and pro-apoptotic properties of crocin when administrated in induced-HCC model. Crocin exhibited anti-inflammatory properties where NF-kB, among other inflammatory markers, was inhibited.



A saffron-based ‘crocin’ can protect people against a deadly form of liver cancer, researchers at UAE University have said. (Shutterstock)

Using murine model, human liver cancer cells, gene expression profiling and computer-assisted modeling analyses, Amin’s study identified ‘NF-kB’ as a regulatory hub and a candidate therapeutic drug target for liver cancer.

“Taken together, our findings introduce crocin as a candidate chemopreventive agent against HCC,” the authors concluded. The study, funded by Al-Jalila Foundation and Terry Fox Foundation, was published in the journal *Recent Patents on Anticancer Drug Discovery*.

THE HINDU BusinessLine

Wheat output may drop for second year straight due to warm winter



NEW DELHI, JAN 3:

Wheat production in India, the world’s second-largest producer, is likely to fall below 90 million tonnes for the second year in a row in 2015-16 due to an unusually dry and warm winter.

Wheat output had declined to 88.95 mt in 2014-15 due to a poor monsoon and unseasonal rains in February-March, as against a record 95.85 mt achieved in the previous year.

Sowing of wheat, a major rabi (winter) crop, begins in October and is harvested from April.

“Wheat sowing is lagging behind as there is higher temperature stress because of an unusually dry and warm winter in the wake of two consecutive drought years. This will impact wheat production by at least 5 per cent,” a senior Agriculture Ministry official told PTI.

The area sown under wheat was trailing by 2 million hectare at 27.14 million hectare till December of the ongoing rabi season, as against 29.31 million hectare in the year-ago period, according to ministry data.

The 2 million hectare lag in wheat area means production would be down by around 6 mt considering an average yield of 2.9 tonnes per hectare achieved in the drought year 2014-15, the official added.

Stating that wheat crop is in a “critical stage”, the Indian Council of Agricultural Research (ICAR) Deputy Director-General (Crop Science) J S Sandhu said: “High temperature stress particularly reduces the yield of wheat. We hope rains in the next 15-20 days can help recover some loss in yields.”

High temperature leads to early maturing, thus reducing crop yields. Rain this month would bring down temperatures and help in achieving good production, he added.

Currently, the temperature is above normal in wheat growing areas. There is more moisture stress in central India especially Madhya Pradesh, Gujarat and parts of Rajasthan.

There is temperature stress because of a 14 per cent deficit in the June-September south-west monsoon and 23 per cent deficit in the October-December North-East monsoon, according to the India Meteorological Department.

(This article was published on January 3, 2016)

US gives India time till June to remove import curbs on poultry



Local industry examines other practices of US that could be the basis of fresh restrictions

NEW DELHI, JANUARY 1:

India has got time till June to remove import restrictions on poultry from the US as Washington has agreed to give it a year to implement the World Trade Organisation's (WTO) ruling against the ban.

Local poultry farmers, who fear a sharp dip in business once cheap chicken legs from the US hit the Indian market, have time till June 16, 2016 to brace for the imports, a Commerce Ministry official told *BusinessLine*.

1- year timeframe

“We were hoping that the US would allow us 18 months for implementing the WTO ruling on poultry ban, which is the maximum permitted, but after hard negotiations it agreed to give one year,” the official said.

The US argued that it does not take much time for a department to take out the relevant notification and if India wanted, it could make the relevant changes immediately. In November 2014, a dispute settlement panel of the WTO ruled in favour of the US on its complaint that import restrictions imposed by New Delhi on chicken legs and other poultry items, ostensibly to check spread of avian influenza, did not conform to relevant international standards.

India contested the ruling, but the WTO Appellate Body upheld the panel's findings in January 2015. Following this the dispute settlement body adopted its recommendations and rulings in June 2015.

“We hope the Indian poultry industry has enough time to establish its other allegations that unhealthy practices such as freezing chicken legs for a long time, which gave the US industry a winning edge, flouted international health regulations,” the official said.

Less pricing

Chicken legs from the US could be available in the Indian market at less than half the price at which it is available domestically as there is not much demand for the item in the country, the Indian industry has calculated.

