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THE HINDU

Commodity prices

Garlic prices have risen over 50 per cent in the last one year. In the retail market in Chennai, garlic sells for ₹140/kg, up from ₹90/kg at the same time last year. The persistent increase in demand and bad monsoon rains which reduced supply this year, are reasons for the spike in prices. Last month, garlic was selling for about ₹120/kg.

Here are the prices of various commodities in Chennai.

Price scale is given as Rs./kg

Commodity	Quantity	Now	Year ago
Rice	1 kg	28	32
Wheat	1 kg	32	30
Atta	1 kg	30	32
Gram Dal	1 kg	71	47
Tur Dal	1 kg	145	86
Urad Dal	1 kg	125	91
Moong Dal	1 kg	111	101
Masoor Dal	1 kg	95	75
Sugar	1 kg	32	34
Milk	1 ltr	37	27
Ground Nut Oil	1 ltr	124	105
Sun flower Oil	1 ltr	91	85
Gur (Jaggery)	1 kg	50	49

Commodity	Quantity	Now	Year ago
Tea	1 kg	220	220
Salt	1 kg	18	17
Lime	1 kg	52	100
Apple	1 kg	140	120
Papaya	1 kg	30	25
Pineapple	1 kg	40	40
Pomegranate	1 kg	140	100
Sapota	1 kg	50	40
Banana	1 kg	30	30
Bitter Gourd	1 kg	30	28
Brinjal	1 kg	32	32
Cabbage	1 kg	20	16
Cauli Flower	1 kg	40	40
Garlic	1 kg	140	90
Ginger	1 kg	100	120
Chilly	1 kg	32	36
Onion	1 kg	62	30
Potato	1 kg	24	36
Tomato	1 kg	18	16

*Source: Ministry of Consumer Affairs, National Horticulture Board.

“Women need to be trained in agro-tech”

Haryana Agricultural University Vice-Chancellor, K. S. Khokhar on Tuesday said that in view of the crucial role played by women in agriculture and livestock production, they should be imparted training to upgrade their knowledge and skills.

For agricultural development, it was necessary that women stays updated with all the latest technologies in this field, he said while talking to a delegation of agricultural experts from Swaziland. The situation in Swaziland was not different from here as women folk there also contributed in agriculture equally to their male counterparts, Mr Khokhar said.

The delegation which included seven agricultural officers and extension officers had been visiting the university since September 21 for training on good cultivation practices of maize.

The Vice-Chancellor said the developing nations are still plagued by challenges posed by food security, malnutrition, poverty and unemployment and need to cooperate with each other to get rid of those problems.

He said that Haryana Agricultural University had taken an initiative to share its improved and useful agricultural technologies with friendly nations.

The gates of the university were open for the students from Swaziland who after getting education from here would build a strong human resource to boost agricultural production of their motherland, Mr Khokhar said.

Chritopher M, a member of the delegation expressed gratitude for the training and said it would help increase production of maize, which though a staple crop of Swaziland, had much less yield than Haryana.

Grow your own organic vegetables in kitchen garden

The State government is keen to promote kitchen gardens and terrace gardens among urban residents.

With a large quantity of vegetables sold in the city suspected to be laced with pesticides and chemicals, the Department of Horticulture has

launched a programme to promote kitchen gardens and terrace gardens among households in urban areas.



As part of the comprehensive horticulture development programme taken up by the State government, interested residents will be trained to grow organic vegetables in their households in kitchen gardens or terrace gardens. They will also be provided vegetable seeds, implements, pots, and bio-fertilizer.

The State government is keen to promote kitchen gardens and terrace gardens among urban residents so that they can consume safe vegetables. “A large quantity of vegetables being sold in urban areas are laced with pesticides and chemicals. Many vegetables are sold before the post-harvest interval needed for the effect of chemicals to go away. Many pre-harvest and post-harvest practices are not followed properly, leading to sale of vegetables that are unsafe for consumption,” said C.R. Krishna Kumar, senior assistant director, Department of Horticulture, Mysuru.

Hence, citizens should make use of garden space in their houses or terraces to grow vegetables for their household needs, he said.

After receiving an encouraging response to a training programme last year, the Department of Horticulture is organising one more training programme shortly.

More than 1,000 applications were received last year, but barely 590 could be accommodated.

BOX No. 1

‘70,000 households consume Rs. 5 crore worth coriander and mint every year’

Laiqh A. Khan

Can you guess the amount of money households in Mysuru city spend on coriander and mint, the two staple ingredients used in a variety of cuisines?

Senior Assistant Director of Horticulture, Mysuru, C.R. Krishna Kumar told *The Hindu* that a study conducted by an NGO in Mysuru during 2012 showed that 70,000 urban households spent a total of Rs. 5 crore on buying coriander and mint every year.

If all the estimated 2 lakh households in Mysuru city is taken into account, they together spend about Rs. 15 crore on herbs alone. “If you take all the vegetables into account, residents of Mysuru City spend around Rs. 200 crore every year,” he said.

Box No. 2

Submit applications by October 9

Citizens of Mysuru interested in participating in the kitchen garden and terrace garden training programme should obtain the application form from the Department of Horticulture in Curzon Park and submit the filled-up form by October 9.

Applications should be accompanied by a photograph and address proof.

Two hundred and ninety four applicants each will be chosen for the kitchen garden and terrace garden programme separately. As fifty five slots each in both programmes are reserved for Scheduled Caste and Scheduled Tribes, candidates belonging to these categories should submit their caste certificate along with the application.

The early bird applicants will be chosen for the day-long training programme, whose date is yet to finalised. All the selected participants will be given a free kit containing seeds of vegetables like tomatoes, chillies, ladies finger, cow pea, field beans, etc. While terrace garden

participants will be given 15 to 20 pots, a shovel and ten kg of bio fertilizer, kitchen garden participants will receive five kg of bio-fertilizer and sprayer. For more information, call 9986787739.

