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THEMOMHINDU

Haryana to set up centres for farm products

The Centre is preparing a scheme for commercialisation of centres of excellence for fruits and vegetables to improve economic condition of farmers, Union Agriculture Minister Radha Mohan Singh said here on Wednesday.

The scheme will be launched by Prime Minister Narendra Modi on April 14, he said.

The minister further said 585 mandis across the country will be connected through e—trading.

He was speaking after inaugurating the Centre for Sub—tropical Fruits at Ladwa in Kurukshetra district.

Haryana Chief Minister Manohar Lal Khattar was also present on the occasion.

Mr Singh said an agreement for establishing a centre of excellence for fruits was signed between India and Israel under the Indo-Israel Agriculture Project in May, 2006.

Haryana had taken a major step for advancement in the horticultural sector by establishing the Centre of Excellence at Ladwa with the assistance of experts from Israel, he said.

He said under the Indo—Israel work scheme, approval has been given for 26 centres of excellence under the Mission for Integrated Development of Horticulture.

Speaking on the occasion, Mr Khattar said the Centre for Sub—tropical Fruits had been set up over an area of 28 acres at a cost of Rs 9.10 crore. He said work would be carried out to connect farmers through modern technology for trial of new varieties, dense plantation and renovation of old orchards.

Mr Khattar said under the Indo—Israel Agriculture Project, farmers would be provided planting material of high—quality fruit plants and information regarding methods of management, apart from training and on—site demonstrations.

Agriculture and Rural Development Minister of Israel Uri Ariel said with the help of centres of excellence, good crops could be produced using new and efficient techniques from Israel.

Haryana Agriculture Minister O P Dhankar said agricultural and water management techniques of Israel were being adopted all over the world.

He said in Haryana, work is being carried out on 13 such projects, including Centre of Excellence for Vegetables in Gharaunda, Centre of Excellence for Fruits in Mangiana, Sirsa and Government Livestock Farm, Hisar. -- PTI

Workshop on Centre's crop insurance scheme



Gaining knowledge:Officials being shown a board with information on the Pradhan Mantri Fasal Bima Yojana installed at the Krishi Vigyan Kendra in Bidar.

A workshop to spread awareness about the Pradhan Mantri Fasal Bima Yojana, a crop insurance scheme, was organised at the Krishi Vigyan Kendra here on Tuesday. Resource persons spoke to farmers and explained the salient features of the scheme and about how it was different from the

old insurance schemes. They said the scheme was mandatory for farmers who take farm loans, while for others it is an option.

Bhagwant Khuba, MP, after inaugurating the workshop, urged farmers to avail the benefits of the scheme. He said the previous schemes managed to reach only about one-fifth of the country's farmers, and added that Prime Minister Narendra Modi wants each farmer to be covered under this scheme.

He said the benefits of the scheme include a uniform premium of 2 per cent for kharif crops, 1.5 per cent for rabi crops, and 5 per cent for horticulture, cash and annual crops.

The rest of the premium will be paid by the Union government, even if it is beyond 90 per cent.

Those who take Kisan Credit Cards are automatically covered as their contributions are deducted while releasing the loan. Other farmers will have to buy insurance by paying premium separately. He said this would provide farmers with much-needed security, with the rising prices of inputs such as seed and fertiliser, and the unstable prices of farm produce.

He said the previous UPA government had restricted the amount of premium to be paid by the government, which resulted in lower compensations. With this cap removed, farmers stand to be fully compensated for their losses, he said.

As the MP reeled off on the NDA government's "pro-farmer measures", Veerabhushan Nandagave, a Karnataka Rajya Raitha Sangha leader, objected and said the so-called benefits were not reaching the beneficiaries. Countering the MP's claim that the MUDRA bank scheme had benefited over 10,000 persons in Bidar district alone, he said bankers were not even entertaining applications by many deserving youths.

However, the MP responded by saying the scheme was one of the most successful schemes of the government, and called the criticism "not valid".

The University of Agriculture Sciences, Raichur, the Department of Agriculture and Reliance Foundation had jointly organised the workshop.

'Efforts on to push Krishi Bhagya scheme'

Efforts are being made to popularise the Krishi Bhagya scheme through which farmers can get more yield with lesser input costs, according to Krishna Byre Gowda, Minister of State for Agriculture.

Mr. Byre Gowda, who was on a day's visit to Koppal district to have an interaction with the beneficiaries of the scheme, was talking to presspersons at Ningappa Myadneri's farm in Hatti village on Wednesday.

Complimenting Mr. Myadneri, who had successfully cultivated capsicum and tomato on his half-acre land and got good yield making use of the Krishi Bhagya scheme, Mr. Byre Gowda said that more number of farmers were coming forward to make use of the scheme.

'Millet farmers too should grow in stature'

Millet farmers should also gain the stature of a sugarcane or paddy farmer since growing millets is also agriculture, former Vice-Chancellor of Andhra University K.V. Ramana said at the Jeevana Vaividhya Jaatara held here on Wednesday.

He wanted the government to encourage millet farming by giving a boost to organic farming, provide crop insurance, form producers' cooperative societies, warehousing facility, introduce millets in the PDS and establish millet bazaars on the line of Rytu Bazaars in the urban areas to meet the demand for millets which is growing fast. The bio-diversity festival was organised by AU's Dr. Durgabai Deshmukh Centre for Women's Studies and NGOs Sabala and Sarada Valley Development Society.

The AU Dr. Ambedkar Assembly hall was full with millet farmers, an overwhelming member of them women, from Visakhapatnam and Vizianagaram districts, indicating that millet farming is popular with small and marginal farmers of the area in spite of several difficulties it is facing. Fifteen women farmers of the two districtswere honoured with Ugadi Jeeva Vaividhya Puraskarams.

Gujarat food security programme to benefit 3.82 crore people: CM

After a delay of almost three years, the Gujarat government on Wednesday implemented the national food security programme 'Maa Annapurna Yojna', which will cover 3.82 crore people who will receive good quality wheat and rice at Rs. 2 and Rs. 3 respectively in the State.

Launching the programme, Chief Minister Anandiben Patel said "almost 75% of the State's population is covered with this subsidised food scheme."