According to various estimates made by poultry associations representing India's four-lakh-plus poultry farmers, local players could lose between 15 per cent and 40 per cent of their domestic markets once US products start flowing into the market.

Local industry produces an estimated 3.5 million tonnes of chicken every month.

Poultry associations are looking at all practices of the US industry, such as feeding its poultry genetically modified food and keeping the meat frozen for long periods of time, that may not be approved by international quality organisations.

(This article was published on January 1, 2016)

Edible oils steady in subdued trade

MUMBAI, JANUARY 1:

Activities in edible oils market remained thin and prices were steady on Friday as stockists stayed away in absence of supporting factors. On the BCE, prices were unchanged as local refineries kept their rates steady. Vikram global commodities quoted ₹ 498 for Malaysian super palmolein. Ruchi traded palmolein at ₹ 465, soyabean refined oil ₹ 621 and sunflower refined oil ₹ 740. Allana was quoting palmolein for ₹ 471,soya refined ₹ 625 and sunflower oil ₹ 740. In Saurashtra-Rajkot, groundnut oil *Telia* tin was up at ₹ 1,530 (1,520) and loose (10 kg) at ₹ 975 (970).

BCE spot rates (₹ /10 kg): groundnut oil 975 (975), soya ref. 621 (621), sunflower exp. ref. 670 (670), sunflower ref. 740 (740), rapeseed ref. oil 930 (905), rapeseed exp. ref. 900 (875), cottonseed ref. 580 (580) and palmolein 457 (456).

(This article was published on January 1, 2016)

Wheat acreage down 7% on poor soil moisture

Rabi Acreage*		
	This year	Last year
Wheat	271.46	293.16
Pulses	128.24	131.33
Coarse Cereals	55.19	50.97
Oilseeds	71.47	76.11
Rice	14.77	16.05
Total	541.12	567.63

*in lakh ha as on Jan 1

Source: Agriculture Ministry

NEW DELHI, JANUARY 1:

The total area sown under rabi crops as on January 1 stood at 541.12 lakh hectares (lh) – lower than 567.63 lh last year, according to preliminary reports received from the States.

Among the crops that failed to pick up pace are wheat, which was sown on 271.46 lh (293.16 lh) and pulses which were sown on 128.24 lh (131.33 lh), an Agriculture Ministry release said.

Oilseeds, too, were sown on a lower area of 71.47 lh against last year’s 76.11 lh, while rice was transplanted on 14.77 lh (16.05 lh). However, the area under coarse cereals rose to 55.19 lh (50.97 lh).

Soil health cards

Meanwhile, highlighting his Ministry’s achievements here at a press conference, Agriculture Minister Radha Mohan Singh said productivity and production can only be improved if land quality is improved. He said the Centre had so far provided five crore Soil Health Cards to farmers in 2015-16, for which ₹ 109 crore had been released till December 2015.

₹ 568 crore have been sanctioned for providing Soil Health Cards to all the farmers,” he said, adding that in 2014-15 and 2015-16, the Centre had sanctioned 79 and 101 Soil Health Laboratories, against only 43 such labs in the past four years.

To alleviate the impact of drought, Singh said 100 district irrigation plans should be ready by March 31, 2016 under the Prime Minister Krishi Sinchai Yojana. “Under water management, there is 40 per cent increase in investment in just one year in comparison to last year,” he added.

Singh said over 20 States had expressed interest in linking their mandis with the National Agriculture Market Scheme, for which a portal would be launched by March 2016. “200 mandis will be connected by

September 2016 another 200 by March 2017, and the remaining 187 mandis by March 2018,” he said, adding that till December 31, proposals of 214 mandis from eight States had been sanctioned at a cost of ₹ 111.16 crore.

(This article was published on January 1, 2016)

Good demand for CTC varieties at Kochi tea auctions

High-priced teas trended lower

KOCHI, JAN 1:

High-priced teas were irregular and lower by ₹ 3 to ₹ 5 at Kochi auctions, even as CTC varieties witnessed a good demand in dust category.

Major blenders' including Kerala State Civil Supplies Corporation was active on good liquoring varieties. In sale no 53, the quantity on offer in CTC grades was 10,24,500 kg, which was slightly low compared to last week.