Icrisat for partnership to benefit marginal farmers

Partnerships, especially to further the adoption of scientific advancements that benefit the marginal farmer, was the recurring theme at the 73rd Governing Board meeting of the International Crops Research Institute for the Semi-Arid Tropics (Icrisat) held recently in Hyderabad and New Delhi. Appropriate partnerships with the private industry were high on the agenda which included partnering with companies for their corporate social responsibility.

Highlighting the importance of partnerships, Dr. Chandra Madramootoo of Icrisat Governing Board said, “With a focus on strong partnerships and research for development, Icrisat is dedicated to elevate rural communities out of poverty, while improving their health”.

This was reiterated by Ms. K. Padmavati Annapurna, Director of the Mathesis Engineering Pvt. Ltd. (Food Products Division) during her presentation to the board at Icrisat headquarters.

“Our mission has been to provide food products in ready-to-eat and ready-to-make formats, using traditional and nutritious grains towards promoting health and nutrition. We have immensely benefitted from association with the Icrisat Agribusiness and Innovation Platform (AIP), towards developing and commercialising the sorghum and millet based gluten-free “Smart Breakfast product”. “We look forward to the development of markets for new food products from the local crops, thus elevating the standard of living and well-being of rural communities,” added Ms. Padmavati.

Ms. Parvati Krishnan, programme manager, Coca-Cola Foundation, India, noted, “We are very fortunate to work with Icrisat on watershed improvement projects in Parasai and Chataarpurn villages of Uttar Pradesh. It allowed the Foundation to bring modern soil and water conservation technologies and agronomic research findings to thousands of men, women and children in impoverished villages in India.

Water scarcity

Highlighting the water scarcity issues, Ms. Meenakshi Sharma, Vice-President, Sustainability and Communications, SAB Miller, India said, “At SAB Miller, we are very excited about the outcomes of the project we are undertaking with Icrisat. Water scarcity is becoming a hugely limiting factor for food and fodder security. In this context, safe reuse of bio-refinery wastewater in agriculture assumes great significance”.

“Icrisat is committed to put in more efforts to engage strategically in areas where it can benefit the marginal farmer,” said Icrisat Director General Dr. David Bergvinson.

Icrisat Governing Board plans to elevate rural communities out of poverty with focus on strong partnership and research for development

Don't lose hope, Naidu tells farmers



Chief Minister N. Chandrababu Naidu during 'Rythu Kosam Chandranna' programme at Kothacheruvu in Anantapur district on Wednesday.

The Chief Minister Nara Chandrababu Naidu on Wednesday appealed to farmers to 'not lose hope' and refrain from giving up their lives, promising all help from the government, at Kothacheruvu village of the Anantapur district.

Speaking at the closing ceremony of the 'Rythu kosam Chandranna' programme here today at Kothacheruvu mandal headquarters village in the district, in the presence of the Agriculture minister Prathipati Pulla Rao, IT Minister Palle Raghunatha Reddy and a host of other Ministers, he said the government would, as promised by him earlier, strive to drive away drought from the face of the district.

“We have connected Godavari with Krishna (river) in just five months, we will connect Krishna with Penna (river). We will ensure that every acre in Anantapur district is given water. We will drive away drought for you”, said the Chief Minister even as he said that the government was aware of the hardships being faced by the farmers in the district and promised all help.

Saying that the government will take the farmers towards 'modern agriculture' by ensuring that farmers are handheld in choosing the right crop and right use of fertilisers etc based on the soil tests.

Mr Naidu appreciated the government officials for having successfully implemented the governments good intentions and welfare schemes, especially those aimed at the welfare of the farmers. He said 'welfare schemes' were the top priority of the government.

He also claimed that his government was the first and only government to come forward to pay Rs 5 lakhs towards compensation to the kin of those farmers who committed suicide, although he believed the lives of the farmers were 'invaluable' and consequently shouldn't be given up in any circumstance.

Now, a mobile app for Kangayam cattle conservation

To help farmers track the genetically pure cattle breed

Tracking a genetically pure Kangayam bull/cow for mating and identifying a genuine buyer for Kangayam cattle are now just an app away.

V. Sivakumar, an Indian-American engineer from Tirupur and his team regularly rescue Kangayam bulls from slaughter. He has introduced the mobile app as an extension of rescue/rehabilitation/conservation activities to improve breeding of genetically pure Kangayam cattle and ensure sales to only needy farmers.

He had recently launched 'Konga Goshala' to rehabilitate the Kangayam cattle,

“Both these steps are aimed at saving the Kangayam cattle from extinction. When it comes to sales, the app will help prevent the cattle from falling into the hands of middlemen who could resell the animal to slaughterers as the buyers too have to register first”, he told *The Hindu* .

The registration of names into the database is being done free.

Explaining its salient features, Mr. Sivakumar said that the app would function on Android based mobile phones and iPhones with Tamil as the language to enable farmers use it comfortably.

“Only those farmers having their addresses within the Kangayam tract that spreads over Tirupur and some adjoining districts, are allowed to join the group”.

The application enables a farmer to locate a bull which is near to their location for mating with the cow.

“For sales too, features are embedded to help buyers easily identify the cattle of their choice,” said Mr. Sivakumar.

The marketing of the app will be confined to within the farming community.

Dairy farmers being sensitised to ration balancing programme

Dairy farmers in Erode district are being sensitised to the ration balancing programme (RBP), an intervention by National Dairy Development Board (NDDB) to educate milk producers on balanced feeding of their dairy animals.

The benefits are multi-pronged, according to P. Muthukumar, a dairy farmer of Kuzhalipalayam village, who is keen to avail himself of the benefit of door-step advisory services on proper use of locally available feed resources at least possible cost; increasing milk production with more fat and SNF (Solids Not Fat) percentage; improving reproductive efficiency by reducing inter-calving period and increasing productive life of animals; improving general health; and improving growth rate in growing calves leading to early maturity.