"When Congress was in power in the State, only 1.88 crore people were given foodgrain at subsidised rates prior to 1995. Now, under the Maa Annapurna Yojna, 3.82 crore people of Gujarat will benefit. Each of them will receive rice at Rs. 3 per kg and wheat at Rs. 2 per kg," the Chief Minister said, claiming credit for the scheme, which was originally brought in by the previous UPA regime in 2013.

"Out of 35 kg provided at subsidised rates during the Congress rule, only 16 kg of foodgrain was actually given at those rates, while for the remaining 19 kg, the government used to charge Rs. 7.70. Now, Prime Minister [Narendra] Modi removed this condition and announced provision of the entire 35 kg of foodgrain at subsidised rate," Ms. Patel said.

The Chief Minister said if any family felt it deserved to be included in the scheme, they could get their criteria verified from the zonal offices concerned and apply for the seal of the mamlatdar/taluka development officer in villages and of the chief officer in towns in their ration card. The list of priority families could be obtained at fair price shops, village and taluka panchayat offices as well as on the government website.

More families

"The government is open to add more families if they are found deserving," the Chief Minister said, stressing that the government was committed to providing subsidised foodgrain in all scarcity-hit areas in the State.

Ms. Patel also lauded the efforts of the NDA government in effectively implementing the food security programme across the country.

"Thanks to the efforts of [PM] Modi ji, many poor citizens, including widows and farmers who lost their crops, are now covered under the

scheme. They no longer have to worry about feeding their families. No other PM has ever thought about the welfare of the poor as much as this PM has," she said.

Congress hits back

Meanwhile, Ms. Patel's statements drew strong criticism from the Congress party, which said "the Chief Minister tried to claim credit for something that was done by the Congress government."

"Instead of taking credit for launching the food programme, why is the Chief Minister not telling what caused a delay of three years in implementing the central act?," asked Congress leader Nishit Vyas.

Tamarind offering 'sweet' returns to farmers in Kolar district



At present, tamarind is fetching a good price for cultivators.— PHOTO: VISHWA KUNDAPURA

Tamarind cultivators in the 'mango barn' of Karnataka are now a happier lot owing to a bumper harvest and remunerative prices. Growers, particularly in Srinivasapur and Mulbagal taluk, are busy harvesting tamarind and are expecting good returns.

Tamarind is a must in the kitchen. For growers, it is "black gold". True to its sobriquet, it is bringing in a fortune to growers who persisted with the crop. The good harvest is being attributed to the heavy rain in November last.

It is being grown in about 30,000 hectares in Srinivasapur taluk, which equals the mango cultivating area till a few years ago.

Earlier, growers would plant tamarind trees in between mango trees. They began felling tamarind trees when prices went down. But now, the crop is fetching a good price — Rs. 25,000 to Rs. 30,000 a tonne. The growers who felled the trees a few years ago are repenting now.

The good fortune is attracting labourers from neighbouring Andhra Pradesh who either clean the pod or cultivate tamarind on leased land.

On an average, male workers get Rs. 400 a day for collecting the fruit while woman workers get between Rs. 250 and Rs. 300 for filling them in gunny bags.

Growers who felled tamarind trees anticipating low demand are repenting after seeing the price it is fetching now

— Muniraju, tamarind cultivator, Vanarashi village

Cotton sowing may dip in Punjab

As the genetically-modified cotton crop suffered extensive loss after whitefly pest damaged the crop last year, distressed farmers in Punjab are likely to sow cotton in nearly 1 lakh hectare less area this season.

However, in the neighbouring Haryana and Rajasthan, area under cotton could increase, trade body and farmers said.

"We are expecting cotton to be sown in nearly 16 lakh hectares across north Indian States in the upcoming sowing season [2016-17] as against 15.47 lakh hectares of the previous year," Rakesh Rathi, president, India Cotton Association Limited (ICAL), told *The Hindu* on Wednesday, pointing out that in Punjab, the cotton sowing could dip as farmers are likely to prefer paddy (rice) over cotton this Kharif season.

In north India – Haryana, Punjab and Rajasthan are the major cotton producing States.

In 2015-16, cotton was sown in 4.35 lakh hectares in Punjab while in Haryana its acreage was 5.86 lakh hectares. Rajasthan had an area of 5.26 lakh hectares under cotton. Cotton sowing will begin in mid-April in Punjab and Haryana.

Meanwhile, after last year's extensive loss of Bt cotton crop, the Centre and States are recommending farmers to sow traditional non-Bt varieties and indigenous cotton in areas susceptible to high infestation of whitefly.

'India heading towards medium-scale dairy farms'



Milking profits: Medium-scale dairy farms with 50 to 300 cattle will be key growth drivers in Indian dairy—File photo

Rabobank says milk procurement will become the single most critical link in the dairy supply chain in future

India's dairy farming sector is headed for significant change, according to Rabobank, a major financer of agri- and dairy-related businesses. This will be, the bank said, due to the increasing demand for high-quality milk from the consumer side, and procurers as well as processors emphasising cost competitiveness from the manufacturing end.

A sector report published by Rabobank said: "Strong growth in India's organised dairy industry, due to formalisation of perishable milk products and the growth of value-added dairy products, has placed the focus on raw milk sourcing. In the coming years, milk procurement will become the single most critical link in the dairy supply chain." The report, 'Emerging Dairy Farm Trends in India', pointed out that "Medium-scale dairy farms with 50 to 300 cattle will be the one of the key growth drivers in Indian dairy."

The report estimates that to keep pace with the strong growth in branded milk and dairy products, direct milk sourcing will gradually replace agent-based sourcing as a dominant model. This will help them secure consistent supply of superior quality raw milk.

"The share of milk procured from small and marginal farmers will decline. However, this segment will still stay relevant," Rabobank said. At present, 75-80 per cent of milk is procured from these farmers. Large dairy farms with cattle herd of over 1,000 have faced issues such as the availability of land and fodder, a paucity of professional workers, and a ban on import of cattle. Rabobank expects this segment to remain with a select few. Therefore, for new dairy entrepreneurs, medium-scale farms are the emerging trend.