The auctioneers Forbes, Ewart & Figgis said that there was active participation from upcountry buyers, while exporters confined to medium and plainer varieties.

With improved arrivals in orthodox grades, the quantity on offer was 15,500 kg. However, the market barely remained steady and a small quantity of orthodox dust was absorbed by exporters.

In Cochin CTC dust quotation, good varieties quoted ₹ 105-107, medium grades fetched ₹ 90-125 while plain stood at ₹ 72-87.

There was a good demand in leaf category with 175,5000 kg was on offer in orthodox grades. A good demand spurred the market of both select best Nilgiri broken and whole leaf firming to dearer. Others were irregular and lower following quality.

In CTC leaf, all varieties were dearer by ₹ 2 to ₹ 3 and sometimes more. The quantity on offer was 64,000 kg.

In dust varieties, Pasuparai FD quoted the best prices of ₹ 162 followed by both Kallayar SFD and Surianalle SRD at ₹ 159 each. Chamraj FOP-sup green tea came to the top in leaf grades quoting ₹ 331 followed by Sutton GFOP at ₹ 271.

(This article was published on January 1, 2016)

Pulses go off the boil

INDORE, JANUARY 1:

Pulses and pulse seeds continued to trade low in Indore mandis on slack buying from millers and stockists with masur (bold) being quoted at ₹ 5,700 a quintal, while masur (Madhya Pradesh) ruled at ₹ 5,400.

Masur dal (medium) was at ₹ 6,000-6,100, while masur dal (bold) ruled at ₹ 6,200-6,300. Urad (bold) was at ₹ 10,200-500, while urad (medium) ruled at ₹ 9,300-9,500. Urad dal (medium) went for ₹ 11,500-900, urad dal (bold) ₹ 12,100-600, while urad (mongar) ruled at ₹ 12,300-500.

Moong and its dal ruled stable with moong (bold) at ₹ 7,500, while moong (medium) was ₹ 7,000. Moong dal (medium) traded at ₹ 8,000-8,200, moong dal (bold) ₹ 8,400-8,700, while moong mongar ruled at ₹ 8,200-8,400.

(This article was published on January 1, 2016)

Cotton stays flat on limited demand

RAJKOT, JANUARY 1:

Cotton price remained unchanged as demand was limited from exporters and domestic mills. *Kapas* or raw cotton also traded flat on moderate ginning demand. Gujarat Sankar-6 cotton was traded at ₹ 33,900-34,200 per candy of 356 kg.

About 40,000 bales of 170 kg each arrived in Gujarat and 1.25 lakh bales arrived in India. *Kapas* went for ₹ 940-960 per 20 kg and gin delivery *kapas* fetched ₹ 960-980 in Gujarat. Cottonseed stood at ₹ 475-490.

(This article was published on January 1, 2016)

Sugar production up 6.5% last year: ISMA



NEW DELHI, JAN 4:

About 470 sugar mills in operation had produced 79.85 lakh tonnes of sugar till December 31, 2015, 6.5 per cent higher than last season's production, the Indian Sugar Mills Association (ISMA) said here on Monday.

In 2014-15 sugar season, 490 sugar mills had produced 74.95 lakh tonnes till December 31.

So far, the mills have contracted for export of around 8 lakh tonnes of sugar and have physically despatched around 3 lakh tonnes, ISMA said, adding that since there was no parity on export of raw sugar due to high cost of cane in India and depressed global prices, Indian mills produced "almost negligible quantum of raw sugar" and are mainly exporting white sugar.

In Maharashtra, 169 sugar mills are in operation and had produced 33.75 lakh tonnes till December, 31, 2015, against 172 sugar mills producing 32.64 lakh tonnes in the same period last year. From the beginning of this season till December 31, the average sugar recovery in the State stands at 10.36 per cent against 10.44 per cent last year.

The 113 mills in Uttar Pradesh had crushed 183.21 lakh tonnes of cane and produced 18.32 lakh tonnes, with an average recovery of 10 per cent. In 2014-15, 118 sugar mills in UP had crushed around 186 lakh tonnes to produce 16.95 lakh tonnes of sugar with an average recovery of 9.2 per cent.