The NDDP has made available detailed guidelines on RBP and fodder development in its website: <http://www.nddb.org/ndpi>. Projects submitted by cooperative Milk Unions, State Dairy Federations and producer companies have been approved for Coimbatore, Tiruchi, Madurai, Vellore, Villupuram, Erode and Salem Milk Unions.

So far, around 6000 dairy cooperative societies across the country have been covered under the project. Under National Dairy Plan Phase -1, Rs. 360 crore have been earmarked for RBP implementation in 14 States, according to official statistics.

Take fruits of research to farmers, says Minister



Minister for Agriculture K.P. Mohanan inaugurating the golden jubilee of the College of Agriculture, Vellayani, on Wednesday.

The benefits of research should be made available to farmers, Minister for Agriculture K.P. Mohanan has said.

He was inaugurating the year-long golden jubilee of the College of Agriculture, Vellayani, here on Wednesday.

Mr. Mohanan stressed on the need to provide the best of facilities for students studying in universities.

He said the organic farming initiatives of the State had attracted national attention. The Union government had decided to conduct a seminar in the State in December on how to take up organic farming. Agriculture Ministers of all States will take part in the seminar.

The university should make efforts to complete all projects in time, he said.

New facilities

The Minister also inaugurated a new pesticide residue analytical laboratory building, amphitheatre, and biotechnology laboratory.

He also laid the foundation stone for a diamond jubilee auditorium, alumni gate, new students' hostel, and honey control lab.

Presiding over the function, Jameela Prakasam, MLA, stressed the need to upgrade hostel facilities for students on the Kerala Agricultural University (KAU) campuses.

Farm tourism

KAU Vice Chancellor P. Rajendran, in his welcome address, proposed to explore the agri-tourism potential of the Vellayani campus. He called for the setting up of an international convention centre making the best of the natural beauty of the Vellayani lake, and sought help for taking up the project.

He said infrastructure development to the tune of Rs.98 crore had been taken up on various campuses of the university. “On the Vellayani campus, works already taken up and that are being inaugurated will total Rs.12 crore,” he said.

Cultivating a taste for coffee

Growers' children returning to tend their plantations on the rise



Workers in a coffee estate in Belur taluk of Karnataka.

B.M. Manoj of Ballupete in Sakaleshpur studied MBA in Australia and worked in a company for a couple of years in Bengaluru. He returned to his village in 2011 to look after his estate along with his father B.A. Mohan Kumar.

A reverse migration of young farmers back to tend their coffee plantations appears to be a new trend, which was not seen for nearly 15 years now. Unlike children of potato, ragi or coconut growers, well-

educated members of coffee-growing families see opportunities to earn well in the plantation sector they are already familiar with.

Mr. Kumar is happy with his son's decision. "His modern thinking and my experience in coffee cultivation have helped the estate well. Now he is adopting newer techniques, including drip irrigation methods, to tackle shortage of labourers and other problems," he says.

Manoj, (32) was heading a team in an event management company after his studies. "I had travelled to many countries. I never regret my decision to return to my village," he says.

T.C. Hemanth Kumar, Joint Director of Coffee Board, who has been serving the board for last 32 years, says: "A decade ago, planters preferred their children getting higher education and becoming professionals. Now it is changing. During my visits to plantations, I have noticed many youngsters looking after estates. They have returned to their native places after studying BE, M.Tech., MBA."

"There is a growth opportunity in coffee plantation sector," says Dr. N.K. Pradeep, member of Coffee Board, and one of the big planters in Hassan. Mr. Pradeep, being a doctor, had to give up his practice at the age of 24 because of his father's death and look after the estate. "I was forced to return to my native place. However, I am happy with what I am doing today," he said. He pointed out that many more would return to villages provided the government improves both digital and physical infrastructure. "We require good roads, power supply, besides access to internet," he said.

Former Minister and planter B.D. Basavaraj said many youths had come back after working in the private sector for some years because they wanted peace of mind, which they did not get in their workplaces. "Here they get good environment and enjoy good health. Moreover, they are independent here, no need to listen to anybody!" he adds.

Planters' children return home to take care of their estates

Black gram price touches an all-time high

After red gram and Bengal gram, it seems to be the turn of black gram (urad dal) prices to go through the roof.

The price of black gram, which was Rs. 7,910 a quintal in September first week, crossed Rs. 11,042 a quintal by September 30. This is the highest

ever price reached by black gram in Bidar Agricultural Produce Marketing Committee's wholesale market. The price of the protein-rich lentil has increased by 50 per cent in just a month. The price moved up steadily throughout September.



This has hit the food basket hard. Retail price has crossed Rs. 140 a kg. Retail price of peeled urad (*bolu kalu*) has touched Rs. 155 a kg and urad dal is selling at Rs. 170 per kg.

Scarce rainfall and changes in cropping patterns have caused shortage of black gram that has led to an unprecedented price hike. This year has been the worst, with scarcity reaching 40 per cent, said Ravi Deshmukh, a farm scientist. He said that lower returns on investment for a few years forced farmers to shift to other crops.

The area on which the crop is grown has also decreased drastically. For some years, Bidar was the highest black gram growing district in the State. But this year, the area hardly crossed 6,000 to 7,000 hectares, Mr. Deshmukh said.

The district has suffered poor rainfall for three years now, reducing the crop yield. During an average rainfall year, black gram production was 5 to 6 quintals an acre. But this year, it has been just around 2 quintals an acre, Baburao Karabari, a farmer in Bhalki, said.

“Usually the price is very low, sometimes even Rs. 1,000 a quintal. That is why farmers have shifted to profitable crops such as soya bean,” said Ramakanth Patil, a farmer from Basavakalyan.