"As procurement from small and marginal dairy farmers will increasingly become a challenge for milk processors, the industry will see the emergence of farmer-owned dairy farms, with herd sizes ranging from 50 to 300 cattle," Shiva Mudgil, senior dairy analyst at Rabobank's Food and Agribusiness Research and Advisory told *The Hindu*. "Industry players, including milk processors, along with nutrition, genetics and equipment service providers will start to realise this emerging trend."

'Reconstitute CACP with agricultural experts and genuine farmers'

The Karnataka State Sugarcane Growers' Association has alleged that the Commission for Agricultural Costs and Prices (CACP) has failed to get farmers a remunerative and stable price for agricultural commodities.

Farmers were suffering losses in the range of Rs. 30,000 to Rs. 45,000 an acre owing to the whimsical prices fixed for the commodities. The CACP must be annulled and a new commission comprising agricultural experts and genuine farmers should be formed, the association said.

Kurubur Shanthkumar, president of the association, said that the CACP was largely represented by IAS officers and a few persons who claimed to be farmers. These persons had no knowledge about agricultural activities and without realising the ground reality or conducting field visits, they recommended minimum support price irrationally, he said.

The input subsidy to farmers in drought areas was meagre, he said and demanded that the government give compensation for crop loss in addition to input subsidy for the next agricultural season in drought-hit areas.

The association has written to the government to reconstitute the commission. We will soon chalk out a plan to agitate in front of the residences of Karnataka MPs to pressurise the government to quash the existing commission, he added.

Commission for Agricultural Costs

and Prices is largely represented by

IAS officers and a few persons who claim

to be farmers

Kurubur Shanthkumar, president, Karnataka State Sugarcane Growers' Association

Farmers sensitised against taking up mass cultivation of ginger

Experts raise concern over crop's high water needs and the chemicals used in its production



Not necessary:Farmers' associations have taken up the task of educating local farmers against the cultivation of ginger in the border villages of Mysuru district.—PHOTO: M.A. SRIRAM

With widespread concern expressed over extensive cultivation of waterintensive ginger crop in the border villages of Mysuru district, farmers' associations have now taken up the task of educating local growers against leasing out their lands for the cultivation of the crop.

Traders from neighbouring Kerala are taking fertile farmlands in the border villages, especially in H.D. Kote, Periyapatna and Hunsur taluks, for lease, luring the local farmers with handsome price.

The farmlands are usually taken for lease for at least three years and thereafter traders go in search of other lands for raising the crop. The trend of contract farming for ginger crop has caught the fancy of local farmers with some of them having leased out their lands to the extent of over 50 acres, according to farmer leaders here.

Besides being a high water-intensive crop, a lot of chemicals are used to raise it and this is feared to weaken the soil productiveness.

Understanding this disturbing trend, the State Sugarcane Growers' Association recently held an interactive session at H.D. Kote town, where farmers were educated on the impact of ginger cultivation.

Association president Kurubur Shanthkumar told *The Hindu* that the farmers were being sensitised on the long-term impact of ginger crop on the soil. After growing ginger, soil becomes unsuitable for other crops. If at all other crops are raised, the yield will be significantly less. But farmers are ignoring these aspects, he added.

Mr. Shanthkumar maintained that some farmers are being lured into leasing out their lands to merchants from Kerala whose job is to look for lands in other States and raise the crop for profits.

For an acre of land, farmers are being paid at least Rs. 75,000 a year. This has been an attractive factor. But the long-term impact was severe, including depletion of groundwater.

"The crop required rigorous supply of water to ensure a good yield. Usually, borewells are sunk for raising the crop. By excessive use of water, the groundwater source drains out, resulting in depletion of drinking water source for others," he said.

Some enterprising farmers belonging to the association, which has been fighting for farmers' cause despite being a body of sugarcane growers, have resolved to visit other growing areas in Hunsur and Periyapatna taluks and educate local growers and also those leasing out their lands for ginger cultivation. The Mysuru district administration has set up three special teams to discourage local farmers from cultivating ginger on their lands.

Woman earns profit growing organic millets

We don't have borewells and so can't go for paddy or sugarcane; millets can be raised with little or no water



GOOD RESPONSE: Visitors having a look at samples of millets on display at the Jeeva Vaividhya Jaatara organised by NGOs at Andhra Univeristy in Visakhapatnam on Wednesday.— Photo: C.V. Subrahmanyam

Millet farming might not be considered lucrative, but when one talks to P. Narasamma of Metlakunta in Nalkol mandal of Medak District, one of the many women millet farmers of the village, its revealed how satisfying the millet farming is.

The millet farmers are also continuing with the organic farming method followed by their forefathers. They are also able to convert a large number of farmers raising paddy and sugarcane to switch over to organic farming in their area.

No water for paddy

"We don't have borewells and so can't go for paddy or sugarcane. The millets can be raised with little water or no water. Some just prosper like that. We are not worried if the yield is low because what we spend on inputs is also low. We prepare our own seeds, use only organic manure and pesticides made at our homes with animal droppings, etc. Our products get at least Rs.10 more per kilo and we make profit and are happy", says Ms. Narasamma.

She is here in connection with the Jeeva Vaividhya Jaatara (biodiversity festival) organised by the Andhra University's Dr. Durgabai Deshmukh Centre for Women's Studies and NGOs Sabala and Sarada Valley Development Society, and explained in short the millet crop and how satisfied the farmers are.

Initially 20 farmers were raising millets and that number has gone up to 70 now and they produce various varieties of millets. Ms. Narasamma brought a few dozens of millets for display at the exhibition.

The millet farmer says the farmers in the village had even trained volunteers of Deccan Development Society telling them to just watch what they do on the field.

She feels that the Government must make all farmers grow all varieties of millets and is trying to meet Telangana Chief Minister K. Chandrasekhara Rao to discuss the issue and hold a meeting.

She wants to ask Prime Minister Narendra Modi to provide a cow or buffalo to each household so that organic manure and pesticides can also be prepared. She and other farmers managed to gather three lakh signatures at the behest of Congress leader Sonia Gandhi, when UPA was in power, to provide millets in the ration quota under the public distribution system since the millets help people keep good health. But by that time Ms. Sonia's party was defeated, she recounted.