In Karnataka, 62 sugar mills in operation had produced 15.50 lakh tonnes against 12.43 lakh tonnes produced by 63 sugar mills in 2014-15 sugar season till December 31, 2014.

In Gujarat, 19 mills had produced 4.40 lakh tonnes of the sweetener against 18 mills producing 3.88 lakh tonnes in 2014-15.

In Andhra Pradesh and Telangana, 25 sugar mills had produced 2.15 lakh tonnes, 0.41 lakh tonne less than the sugar produced by 29 mills in 2014-15, while in Tamil Nadu, 15 mills are in operation, compared with 19 mills last year, but the production is almost similar at 0.80 lakh tonnes, the sugar producer's body said.

Sugar production in Bihar, Haryana, Punjab, Uttarakhand and Madhya Pradesh is almost at the same level as last year, with the Bihar mills producing 1.40 lakh tonnes, Haryana 1 lakh tonne, Punjab 0.95 lakh tonne, Uttarakhand 0.70 lakh tonne and Madhya Pradesh 0.75 lakh tonne.

ISMA said while domestic ex-mill prices had improved in the past fortnight by Rs. 1-to 2 a kilo, the all-India average for the three months (October to November 2015), stood at around Rs. 27-28/kilo, which is still Rs. 4-5/kilo lower than the all-India average cost of production.

(This article was published on January 4, 2016)

Business Standard

Breaking down barriers

Important moves towards a single agricultural market

The nearly decade-old proposal to create a national agriculture market (NAM) finally seems to be making some headway. It would change how farm commodities are traded in the country. Based on online transactions through a national e-platform, this transparent mode of marketing would help tame agricultural inflation by cutting down on intermediaries and narrowing the price gap between producing (read surplus) and consuming (deficit) areas. Over half a dozen states have already agreed to knock down trade barriers as the first step towards formation of the unified farm market, and many more are expected to come on board soon. A time-bound programme announced by the agriculture ministry for developing NAM envisages linking 250 mandis by September 2016 and all 585 mandis by 2018. The Centre has already approved funds for states like Gujarat, Maharashtra, Telangana, Jharkhand and Chhattisgarh, to cover the cost of the needed software and its customisation in the participating markets. Karnataka is already running a unified market by interconnecting 51 of 155 major market-

yards and over 350 sub-yards through an e-platform. This model is to be upscaled to the national level to create the NAM, with the Small Farmers' Agribusiness Consortium (SFAC) acting as the nodal agency.

If run properly - and this is a formidable "if" given the tendency to fall back on socialist-era recipes to control prices through trade restrictions - the new system can allow farmers to sell their produce wherever they get a good deal. Buyers could source their supplies from wherever they like. There will be a single licence valid for all states and single-point payment of market fees. With an all-India jurisdiction, the electronic platform can facilitate better price discovery. More importantly, it can spur private investment in agricultural marketing, as has happened in Karnataka, and is vitally needed elsewhere as well.

The idea of a unified farm market has been floating around since the early 2000s. It was included in the National Policy for Farmers brought out in 2007. However, since agricultural marketing is a state subject under the Constitution, the states' role is critical in this venture's success. This is especially so because the agricultural produce marketing committees (APMCs), which operate regulated mandis, have considerable political clout and do not want to forego their hold on marketing of farm produce. The unified e-market has been conceptualised in a way that may not attract much hostility from APMCs. Their interests have not been entirely disregarded. According to the SFAC, a transaction on the e-platform would be deemed to have taken place through the mandi where the seller would normally have brought his produce. Thus, the APMC concerned would continue to earn the mandi fee even if the transaction does not happen in its market yard. With this critical issue having been addressed by the government, it can be hoped that states would have no hesitation to join the NAM for the benefit of both farmers and consumers.

Expect big rural push in Budget

Allocation boost likely for schemes on agriculture, irrigation, rural roads



In a move to boost rural consumption and alleviate distress in the hinterland, the government is likely to give an allocation push in 2016 to programmes on irrigation, rural roads, [soil health cards](#) and agriculture.