Karnataka's foodgrain output may see 40 percent fall

Karnataka, which saw an all-time record foodgrain production of 137.91 lakh tonnes during 2010–11, has set a target 140 lakh tonnes during the current year.

Now, following a demand from the Opposition as well farmers in the wake of farmers' suicides, the State government has decided to waive interest on medium- and long-terms loans borrowed by famers from cooperative banks and Karnataka Land Development Bank.



The shortfall in foodgrains is on account of drought situation coupled with crop damage due to recent hailstorm. According to official sources in the Agriculture Department, the expected loss of production of cereals was 30 per cent, pulses – 42 per cent, oilseeds – 52 per cent and commercial crops (cotton and tobacco) – 35 per cent.

A total of 11.95 lakh hectares of land under cereals, 21.35 lakh under pulses, 5.93 lakh hectares under oilseeds, and 3.61 lakh hectares of land under commercial crops have been affected owing to moisture stress. The total estimated loss owing to drought in the State is Rs. 15,636.07 crore and the State has sought Rs. 3830.84 crore aid from the Centre.

The rainfall deficiency of more than 27 per cent in the Malnad region has resulted in the poor inflow into major reservoirs. Against the total capacity of 860 tmcft, only 470 tmcft, which constitutes 55 per cent of the total capacity, is the storage in 13 major reservoirs.

“We have decided to waive interest on loans amounting Rs. 2,300 crore borrowed by farmers. Only one year’s interest — September 2014 to September 2015 — will be waived,” said Minister for Cooperation and Sugar H.S. Mahadev Prasad. The Minister, however, ruled out waiver of crop loans.

‘Demonstrate technology used to mitigate impact of climate change’

‘Warming, temperature extremes and strong variability in rainfall are likely to impact food and livelihood security of the population in India’

Ahead of the UNFCCC (United Nations Framework Convention on Climate Change) Conference of Parties (CoP) 21 later this year, the Prime Minister’s Office has asked Ministries related to climate change to publicly demonstrate the technologies adopted by them to mitigate the effects of climate change.

The PMO has asked the ministries concerned to visibly demonstrate — through the media — the initiatives taken for reducing Green House Gas (GHG) emissions ahead of the conference in which the participating countries are expected to reach an international pact to tackle climate change by 2050. At Paris, heads of States are expected to agree on a post-2020 plan that will guide future actions.

For India, projected climate change scenarios forecast consistent warming trend with temperature increase ranging from 1.5 to 4.3°C. Warming, temperature extremes and strong variability in rainfall are likely to impact food and livelihood security of the burgeoning population in India which is dependent on agriculture, says ICAR Deputy Director-General (Natural Resource Management) Alok K. Sikka.

Speaking to *The Hindu* Dr. Sikka said India’s strategy in agriculture would be on adaptation to changes in the climate rather than mitigation. “We cannot compromise on agricultural production and productivity. Therefore we are concentrating on climate smart practices to make our agriculture resilient to climate change.”

Awareness programme

Brahmakumaris to visit Srikakulam villages

Brahmakumaris will take up farmer's awareness programmes in Srikakulam district between October 1 and November 1 to instil confidence among them. The spiritual organisation's representatives Sarada, Sudha, Veena and others said the villagers should adopt age old practices to make agriculture remunerative and help them get good income.

“Many farmers are stopping agriculture activity. It is a dangerous situation to the entire nation. That is why the organisation wanted to

conduct awareness programmes in 160 villages of 18 mandals," They added.

Winter school on groundnut begins

The winter school currently under way at ANGRAU's Regional Agricultural Research Station (RARS) has provided a platform for the best of the brains to discuss the various aspects of groundnut, right from production, protection, crop management and further to post-harvest.

Twenty-five scientists from Andhra Pradesh, Telangana, Karnataka, Tamil Nadu and Jharkhand, all of them working on groundnut research and extension, have converged at the campus for the first-ever winter school to be conducted in the State post-bifurcation.

"Apart from conventional breeding, the event discusses the biotechnological approaches to ensure tolerance to drought, diseases and pests," said RARS Associate Director T. Giridhara Krishna. The Indian Council of Agricultural Research (ICAR) gave its nod to the proposal forwarded by the Tirupati RARS, in view of its expertise and achievements in the field of groundnut research.

The interactive session will be brainstorming in nature, where the scientists present the farming, research and extension practices in vogue in their respective States and imbibe the inputs learnt from the forum.

"We are roping in experts from various fields to address the participants," the course director V. Krishna Reddy added. The event concludes on October 15.

While it is groundnut research this time, the RARS is contemplating to hold a similar winter school next year on biotechnology, another promising area for the research station.

Twenty-five scientists from various States

have converged at the campus for the first-ever winter school being conducted in the State post-bifurcation

Paddy crop hit by leaf roller pest; officials caution farmers

Agriculture department deputed teams, details precautions

The Agriculture Department has cautioned farmers on taking steps about the leaf roller or leaf folder worms, which have affected paddy crops in a few parts of the district.

Sarnath Babu, Joint Director of Agriculture (In-charge) said in a statement that during the Kuruvai season, paddy had been cultivated in an area of 6,971 hectares and the crops were in the vegetative and flowering stages.

BEWARE OF THIS PEST

Leaf folder (or) leaf roller: *Cnaphalocrocis mainsails* / *Marasmia patnalis*

Symptoms

- Leaves fold longitudinally while the larva remains inside
- Leaves become white and dry after the larva scrapes the green tissues
- The whole field exhibits scorched appearance during severe infestation

How to identify the pest

Egg: Yellowish white in colour and of flat, oval shape

Larva: Translucent and greenish

Adult: Moth is brownish, with many dark wavy lines in centre

Source: Tamil Nadu Agricultural University

“The crop has been cultivated in the Madurai East, Madurai West, Vadipatti and Alanganallur blocks. It has however been brought to the notice of the team in-charge of pest-control that crops in a few areas have been affected by the leaf roller worms, which can cause widespread damage to the crops if not checked in time,” he said.