Fungicides are bad news for neurons: study



A farmer spraying fungicide in Hassan taluk, Karnataka. File Photo



Could eating food sprayed with fungicide strobilurins cause autism or Alzheimer?

Modern fungicides that are sprayed on fruit and vegetables have been found to cause similar genetic changes in mouse neurons to those seen in autism and Alzheimer's disease.

Researchers exposed dishes of the brain cells to more than 300 different pesticides and fungicides and found that one class of fungicides, the

strobilurins, produced patterns of genetic changes often seen in the human conditions.

Scientists at the University of North Carolina in Chapel Hill hoped the experiment might shed light on the kinds of substances in the environment that contribute to cases of autism. To their surprise, they found compounds that produced some genetic hallmarks of autism and neurodegenerative diseases at the same time.

The strobilurins have only been approved for use in the past 20 years, more than half a century after the first individual diagnosed with autism was announced in the medical literature. Since the fungicides arrived on the market, they have been sprayed in increasing quantities to protect crops such as cabbages, spinach, lettuce, kale, tomatoes, apples, pears and grapes.

While the fungicides produced autism-like and Alzheimer's-like signatures in the way genes are expressed in mouse neurons, the relevance of the changes is unclear: the scientists have no evidence that the chemicals contribute to either condition.

"The study was designed to try and identify chemicals that could cause autism, but we in no way say these things do cause autism," said lead scientist, Mark Zylka, whose study appears in Nature Communications.

Strobilurins work by disrupting mitochondria, the tiny structures that live inside cells and ensure they have enough energy to function properly. Tests on the mouse neurons revealed that the compounds dampened down the activity of genes involved in synaptic transmission, the mechanism by which neurons talk to each other. Meanwhile, the activity of other genes linked to inflammation in the nervous system ramped up.— © Guardian Newspapers Limited, 2016

While the fungicides produced autism-like and Alzheimer's-like signatures in the way genes are expressed in mouse neurons, during the experiment, the relevance of the changes is unclear

FLOWERSHOW



OOTY FLOWER SHOW FROM MAY 27

The three-day annual flower show, a major tourist attraction during the month—long summer festival in this hill resort town, will begin from May 27.

The 120th Flower Show will have on display 35 new varieties of Dalia, along with other major flowers, in the sprawling and picturesque government botanical gardens, Horticulture Department Director L Chitrasenan told reporters here. Similarly, the 58th Fruit show will be organised at the famous Sim's Park in nearby Coonoor on May 21 and 22, he added.PTI

Fruit show on May 21, 22

The 58{+t}{+h} fruit show at Sims Park in Coonoor will be held on May 21 and 22 and the flower show from May 27 to 29 at the Government Botanical Garden in Udhagamandalam, the Horticulture Department announced on Wednesday.

The flower and fruit shows have been delayed due to elections. There has been no announcement yet on the regular features of the summer festival

such as Vegetable Show which used to be held at Kotagiri, a Spice show that used to be held in Gudalur, and the Rose show normally held in Udhagamandalam.

The 194 species of flowers to provide a feast to the eyes of the tourists this time would include Oriental Lilly, Tithonia, Torenia, Lobelia, 35 new varieties of Dahlia, Inca marigold, French marigold, Begonia, Candytuft, Delphinium, Lisianthus, fancy, Petunia, Phlox, Primula, Ranunculus, Cyclamen, Cineraria, Verbena, Hollyhock, Sunflower, Antirrhinum, Asiatic lilly and Viola.

The flower show gallery this time would have a decoration of nearly 1,500 varieties of flowers.

The Flower Show will be held at Botanical

Garden from

May 27 to 29

Vijayapura to host flower show after 15 years



Green space:Basava Vana is the likely venue for the fruit and flower exhibition to be held in Vijayapura.— PHOTO: Rajendra Singh Hajeri

After a gap of over 15 years, the district Horticulture Department is all set to organise an exhibition of flowers, vegetables, and fruits near the District Stadium here.

While, several districts in the State have been organising similar events to promote horticulture regularly, no such programme was held in Vijayapura district in the last 15 years.

"I really do not know why officials earlier did not take interest in holding this annual event. However, we have planned to organise the exhibition on a grand scale this year, and wish to reset the trend," Santosh Inamdar, Deputy Director of the Horticulture Department, said.

He told *The Hindu* that the department receives Rs. 3 lakh as a grant from the government.

"However, the event requires at least Rs. 7 lakh ... hence, the department would rope in local agencies," he added.

Mr. Inamdar said that he has already spoken to his counterpart in Belagavi, where the event is held regularly. With the help of Belagavi officials, plans would be chalked out to conduct the exhibition here, Mr. Santosh Inamdar added.

He said that the department has decided to conduct the event in winter as the district faces water scarcity in summer. "It will possibly be held for three days starting November 1—Rajyotsava Day," he added.

Mr. Inamdar said that during the event, besides giving publicity to the schemes of the department, people who have attained success in kitchen gardening would be invited to share their expertise.

An exhibition showcasing various ornamental flowers, bonsais and cactus would also be held, he said. He also said that a replica of a historic monument would be made using flowers.

"We are still on the process of selecting the monument," he added. He said that University of Horticulture Sciences, Bagalkot, would be involved in the event.

As a special attraction, the Fisheries Department would be requested to develop an aquarium, he said.

"We also tentatively plan to bring some of the popular landscape designing agencies for spreading awareness among people about the importance of landscaping," Mr. Inamdar said.



Vegetarian diet does NOT increase cancer risk: Researchers clarify

Researchers of the much-publicised study linking vegetarian diet to cancer say their findings were misrepresented.



"Vegetarian diets are good and healthy when made of traditional vegetarian foods," say the researchers. (Source: Thinkstock Images)

Recently, a news report stating that a vegetarian diet can lead to increase in risk of colon cancer went viral. The story, published by news agencies was widely picked up by media organisations (including this one), leading to people questioning the diktat offered by doctors, that a vegetarian diet actually helps reduce cancer risks.

But researchers Kumar Kothapalli, J Thomas Brenna and Kalpana Joshi (who are a subset of authors of the widely quoted study) have called this a "misinterpretation of our findings".