According to officials, the Union Budget for 2016-17 could see a significant increase in allocation to marquee programmes like the Pradhan Mantri Krishi Sinchai Yojana, Rashtriya Krishi Vikas Yojana, Pradhan Mantri Gram Sadak Yojana, and the one to provide soil health cards to the country's 140 million farmer families over three years. The increase is likely to be over the allocations in 2015-16 (according to the revised estimates).

The idea, it appears, is not only providing a one-time solution to the rural problem but boosting the overall rural economy, which has been reeling from the impact of consecutive droughts, through increased public spending.

Meanwhile, agricultural experts are meeting [finance ministry](#) officials on Monday to give their inputs on the Budget.

"The agriculture sector has seen a slowdown over the past three years. To revive it, a 'Make In India' -like stimulus is needed," S Mahendra Dev, director, Indira Gandhi Institute of Development Research, told Business Standard.

Though the [14th finance commission](#) had given a higher devolution to states for spending on agriculture and [irrigation](#) infrastructure, it was still too early for them to pick up the reins, Dev said. "The Centre needs to continue spending more on agriculture because states will take time coming to terms with the finance commission windfall."

The Union Budget for 2016-17 plans to do just that. Allocation to the

Pradhan Mantri Gram Sadak Yojana could be maintained at the Rs 15,100 crore sanctioned for 2015-16 or enhanced with a definite objective of connecting over 178,000 rural habitations with all-weather roads by March 2019 - three years ahead of scheduled completion - say officials.

State governments, along with the Union [rural development](#) ministry, are already preparing a time-bound action plan for this.

The ambitious soil health card scheme could be merged into the [Rashtriya Krishi Vikas Yojana](#)(RKVY), and the latter's allocation could be enhanced. Of the Rs 568 crore the Centre had allocated to the soil health card scheme in the 2015-16 Budget, Rs 109 crore had been released to states as of December 31, 2015. A merger will mean that states will have more flexibility to spend the funds allocated to them and ensure better focus on implementation.

Compared with Rs 4,500 crore in Budget 2015-16, the total central allocation to RKVY could increase to Rs 10,000 crore in the Budget for 2016-17. The 2015-16 allocation, however, was before the implementation of the Shivraj Singh panel recommendations for revamping centrally sponsored schemes.

"The soil health card scheme will be ramped up, as the prime minister has already laid out plans for it. It will be merged into Krishi Vikas Yojana, one of the government's flagship schemes," said a senior official.

BHARAT TO TAKE CENTRE STAGE

- Soil health card scheme could be merged into the Rashtriya Krishi Vikas Yojana (RKVY), which would increase flexibility in spending
- Compared with Rs 4,500 crore in Budget 2015-16, the total central allocation to RKVY could increase to Rs 10,000 crore in the 2016-17 Budget
- Allocation to the Pradhan Mantri Gram Sadak Yojana could be maintained at Rs 15,100 crore sanctioned for 2015-16
- Funds for the [Pradhan Mantri Krishi Sinchai Yojana](#) could be doubled
- The Bharatiya Krishi Bima Yojana, a [crop insurance scheme](#) with premiums as low as two per cent of the sum insured, could cost the govt Rs 2,500 crore to Rs 3,000 crore

SET FOR A BOOST

Budgetary allocations for 2015-16

- **Rashtriya Krishi Vikas Yojana:** Rs 4,500 cr
- **Soil Health Card Scheme:** Rs 560 cr
- **Pradhan Mantri Gram Sadak Yojana:** Rs 15,100 cr
- **Pradhan Mantri Krishi Sinchai Yojana:** Rs 5,300 cr

The Centre would ensure, said the official, that states contributed their share of funds to the programmes and that their own portion was substantially higher as well.

An ambitious crop insurance scheme with premiums as low as two per cent of the sum insured for the farmers is expected to be announced next week. The scheme, Bharatiya Krishi Bima Yojana, is estimated to cost the government Rs 2,500 crore to Rs 3,000 crore a year. For food, officials said, the focus would be on faster completion of digitisation and modernisation of the operations of the public distribution system to curb leakages.

The Pradhan Mantri Krishi Sinchai Yojana (PMKSY) could also see a significant increase in allocation in the 2016-17 Budget, thanks to Prime Minister Narendra Modi's personal commitment to improving irrigation infrastructure in the country.