While the department has deputed teams to interact with farmers at the field-level and offer solutions if the damage is very high, they have further said that precautions can be taken by farmers themselves if there is a 10 per cent damage to the crop at the vegetative phase and 5 per cent damage to the crop during the flowering phase.

The farmers have been instructed not to use nitrogenous fertilizers. They have also been asked to keep the bunds in the fields clean and set up light traps, which can take the pests away from the crops.

The department is however expecting a high yield for the 'Kuruvai' season as the area under cultivation has increased.

While the officials initially expected a yield of 28,000 tonnes from 5,100 hectares, the paddy coverage has gone over 6,000 hectares.

The curtain falls on Krishi Mela

13 lakh people turned up at the four-day event

The four-day Krishi Mela-2015 organised by the University of Agricultural Sciences (UAS) concluded in Dharwad on Wednesday. Despite drought in the region, the turnout was good.

Apart from local farmers, the farmers and farm scientists from other States like Goa, Maharashtra and Andhra Pradesh participated in the event. The event provided a platform for farmers to interact with each other. The farmers had a rare chance to meet and discuss their problem with well-known agriculture experts and progressive farmers.

Plant protection

The other major problems discussed were on plant protection, Agronomy and Horticulture.

On the final day of Krishi Mela, over two lakh people participated. During these four days of the Krishi Mela, nearly 13 lakh people turned up. For the first time, the varsity had introduced free bus services to the farmers willing to participate in field visits.

Jowar, sunflower displayed

High quality jowar, sunflower and other crops were displayed. UAS Dharwad selected one farmer each from each district for the 'Shreshta Krishika' and 'Shreshta Krishi Mahile' awards.

The varsity also gave away youth awards titled 'Shresta Yuva Krishika' and 'Shreshta Yuva Mahile'.

This year, as many as 42 youth agriculturists received the award.

“The results are increasing our understanding of how these medications can affect the brain,” Anderberg added.

The medication used for Type-2 diabetes mimics the gut-brain hormone called “glucagon-like peptide-1”.

Recently, Type-2 diabetes has begun to be treated with medications that resemble the body’s own hormone GLP-1.

The hormone GLP-1 is produced naturally, both in the intestines and in the brain.

After every meal, the levels of GLP-1 in the blood increase, which lead to an increase in insulin production and a decrease in appetite.

Medications resembling GLP-1 have become a potential new treatment for obesity and these findings can be of major clinical significance.

“Our data can make an important contribution to the understanding of these mechanisms,” Anderberg added.



Foodies, did you know that high fat food can be addictive?

Foodies, beware! Eating a high quantity of fatty foods could trigger the brain’s hunger signalling awry, causing you to want more — even if you don’t need it — and gain weight, according to a recent research. To make sure you eat what you need to survive, your body’s chemistry associates eating with pleasure, but when that balance gets thrown out of whack, it results in obesity.

“We defined the why, where, and how of ‘hedonic’ obesity and found that disrupting a specific signalling pathway in the brain can lead to overeating, specifically food items that are high in fat,” says co-author Dr Kevin Niswender of Vanderbilt University in the US, emphasising on the word hedonic, which means guilty pleasures.



“Our findings reveal a system that is designed to control eating of foods that are high in fat and possibly sugar,” says co-author Dr Aurelio Galli. “This system can be hijacked by the very foods that it is designed to control.”

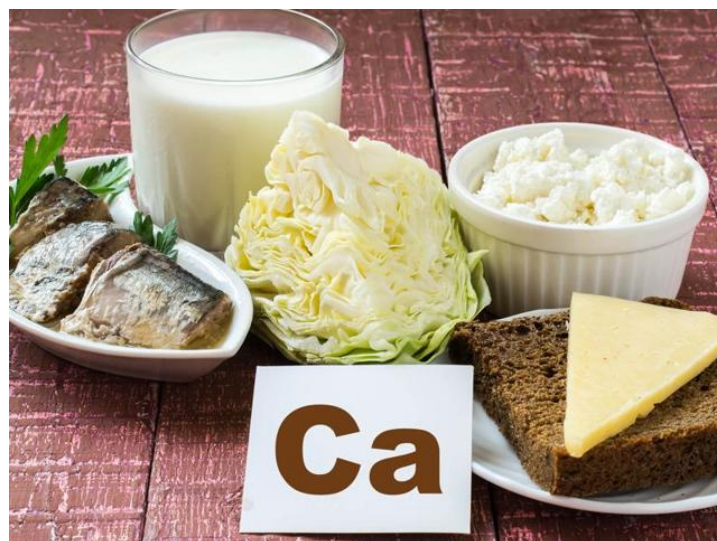
When signalling in parts of the brain that control eating goes awry, it leads to a vicious cycle, prompting more and more fatty-food intake that only reinforces the brain’s hunger.

Here are a few simple tips to help you control your fat addiction:

- 1. Make healthy fats a part of your diet:** Include olive oil, avocados, oily fish such as salmon, trout, tuna and mackerel and lean meats in your daily diet. These foods help your body get instant energy. They work as long-lasting fuel that can keep you going for a long time. While they satiate your cravings for fatty food items, they also help keep those calories and maintain a healthy weight.
- 2. Have a filling but healthy breakfast:** Never kickstart your day with drinks and food that are high on fat, sugar and salt. It will trigger cravings for similar foods throughout the day. Instead, start your morning with a bowlful of fresh berries, healthy nuts, freshly chopped fruits, baked veggies and yoghurt.