The reports on the new study — that was published in Molecular Biology and Evolution — have said that "scientists found evidence that a vegetarian diet has led to a mutation that may make people more susceptible to inflammation, and by association, increased risk of heart disease and colon cancer".

Now, this is where the details really matter. The researchers used reference data from the 1000 Genomes Project, to provide evidence that the vegetarian

diet, over many generations, may have driven the higher frequency of a mutation — called rs66698963 and found in the FADS2 gene — among the Indian population.

According to Kothapalli and his colleagues, "Simply put, our paper draws attention to possible vulnerability to chronic disease of persons descended from traditional vegetarianism when substituting some recently available vegetarian cooking oils for traditional vegetarian foods.

It does not suggest that all vegetarian diets are unhealthy; on the contrary it suggests that traditional foods are most healthy." What has happened is this: Over thousands of generations, because of the rs66698963 gene mutation especially in a vegetarian-heavy populace like India, there has been an increase in the body's ability to automatically convert vegetable-based Omega-6 fatty acids (precursors) to the biologically active animal omega-6 fatty acids (products) that are absolutely required for many normal body functions.

Also see: Rejig meals with crunchy, colourful vegetables and fruits But because of changing food patterns, and erstwhile vegetarians shifting to consumption of new products (such as certain vegetable oils) that are rich in Omega-6 fatty acids and as well as inclusion of a non-vegetarian diet, the composition of food intake into the body has changed.

This has led to an alarming rise of Omega-6 fatty acids in the human diet.

"An imbalance in Omega-6 suppresses Omega-3 functions and higher Omega-6 is generally regarded to lead to a more proinflammatory condition. Inflammation is implicated in heart disease and cancer risk and severity," say the researchers, in an email statement to IndianExpress.com.

The study's findings indicate that, on average, vegetarians are more efficient at making the Omega-6 arachidonic acid, and therefore many Indians with ancestry that long emphasised vegetarianism may be at increased risk for maintaining harmful levels of arachidonic acid, compared to omnivorous populations.

In fact, this study is not the first to raise a concern around increase of Omega-6 in the diet from such vegetable oils. Kothapalli and his colleagues refer to the findings in the 1990s by eminent biochemical nutritionist Dr

Ghafoorunissa, from the National Institute of Nutrition in Hyderabad, in their study.

Also see: Diet and workout tips to stay fit in your 20s "We cite a paper in our study showing omega-6 to omega-3 balance in India to be = 20:1, whereas, we evolved by eating closer to omega-6 to omega-3 (1:1 ratio) and lower in overall omegas.

When omega-6 are very high they suppress the metabolism of omega-3, so maintaining a balanced omega-6 and omega-3 in the diet is very important," they say. What one needs to conclude from this is that a vegetarian diet does not cause cancer, but it does suggest that certain ancestrally vegetarian populations like Indians would benefit from staying away from certain vegetables and products that are rich in Omega-6.

One way to do that would be to replace vegetable oils with low Omega-6 oils like olive oil, mustard oil and even moderate amounts of the traditional ghee; and avoid canola oil, soybean oil, safflower oil and corn oil.

Also see: 5 vegetarian recipes that are healthy and light Speaking on the importance of balancing Omega-6 and Omega-3 fatty acids in the body, Taranjeet Kaur, senior metabolism nutritionist, AktivOrtho, says, "We need to have a ratio of under 10:1 for Omega-6: Omega-3, and to stay away from chronic diseases, it should actually be 4:1.

Mixing up cooking oils is one way to maintain balance. Switch to cooking more in mustard and canola oils, and using flaxseed/walnut oils as salad dressings also help."

Adding to the cause of a vegetarian diet, or at least a vegetable-heavy diet, Dr Vaneet Gupta, consulting oncologist, PSRI, Delhi, says: "A vegetarian diet is actually good for people because it is fibre-rich, which decreases the risk of colon cancer."

"Vegetarian diets are good and healthy when made of traditional vegetarian foods," conclude the researchers.



BusinessLine

'Directive to sell 50% of our tea via auctions is not wise'



GP GOENKA, Chairman, Duncan Goenka group

Faced with the prospect of seeing its tea gardens taken over by competing tea producers in West Bengal's Dooars region, the GP Goenka-led Duncan Tea is passing through one of its worst phases.

It entered the tea business in 1959 with 120 gardens, but its 'tea empire' has over time shrunk to just seven gardens, with a projected 8 million kg of tea production. GP Goenka, Chairman, speaks to *Business Line* on the issues

plaguing the business for Duncan and the tea industry at large. Edited excerpts:

What is the current situation with the tea gardens that have been closed down?

Last year, the State government decided to hand over some of our gardens to others. These gardens have been closed, not because of us, but the Tea Board, under the Tea Act, decided to give it to others. We have approached the court, and the matter is subjudice.

But currently, seven gardens are under our control, which are working normally. We expect our crop for these seven gardens will be around 8 million kg, higher than the 6 million kg we produced two years ago. Our total area under tea is about 8,000 hectares.

The entire tea industry has been affected by the closure of the tea gardens. How serious is the situation?

The situation is very grave across the industry. Labour accounts for nearly 60 per cent of our total cost of production. A decade ago, it was 40 per cent. One has to accept the fact that there will be a steady rise in labour cost. But the realisations over the past decade have increased only by 3 per cent.

We don't have the margins. For a kg of tea priced at ₹250, there is a margin of only ₹20. I had a bad year in 2015. So we came to an understanding with the workers on certain aspects. We came to an understanding that was a winwin for all. They got more; we got more.

Our costs are now reasonably under control. We are not interested in making exorbitant profits. But we got to make some profit to sustain the business.

Specifically, what is the labour-related problem that the industry faces?

The problem is that the industry isn't gearing itself up for modernisation. According to the 1969 government norms, there have to be 2.5 workers per hectare. It was alright in those days, but it is totally foolish today.

Nobody can have more than 2 (workers per hectare) today. Tea gardens in South India have 1.3 on an average. It isn't affordable to have more

labourers as the size of garden varies from 400-500 hectares to 1,200-1,300 hectares.

The garden owners and workers do not understand the importance of machines for plucking. In peak season, through manual picking you get only 40 kg per day and you get paid accordingly.