In the 2015-16 Budget, Rs 5,300 crore had been sanctioned to the programme. The Centre plans to spend Rs 50,000 crore under PMKSY in the five years starting 2015-16. To meet the target, it will have to allocate about Rs 12,000 crore in each of the next four financial years.

PMKSY combines the three existing central government schemes - the water resources ministry's Accelerated Irrigation Benefit Programme, the rural development ministry's Integrated Watershed Management Programme, and the on-farm water management component of the agriculture department's National Mission on Sustainable Agriculture.

Officials said the programme's focus in 2016-17 would be on rebuilding and improving the existing infrastructure, such as canals and bunds, before building new ones.

The [NITI Aayog](#) will be the nodal body for coordination between the

Centre and states on major irrigation initiatives, and among different central ministries.

"The government should focus more on the agriculture and rural sector, as its condition is not good; it should not be ignored any further," said T Haque, a former chairman of the Commission for Agriculture Costs and Prices.



THE TIMES OF INDIA

Give industry status to agriculture: Pilot

JAIPUR: State Congress chief Sachin Pilot on Sunday demanded the state government to accord agriculture the status of 'industry'. Pilot also refuted any claims of differences between the senior leaders and him.

Expressing concern over the rising number of farmer deaths due to crop loss, Pilot said that farmers should be able to avail facilities and benefits of an industry.

"Rajasthan should show the way to the entire country by declaring "agriculture" as an industry and provide benefits and tax concessions to poor farmers of the state," said Pilot.

He claimed that nearly 60 farmers committed suicide because of failed crops due to adverse weather conditions yet Rajasthan government failed to prepare contingency plan.

"What was offered to farmers post their losses was meagre and delayed assistance. There seems to be no permanent solution, neither the government has attempted to make any such plans," added Pilot.

Refuting allegations made by the senior BJP leader for ignoring former CM Ashok Gehlot from the party affairs, Pilot took potshots on him.

"I am getting support, affection, and closeness of every senior leader and there is no such question of ignoring anyone." said Pilot.

He added, "Actually, Rathore is not satisfied with his ministry as he wanted a better portfolio hence, he is trying to please chief minister Raje so he could get a good ministry in future."

Vid still has huge agricultural pump backlog: VSDB

Nagpur: Vidarbha Statutory Development Board (VSDB) in its report for 2014-15 has pointed out that the region is still lagging behind regarding agricultural pump connections sanctioned by MSEDCL. The company has however, countered the report pointing out that Vidarbha farmers had sought maximum number of connections and once these were provided the imbalance will be remedied to a large extent.

As per the VSDB report only one district in Vidarbha — Bhandara — had more pumps than the state average. The total backlog of remaining 10 districts is a whopping 4.42 lakh. The total backlog of the state is 7.08 lakh and Vidarbha's figure is over 62% of the state.

The report claims that as on March 31, 2015, the number of agricultural pump connections was higher than average in many districts and the farmers of these districts had applied for maximum number of new connections. Most of such districts are from Western Maharashtra.

On the other hand, Chandrapur and Gadchiroli districts had not been able to remove the backlog as determined by Indicators and Backlog Committee way back in 1996. The backlog of the two districts was 15,916 pumps as on March 31, 2015. However, the number of pending connections in the two districts on the same date was 7,809.

An MSEDCL official said that the lower number of applications was not the company's fault. "Many farmers do not seek pump connections because of lack of water. If the irrigation potential increases then more farmers will seek connections," he said.

"The situation is changing. For the first time in history of the state maximum number of paid pendency in March 2015 as well as October 2015 was from Vidarbha. The March 2015 pendency figure for the state is 1.73 lakh of which about 66,000 applications were from Vidarbha. The state figure for October 2015 was 2.02 lakh of which just over 77,000 are from Vidarbha," he said.

As per the data given by the official, over 51,000 applications for new connections were received in 2015-16 till October end. Of this just over 20,000 were from Vidarbha while over 16,000 were from Western Maharashtra. Some 21,800 new connections were released in Vidarbha against around 17,000 in Pune division. The state figure for new connections is around 59,000.

Energy minister Chandrashekhar Bawankule has promised to clear the entire pendency of agricultural pump connections by end of June 2016. After that a farmer will get a new connection within a month.