- 3. Guilt-proof your refrigerator:** Do not overstock your refrigerator with calorific, unhealthy food and sugary, aerated drinks. Having easy access to such items will make it tough for you to resist. A slight trigger such as a bad day at work or your favourite movie on the TV, and you will end up consuming it all.
- 4. Don't deprive yourself of occasional treats:** No diet plan can ever be successful without a cheat day plan. It is okay to treat - yourself to a small pastry or your favourite pizza once in a week.
- 5. Portion control:** Cutting down portion sizes helps immensely in controlling food addiction. If you can't stop piling your plate with those tempting delicacies, switch to smaller plates and bowls. That way, you will eat less by default.

Thought calcium pills are good for your bones? Think again



This study will turn one myth of the wellness industry on its head. Increasing calcium intake through dietary sources or supplements, say researchers, is unlikely to improve bone health or prevent fractures in older people.

Collectively, results of two studies suggest that increasing calcium intake, through supplements or dietary sources, should not be recommended for fracture prevention.

Guidelines advise older men and women to take at least 1000-1200 mg/day of calcium to improve bone density and prevent fractures, and many people take calcium supplements to meet these recommendations. Recent concerns about the safety of calcium supplements have led experts to recommend increasing calcium intake through food rather than by taking supplements, but the effect on bone health is unknown.

It is time to revisit recommendations to increase calcium intake beyond a normal balanced diet, argues Karl Michaelsson from Uppsala University in Sweden, in an accompanying editorial.

He points out that ever increasing intakes of calcium and vitamin D recommended by some guidelines defines virtually the whole population aged over 50 at risk. Yet most will not benefit from increasing their intakes, he warns, and will be exposed instead to a higher risk of adverse events.

The weight of evidence against such mass medication of older people is now compelling, and it is surely time to reconsider these controversial recommendations, he concludes.

The study is published in The BMJ.



THE TIMES OF INDIA

Benefits and side-effects of herbal medicines

I don't belittle medicines that I don't have the knowledge of, and I am always interested in patients who find relief from an alternative branch of medicine. One of the reasons being, I attempt to understand how a particular medication has helped.

However, the one thing that I'm skeptical about, and which I dissuade my patients from following, is metal therapy. I have seen people suffering from kidney failures, and a few even expiring, so that's one 'therapy' that I wouldn't advise anyone to follow.

Several of my patients often ask me about the benefits/side-effects of herbal medicines. Let me tell you, herbal treatment is not alien to doctors practicing allopathy. I'll give you an example.

There is a medication called Sarpagandha (*Rauvolfia serpentina*, or the Indian snakeroot). It is a species of a flowering plant in the family Apocynaceae, and the extracts of this plant has a compound called reserpine, which is used in anti-hypertensive medications. It is said that Mahatma Gandhi used reserpine as a tranquiliser.



I have in the past used this compound to treat patients (it has now been replaced by better medications). The point I'm trying to make is, such compounds cannot be simply called herbal medication. Rather, they should be termed 'integrative medicine', the interface between herbs and allopathy.

Simply put, herbal medicines are compounds extracted from herbs. They have been in existence since ancient times. It is worth noting that 25% of the medical molecules available in the US have their origins in herbs, and at least 7,000 medical compounds have their origins in plants. Modern molecules such as quinine, aspirin and digitalis -the latter is derived from foxgloves and used to treat heart failure -come from herbal parenthood.

The extracts of several herbs are put into capsules and claimed that the tablets will act on the body the same way as the natural substance. This may not be true.

Among the herbs available in tablet form, and prescribed fairly often, is the St John's-wort, which is *hypericum perforatum*, a flowering plant in the family Hypericaceae, a medicinal herb with antidepressant activity, and potent anti-inflammatory properties. Till a few years ago, the general perception was that the medication being herbal, it was well-suited to treat such conditions in pregnant women, where pharmacological molecules may be contraindicated because of their effects on the foetus. This, however, does not appear to be correct.

There have been several concerns about using St John's-wort, and it appears that it does interfere with some of the allopathic medications.

Another interesting herb which I have come across is Ma huang, which is known in English as ephedra. It is a medicinal preparation from the plant *Ephedra sinica*, and is widely used by athletes as a performance-enhancing drug, and also for weight loss. In recent years, ephedra-containing supplements have been found to be unsafe, following which the US Food and Drug Administration banned it.

Then there is the hugely popular Malabar tamarind, or GARCINIA CAMBOGIA, a weight loss supplement that people from across the country vouch for. It is also said to stabilise blood sugar and cholesterol levels.

The Journal of Obesity in 2011 reviewed it, and said that people who used it did lose about 2lbs (about 0.9 kg) more compared to those who didn't. In 2009, the FDA had cautioned the doctors against its usage because of liver problems, but it couldn't be established that the medication caused such ailments.

A study in food and chemical toxicology stated that high doses of the herb can cause testicular atrophy. Anecdotal experiences do suggest it to be useful in weight loss but medical literature is sparse on the subject, and I will not comment on it.

People willing to spend a lot of money on the 'miracle pill' for weight loss, but they don't want to exercise or control their diet. As a result, the search for such a pill continues. The fact that it's herbal, therefore it's safe, is far off the truth.

One must remember that many medicinal molecules are derived from herbs, and when they become pharmacological, they are subject to extensive scrutiny by various organisations. Herbal medicines come under the umbrella of nutraceuticals, and there is an impression that all of them are safe for consumption, which may not be true. One must remember that the philosopher Socrates was put to death by making him drink a liquid derived from herbs.

[India to submit 'climate action plan' to UN today](#)

India will on Thursday submit its post-2020 'climate action plan' to a UN body in Bonn, specifying what the country will do to fight the threat of

climate change. Hours after its submission within the 'informal' deadline of October 1, the country will announce the plan in New Delhi on Friday (October 2) -the declaration coinciding with the birth anniversary of Mahatma Gandhi.