But if you use machines for plucking, you get 100-125 kg per day, which creates an incentive. For the same number of days' labour, you get more earnings. It's a win-win for everybody.

The requirement of labourers would reduce. Currently, 40 per cent of the workforce is temporary. There is a need to sustain the business with permanent workforce.

In such a situation, how will you achieve profitability?

The internal demand is growing at about 3 per cent. For profitability, all we have to do is to get our costs under control, maintain good quality and sustain the brand equity, and the consumer does the rest.

The Tea Board has initiated steps against you. Does its policy affect the businesses of companies like yours?

Firstly, Tea Board doesn't exist (for us). Recently, we came to know that the Tea Board would issue a directive specifying that 50 per cent of our tea should be sold through auctions. It isn't a wise policy.

All I have to do is to go to court. How can a third party tell me where to sell my tea? How can they dictate? If it's about transparency in prices, as a consumer, nobody will pay anything more than what they are supposed to pay in the market. There are wrong allegations of cartelisations. You can't cartelise thousands who sell tea. I've grown up in this industry, so the tea business will continue.

Dairy farms seen growing bigger: Rabobank



Rabobank expects sourcing of milk from dairy farmers is going to be the key challenge for processors in the coming days. Milk processors are strengthening their ties with farmers and encouraging them to grow their farm size to 50-300 cattle from the current level of 30-50 cattle.

With the strong growth in branded milk and dairy products, direct milk sourcing will gradually replace the agent-based sourcing and this will help them secure consistent supply of superior quality raw milk, said Rabobank's recent report on Emerging Dairy Farm Trends in India.

Though share of milk procured from small and marginal farmers will decline, this segment will still stay relevant as currently 75-80 per cent of milk is procured from these farmers.

Large-scale-dairy farming with over 1,000 cattle has proved difficult to establish due to factors such as land availability, paucity of professional labour, fodder availability, ban on import of cattle, it said.

Shiva Mudgil, Senior Dairy Analyst, Rabobank's Food and Agribusiness Research, said procurement from small and marginal dairy farmers would increasingly become a challenge for milk processors and the industry will see the emergence of farmer owned dairy farms with herd sizes ranging from 50-300 cattle.

Rabobank believes that this farming trend will be driven by existing farmers upgrading to medium scale and fresh investment from private equity investors who will help the farmers in getting modern services and technologies to manage dairy farms efficiently.

Fresh offtake lifts castorseed



Castorseed prices moved up on the back of fresh demand from crushers at the lower level. Moreover, good export demand of castor oil also pushed the price.

Traders said that because of arrival pressure and less demand the price of the seed had gone down during last one week and now at this level fresh demand has increased the market on Wednesday.

About 80,000 bags (of 75 kg) arrived in Gujarat and prices went up by ₹4 to ₹602-612 per 20 kg. At Saurashtra, about 4,100 bags arrived and prices gained by ₹2 to ₹598-608. Castor oil traded up by ₹5 to ₹620/10 kg.

On the Rajkot Commodity Exchange (RCX) castor June contract was up ₹48 to ₹3,258 a quintal. RCX spot traded up by ₹5 to ₹3,075 per quintal.

Spot rubber firms up

Spot rubber finished firm on Wednesday. RSS 4 improved to ₹120 (118) a kg, according to traders.

The grade firmed up to ₹119 (117.50) and ₹116 (114.50) respectively, according to Rubber Board and the dealers.

April futures increased to ₹121.94 (120.91), May to ₹123.60 (122.84)a kg on the National Multi Commodity Exchange.



RSS 3 weakened to ¥174.8 (₹105.64) a kg on the Tokyo Commodity Exchange. Spot rubber rates (₹/kg): RSS-4: 120 (118); RSS-5: 117 (115); Ungraded: 111 (110); ISNR 20: 114 (112) and Latex (60% drc): 93.50 (90).

Spot pepper stays firm

Spot pepper remained firm on tight supply amid good demand. Farmers and primary market dealers were holding back anticipating further price rise.

Enquiries from MNCs said to have aided the upward price movement, trade sources told *BusinessLine*. Only three tonnes were traded at ₹665 a kg. 40 tonnes of exchange released pepper were traded at ₹665.

Buyers were ready to buy High range pepper at ₹680 a kg and Rajkumari pepper at ₹685 a kg. They were also ready at ₹675 for Pulpally and Bathery pepper. Spot prices increased by ₹300 a quintal to ₹66,300 (ungarbled) and ₹69,300 (garbled).

Active contracts on the IPSTA were steady. Export prices were at \$10,800 a tonnes c&f for Europe and \$11,050 for the US.

India losing ground in global oilmeal market on high prices



Shipments have declined 87% in value terms over last three years, reveals SEA data

Plummeting shipments			(in tonnes/value in ₹)	
	2013-14	2014-15	2015-16	
Soyameal	27,81,985	6,59,593	70,820	
Value (₹ cr)	9,626	2,063	240	
Rapeseed meal	9,16,050	10,67,159	3,31,201	
Value (₹ cr)	1,410	1,653	593	
Groundnut meal	3,290	3,013	1,102	
Value (₹ cr)	9.2	8.5	3.08	
Ricebran ext	1,47,001	2,77,492	3,24,999	
Value (₹ cr)	158	260	340	
Castormeal	5,33,668	4,58,406	4,56,319	
Value (₹ cr)	305	314	334	
Total	43,81,994	24,65,663	11,84,441	
Value (₹ cr)	11,508	4,298.50	1,510	

Souce: SEA

India is gradually vanishing from the global oilmeal map due to higher domestic price and lower crop..

Total oilmeal exports have declined sharply by about 87 per cent in value terms over past three years from ₹11,508 crore in 2013-14 to ₹1,510 crore in 2015-16, revealing the growing insignificance of India's oil meal shipments.

Drastic dip

The latest data compiled by the Solvent Extractors' Association of India (SEA) showed overall oilmeal exports in quantity terms declining by over 72 per cent in the past three years, from 4,381,994 tonnes in 2013-14 to 1,184,441 tonnes in 2015-16.

Compared to last year's 2,465,663 tonnes, exports this year have halved.

The trade body holds the price disparity and lower crop as key responsible factors for the poor export performance of India's oilmeals.

Losing market share

The shrinking presence of India's oilmeals is evident from the fact that India has already lost important oilmeal export markets such as Vietnam, Iran and Europe to competing suppliers from North and South America.

Exports to South Korea, Thailand, Indonesia, Taiwan, Iran, Vietnam, Myanmar and Cambodia have drastically come down due to severe competition from other origins including China.

"Even Bangladesh – which was one of the major importers of soyameal and rapeseed meal from India – has started importing soyabean directly to feed local crushing. Similarly, Pakistan also started importing soyabean, apart from rapeseed for domestic crushing," said BV Mehta, Executive Director, SEA.

Price disparity

However, due to price disparity, Indian oilmeal exports have failed to take advantage of higher dollar.

In March 2014, when the dollar was at ₹60.95, soyameal price FAS/FOB per tonne stood at \$606, which fell to \$448 when dollar was ₹62.48 in March 2015.

However, in March 2016, soyameal price was \$480 with the dollar at ₹66.89.

Therefore, with fall in prices, even the quantity of exports fell, due to which Indian exporters failed to capitalise on appreciating dollar.

High prices

But India was completely out-priced in the international market due to high price variation. Internationally, the prices hovered at lower than what was quoted at Indian ports. Soyameal CIF Rotterdam was quoted at \$327 a tonne against India's quote of \$495.

Similarly, rapeseed meal was \$224 in insternational market, while Indian FOB price was \$250 at Kandla.

Meanwhile, Mehta expressed optimism about the monsoon forecast as the initial estimates show a possibility of better-than-normal monsoon this year.

"We will see good crop and again, with increased availability, the domestic prices will cool off and we will again be able to capture our lost markets," he said.

Copra buying by State agencies put on hold on rise in prices

The recent price improvement in copra seems to have prompted the government agencies to hold up the procurement drive for the 2016 harvest season.

The time is not ripe to enter the market for an immediate procurement, considering the recent improvement in copra prices now ruling at ₹5,500 a quintal both in Kerala and Tamil Nadu, official sources said.

Moreover, the Tamil Nadu government has also not taken steps to exempt the five per cent VAT imposed on copra.

Nafed has fixed the minimum support price for 2016 season at ₹59.50/kg for milling copra and ₹62.40 for ball copra for three months.

However, Thalath Mahmood, President, Cochin Oil Merchants Association, attributed the recent price rise to increase in local demand ahead of Vishu festival in Kerala.

The demand has pushed up coconut oil prices at ₹7,700 per quintal in Kerala and in Tamil Nadu it was ₹7,500, he said.

Environment ministry draws flak over GM mustard data

Central Information Commission directs GEAC to share bio safety data on GMOs by April 30

In a new move, the biotech regulator Genetic Engineering Approval Committee (GEAC) has been directed by the Central Information Commission (CIC) to furnish all bio safety data related to genetically modified (GM) mustard by end of this month.

The committee has also been asked to furnish the bio safety data related to all other genetically modified organisms (GMO) by April 30.

The GEAC, under the Ministry of Environment, Forests and Climate, had rejected earlier requests for the bio safety data furnished by the crop developer in 2014 and 2015 on the basis that it would 'breach commercial confidence' of the crop developer.

Kavitha Kuruganti, national Convenor of Alliance for Sustainable & Holistic Agriculture (ASHA) and an anti-GM activist, had moved the commission contending that existing orders by the Supreme Court and the CIC set a different precedence.

"Data on safety issues which is matter of overriding public interest cannot be considered as confidential information," the CIC order noted, directing GEAC to "provide such information which could be given as per the Protocol, more specifically the bio-safety dossier as submitted by the crop developer in 2014 and in 2015, and any other material submitted by them and under review, after separating confidential information if any, as per their independent decision."

The order further explained that the all documents relating to GEAC recommendation, sub-committee report, revised dossier (on bio-safety) as recommended and Risk Assessment and Risk Management document need to be furnished to the public in public interest and that "its denial to appellant is not legal."

"The people should know how and why GM mustard is being permitted or denied because they have to consume that food or feed and face consequences. It is a policy decision by the public authority which needs to be revealed to the public in general as mandated by S4 because they are going to be affected if GM mustard is marked," the order said.

The GEAC was expected to hold its next meeting on April 11, which has, however, been postponed.

"GEAC was scheduled to meet on April 11, in which we, Coalition for a GM-Free India, were invited to participate and share our concerns. It is not clear if the CIC developments are in any way connected with this postponement of the meeting," Kuruganti said.

Business Standard

Govt to launch two schemes to provide farm pumps, fans tomorrow

It will also launch a scheme to provide energy efficient fans that aim to save Rs 700 a year

The Centre will launch two schemes tomorrow including distribution of energy efficient, smart agriculture pumps, aimed at saving subsidy worth Rs 20,000 crore.

It will also launch a scheme to provide energy efficient fans that aim to save Rs 700 a year on consumer power bills every year.

A farmer can operate the SIM-enabled agriculture pumps from their homes using mobile phones.

"Power Minister Piyush Goyal will launch the schemes for distribution of energy efficient smart agriculture pumps and fans tomorrow in Andhra Pradesh," a Power Ministry press release said.

Andhra Pradesh Chief Minister N Chandrababu Naiduwill be present on the launch of the two schemes, namely National Energy Efficient Agriculture Pumps Programme and National Energy Efficient Fan Programme at Vijayawada.

These schemes will be implemented by Energy Efficiency Services Ltd (EESL), a PSU under the Power Ministry.

National Energy Efficient Agriculture Pumps Programme will help farmers in replacing age-old energy guzzlers agricultural pumps across the country with the new-age energy efficient agricultural pumps, with a 5-star rating.

These pumps will be enabled with smart control panel and a SIM card, giving farmers the flexibility to switch-on and switch-off these pumps from their mobile phones and from the comfort of their homes, it said.

Through these new-age energy efficient SIM-enabled agricultural pumps, Power Ministry is looking at 30 per cent savings in energy by 2019.

This will boil down to an annual savings of about Rs 20,000 crore on agricultural subsidies or a saving of 50 billion units of energy every year.