Aligning its 'Green India' pledge with 'Clean India' mission, the country will seek to remind the world on the occasion of 'Gandhi Jayanti' how the 'father of the nation' had forcefully campaigned for preservation of nature through a sustainable lifestyle and 'mindful consumption' when the issue of climate change and global warming were not even on the horizon.

All 196 member countries of the United Nations Framework Convention on Climate Change (UNFCCC) are expected to submit their climate action plan by October 1, specifying how they will act in their individual capacity to check global warming and fight menace of climate change under a post-2020 agreement.



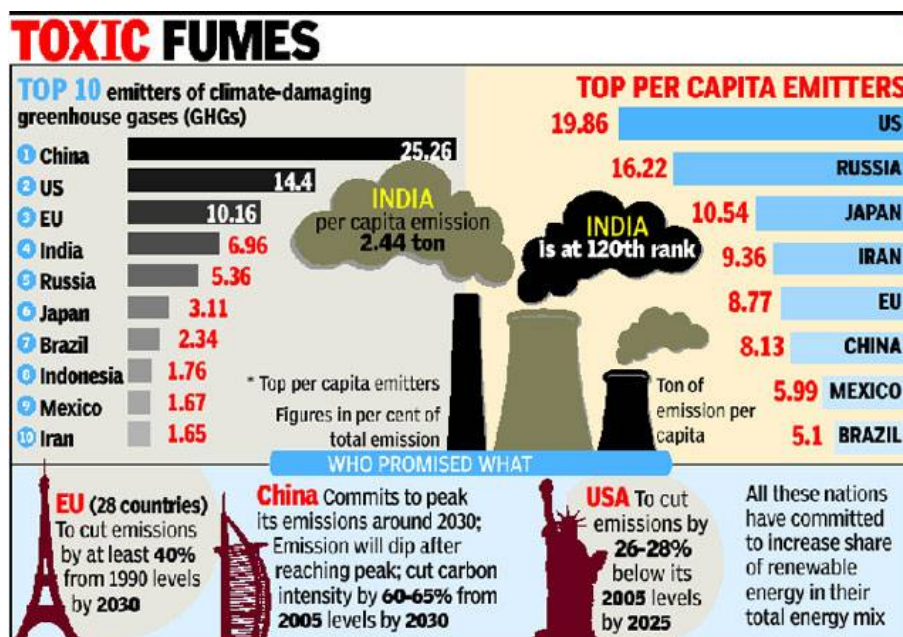
In a media statement following Prime Minister Narendra Modi's meeting with President Barack Obama in New York on Monday India said, "As far as our INDCs are concerned, Prime Minister said that we had sought permission to declare our INDCs on the 2nd of October. As you all know, the deadline is the 1st of October, but the 2nd of October has a special significance for all of us because it is the birth anniversary of Mahatma Gandhi, a person who was passionately committed to the cause of environment, who was a champion of sustainable development in fact. So, if we declare our INDCs on October 2, then it adds a very significant moral dimension as well to our commitment."

The 'Climate Action Plan' of individual country is called the 'Intended Nationally Determined Contribution' (INDC) in climate change negotiation parlance.

India's INDC is expected to focus on reducing carbon intensity (carbon emission per unit of GDP) through efficient use of energy, a huge renewable energy drive (focusing on solar, wind and bio-mass), a massive afforestation drive by unlocking a fund of over Rs 38,000 crore for this purpose, development of efficient public transport system across the country and a range of adaptation measures in various fields including agriculture, water resources and waste management.

India in its INDC will also give a detailed account of its efforts under various existing climate change action plan missions to voluntarily fulfill its pre-2020 commitment to fight climate change during the period when such actions are mandatory only for rich industrialized nations --historical polluters like the US, Japan, Australia and European Union (EU) countries.

In all, 125 countries, including the world's top three polluters (China, US and EU), have so far submitted their respective INDCs to the UNFCCC. Since October 1 is an 'informal' deadline, many countries will submit it beyond the deadline in the next couple of weeks.



These INDCs, comprising mitigation (emission cut promises) and adaptation measures, will form the basis of climate negotiations in Paris during 'conference of parties' (COP21) in November-December.

The world is expected to come out with a global climate deal after the negotiations (COP21) in Paris in December, determining what these 196 countries will do in their respective individual capacities post-2020 to save the world from disastrous consequences of climate change.

India is the fourth largest GHG emitter at present after China, US and EU, but it ranks 120th in terms of per-capita emission. India's per-capita emission is significantly lower in comparison to China, US and the EU nations.

India will not announce its peaking (peak emission) year, unlike China, in its 'climate action plan'. Instead of specifying any timeline to cap its emission of greenhouse gases, the country will, rather, focus more comprehensively on all five key elements which are identified as vital components of global efforts to fight adverse impacts of climate change.

The five elements which will be reflected in India's 'climate action plan' are mitigation (emission cut), adaptation, finance, technology transfer and capacity building.

THE HINDU **BusinessLine**

Australia questions India's mandatory sugar export quota

Australia has questioned India's decision to make it mandatory for sugar millers to export 5 million tonnes during the 2015-16 sugar season (October-September). "Australia has (at a WTO meet) indicated that if India intends to carry out the mandated exports at a subsidised price, it has the potential to distort world trade in the commodity," an official who attended a recent meeting of the WTO's committee on agriculture, told *BusinessLine*.

"Australia wanted to know what policy India intends to adopt on the export quota for sugar. It says the decision could have an effect on world prices since 4 million tonnes is equal to about 8 per cent of the world trade in sugar," the official said.

Australia, the EU, Colombia and Brazil also quizzed India on the increased rate of its export subsidy (announced in February) for raw sugar for the ongoing sugar year and asked it to respect the Bali ministerial declaration on export competition by exercising restraint.

International dispute

“The Food Ministry has to be very careful on how it supports the sugar industry. There is the risk of being dragged into dispute if it can be proved that certain subsidies are affecting world prices and distorting global trade,” a Commerce Ministry official said.



Under WTO rules, India is allowed to provide subsidies to exporters for internal transportation, external transportation and marketing only.

At the WTO’s Bali ministerial meeting in December 2013, all countries agreed to start reducing their export subsidies and move towards their gradual elimination. However, New Delhi has been subsidising limited quantities of raw sugar exports.

India has not yet announced export subsidies for the 2015-16 sugar season, but the Food Ministry is reportedly working on it. Else, sugar exports would not be feasible because of higher domestic prices compared to global prices. The export subsidy of ₹4,000 per tonne, announced in February for the 2014-15 season, for up to 1.4 million tonnes (mt) of sugar, lapses on September 30.

Through mandatory sugar exports, India aims to reduce glut in the domestic market and help millers pay cane arrears to farmers, which stood at ₹14,000 crore at the end of August.

New Delhi seeks time

At the WTO meet, New Delhi asked for more time to respond to Australia's query, as it was submitted after the deadline for questions.

The Indian Sugar Mills Association estimates a carryover stock of about 10.2 mt from this season to the next because of supply outstripping demand. With sugar output in 2015-16 expected at 28 mt, the total supply next season is pegged at 38.2 mt.

Domestic demand is estimated at 25.2 mt, which could leave a surplus of 13 mt next season without exports.

Oil palm competes with arecanut, rubber in Karnataka



“It is a crop from which I get a salary every month,” says GN Ratnakara, an oil palm grower in Badagabail village of NR Pura taluka in Chikmagalur district.

Of the 16 acres he owns, Ratnakara has planted oil palm on about five acres.

Diversification into oil palm has borne fruits for Ratnakara, who now annually harvests around 30-40 tonnes of fresh fruit bunches (FFBs) from each hectare that earns him an income of around ₹3 lakh.

“Oil palm was planted as an inter-crop to prevent the fall of arecanut trees from wind. Now, oil palm is the better crop for me,” says Gopalakrishna Udupa, a farmer in neighbouring Shivamogga.

Economics of oil palm v/s others					
	Oil Palm	Arecanut	Sugarcane	Banana	Paddy
Yield (tonnes/ha)	25	2.5	100	40	4.5
Price of the produce	₹9220/tonne	₹2.5 lakh/tonne	₹1800/tonne	₹8000/tonne	₹1200/quintal
Total annual income (in ₹ lakh)	2.3	6.25	1.8	3.2	1.62
Annual expenditure (in ₹ lakh)	0.5	2	0.7	1.25	0.45
Returns (in ₹ lakh)	1.8	4.25	1.1	1.95	1.17
Specialty of the crop	One-time planting and less maintenance cost	Volatile market, yellow leaf disease	Planting once in three years, labour intensive	Planting once in two years, high cost of cultivation, and labour intensive	Planting once in three months, labour intensive

Source: Department of Horticulture

Udupa, President of Shivamogga-Chikmagalur Oil Palm Growers’ Federation, was also among the few farmers who took up oil palm way back in 1994 under the pilot project of the Karnataka government.

Though oil palm was introduced three decades ago in the State, it has not made significant inroads and is yet to catch farmers’ interest despite the governments, both Centre and State, providing huge subsidies to promote it, while ensuring that the produce is bought back by the designated processing entities at an assured price.

Areca nut rules

“Though oil palm has a vast potential, a large section of the farmers in the region see a potential in competing crops such as arecanut and rubber,” says H Vishwanath, Deputy Director of Horticulture, Shivamogga.

For many farmers, the price of arecanut is still attractive though it has come down from its highs a few months ago.

The farmers’ preference to go for a lucrative crop such as arecanut, sugarcane, banana and coconut is reflected in the acreage under oil palm, which has either been stagnant or seen a drop in some districts.

In Karnataka, total oil palm acreage is 13,000 hectares. In Shivamogga, the oil palm acreage is 728 hectares, lower than 1,240 hectares in 1992. Similarly, in Chikmagalur, it stands reduced at 297 hectares against 643 hectares that was planted since 1992.

Untapped oil palm

There is a huge potential for oil palm considering that India imports edible oils worth ₹65,000 crore, whereas the domestic production helps meet only 50 per cent of the requirement, says T Shivananda, Assistant Director of Horticulture (Oil Palm Development) in Shivamogga.

Comparing the yield from various crops producing edible oil, Shivananda said the yield from a hectare of coconut farm is 1.2 tonnes, sunflower is 0.86 tonnes and groundnut is 1.06 tonnes.

Compared to these commodities, the yield from a hectare of oil palm plantation is 4-5 tonnes, he said. After fourth year of planting, oil palm can be harvested throughout the year. With this, the farmer is also assured of a monthly income, as the amount is directly credited to the account of the farmer without the interference of any middlemen.

Govt support

The State fixes a minimum support price (MSP) for the FFBs every year and currently it stands at ₹9.22/kg.

While the agency, which is assigned the task of buying the produce from farmers and processing them, credits the market price to the bank accounts of farmers, the government pays the balance amount under the MSP.

The MSP for oil palm was ₹7,500 a tonne in 2012-13, ₹8,500 in 2013-14, and ₹9,220 in 2014-15. Many farmers were of the opinion that though the cost of cultivation of competing crops such as arecanut and rubber is more, they get the money immediately when they sell it to the local trader.

In oil palm, the amount is credited every month to the bank account of the farmer. Because of the bulk amount they get in seasonal crops they prefer that, though oil palm assures monthly income throughout the year, opined many growers.

Ramesh from Bhadravati, who has taken up oil palm as a mono-crop on 12 acres of land, said that arecanut has no other use than chewing.

Still many people are going in for its cultivation because of the good market rate for the commodity.