Under the National Energy Efficient Fan Programme, ceiling fans of 5-star rating 50 Watts (from leading companies such as Usha and Bajaj) will be provided at Rs 60 per month on EMI basis and Rs 1,250 per unit on upfront payment basis.

With the usage of these energy efficient fans, consumers will be able to save Rs 700 every year on their electricity bills. This means, a consumer can recover the cost of this energy-efficient ceiling fan in less than 2 years, the statement said.

The energy-efficient ceiling fans cost Rs 1,440 to a consumer who uses the installment route, while those who pay upfront can buy this fan for Rs 1,250. A total of two ceiling fans can be bought on one electricity bill from domestic category consumers only.

CIC orders govt to release biosafety data on GM crops

The Central Information Commission (CIC) has directed the environment ministry to release biosafety data regarding all genetically modified (GM) crops in the pipeline before April 30.

The CIC, on April 1, instructed the Genetic Engineering Appraisal Committee (GEAC), the apex regulatory body for GM crops to release the data arguing it constituted voluntary disclosure under Section 4 of the Right to Information Act.

This will involve the GEAC handing over the biosafety dossier of the GM mustard crop as had been submitted by the crop developer in 2014 and 2015.

The regulators and the ministry had declined RTI requests seeking a copy of the dossier. The applicant, Kavitha Kuruganti, co-convener of the Coalition for a GM-Free India argued that administrative precedents exist within the regulatory regime.



"The decision-making process should be told, along with information about whether such process is adopted, minutes of the meetings, results of clinical trial, and entire information about GM mustard etc.", the CIC said in its order.

THE TIMES OF INDIA

Arrival of summer oinion crop increases

The average wholesale onion prices at the country's largest wholesale onion market at Laslgaon Agriculture Produce Market Committee (APMC) increased marginally on Wednesday compared with the rate on March 22.

The market reopened after 13 days of holidays on Tuesday. Now, the stock of late kharif crop has exhausted and the summer crop has begun arriving in large quantities in the market.

On Wednesday, there was not a single tractor or vehicle of late kharif onions in the market and the entire arrival was of summer crop, which has better shelf life compared with the kharif crop.

Sources from the Lasalgaon APMC said, "The arrival of late kharif crop at

the Lasalgaon market before March 22 was around 7,000-10,000 quintals a day. But the after the re-opening of the market after 13-day holiday, the arrival of the late kharif crop has completely stopped."

"There was not a single vehicle of late kharif onion at the market on Wednesday. On the contrary, the arrivals of the new summer crop have increased a lot. From the 1,000 quintals per day in mid-March, the arrivals have now increased to 7,500 quintals a day. The arrival of fresh summer crop is expected to increase up to 12,000 quintals a day in a week or two," sources said.

Sources added, "The kharif and late kharif onions have a shelf life of less than 25 days and they rot thereafter. Hence, the farmers have no option but to sell the commodity at the prevailing market rates. On the other hand, the summer crop has a shelf life of six-seven months. Hence, farmers prefer storing them with a hope of getting better prices and bring the commodity to the market as per their requirement."

The average wholesale onion price at Lasalgaon APMC was recorded at Rs 825 per quintal on Wednesday, against Rs 760 per quintal on March 22. The minimum and maximum prices were recorded at Rs 400 and Rs 923 per quintal, respectively. Around 7,500 quintals of onions were auctioned at Lasalgaon on Wednesday.

Area under horticulture crop likely to rise by 10%

Acreage under horticulture crop is expected to rise by about 10 per cent in the ongoing 2015-16 season on expectation of a surge in the demand ahead of Simhastha and better remuneration.

Farmers in the region have been shifting from agriculture to horticulture crops amid increased yield, better marketability and improved margins, said experts.

Acreage under fruits especially pomegranates, oranges and bananas is increasing in Madhya Pradesh.

SL Nagar, horticulture (joint director) Indore division, said, "Acreage under horticulture crops in Indore division in 2015-16 is expected to go up by over 10 per cent, especially in fruits and flowers." Nagar said that demand for

fruits, vegetables and flowers is expected to remain high in the coming months when crores of people from various parts of the country will come to Ujiain during Simhastha, scheduled from April 22 to May 21.

Data from Indore division's horticulture department showed that farmers in Indore division had sown horticulture crops on 2,08,035 lakh hectares in 2014-15 against 2,52,542 lakh hectares in 2013-14.

Nagar said acreage dropped in 2014-15 due to insect infestation in fields.

Mohanlal Meena, a farmer from Khandwa in Indore division, said, "I see a good demand for vegetables and fruits during Simhastha. Moreover, unlike agriculture crops, market is easily available for these crops."

Meena said that acreage under lady's finger has increased by 1 acre this year.

This season, several farmers of the region have grown flowers to be supplied to Ujjain during Simhastha 2016.

Data from Bhopal horticulture department showed total area under horticulture crop in Madhya Pradesh during 2014-15 rose to 15,49,000 hectares from 5,55,000 hectares in 2008-09. An official of Bhopal horticulture department said, "Horticulture acreage is expected to be over 16 lakhs in 2015-16 due to increased acreage under fruits and vegetables like chillies, onions and potatoes."

THE ECONOMIC TIMES

Disclose bio-safety data of under-test GM mustard: CIC

The Central Information Commission has directed the environment ministry to share a copy of the bio-safety document related to genetically-modified mustard and the raw data of studies with the caveat that provisions of the Cartagena Protocol on Biosafety as well as confidentiality should be kept in mind.

NEW DELHI: The Central Information Commission has directed the environment ministry to share a copy of the bio-safety document related to genetically-modified mustard and the raw data of studies with the caveat that

provisions of the Cartagena Protocol on Biosafety as well as confidentiality should be kept in mind.



The transparency panel also directed that the entire bio-safety data pertaining to all other genetically modified crops in the pipeline be put in the public domain as that is part of voluntary disclosures under Section IV of the RTI Act.

The ministry had objected to the disclosure of the data, saying the information is exempted under the RTI clause related to commercial confidence of the third party -- the Centre for Genetic Manipulation of Crop Plants.

They also claimed that the trial is premature and thus information cannot be given.