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THE HINDU

Rivals turn the tables on climate

[Wednesday's deal](#) between the world's two biggest emitters of greenhouse gases (GHGs) raises the prospect of a robust international agreement in Paris next year. Although the two countries account for over one-third of global GHG emissions, the U.S. and China have for the best part of the last 20 years been hostage to economic arguments to act decisively on global warming. Now, the U.S. has promised to cut emissions by an extent of 26 to 28 per cent below 2005 levels by 2025, which would mark a near-doubling of the current pace of reductions. As for China, President Xi Jinping has pledged that the country's emissions would peak by around 2030; by that time, solar and wind power would account for 20 per cent of overall energy sources. This is based on projections of a slowdown in economic growth, a phase-out of obsolete power plants and a rise in the share of renewables. In the absence of further details, environment experts and activists remain unsure of the full implications of the latest agreement. But the political significance of the agreement is clearly beyond doubt. The latest announcements represent a huge advance over the entrenched positions held by the two countries until recently. Washington did not ratify the lone legally-binding global pact to cut emissions — the 1997 Kyoto Protocol — as it opposed the view that developed and developing countries had differentiated responsibilities on countering global warming. Beijing was exempted from the requirements of the Protocol in view of its status as a developing country.

The proposals presented by the U.S. and China follow the announcement last month of a 40 per cent reduction in GHG emissions by 2030 for the entire European Union. Together, the package from these three main players would create the momentum for other major high carbon footprint countries to come up with

matching commitments ahead of upcoming talks in Lima and a final deal in Paris. Notable among these are India, Indonesia, Australia and Brazil. In the meantime, President Barack Obama would have to sell the deal to a Republican-dominated Congress, with its share of climate-sceptics. The leaders of the Group of 20 countries meeting in Brisbane this weekend should act on their commitment to reduce subsidies for the further exploration of oil, gas and coal. The September 2014 report of the Global Commission on the Economy and Climate also makes a strong case against the prevailing high subsidies regime. Beijing and Washington should exert their considerable clout to realise this objective at the earliest. Such an effort would be consistent with their pledge to increase reliance on renewable energy.

Rain continues to batter delta

Three persons, including one woman, electrocuted

Heavy rains continued to lash Nagapattinam and Karaikal districts for the third day on Thursday.

Holiday was declared for educational institutions in the two districts following intermittent rain. Low-lying areas in Vedarnayam, Thalaignayiru, Nagapattinam, Mayiladuthurai, Sirkazhi, Porayar, Thirumarugal and surrounding areas were inundated.

Fishermen in few parts of the district kept away from the sea due to adverse weather condition. However, agriculture department officials said that the rain would not affect the crops much.

A maximum rainfall of 12 cm was recorded at Thalaignayiru followed by 10 cm each in Vedarnayam and Thirumarugal; 9 cm in Nagapattinam; 7.6 in Mayiladuthurai; 7 in Kollidam; 7 in Manalmedu and 3 cm in Tharangambadi during the 24-hour period ending at 8.30 a.m. on Thursday.

The rain left two persons dead in the district. Arunagiri (48), a lineman of Keezvelur, was electrocuted while working on an electric post to restore power connection to the house of one Sreenivasan of Nagalur village on Wednesday night.

Another person, Vijayarajan (28) of Attankarai Street near Athalaiyur in Thirumarugal union, who attempted to restore the power connection to his neighbour's house by climbing on an electric post was electrocuted when he came in contact with a live wire on Thursday.

THANJAVUR: Widespread and intense rain lashed several parts of Thanjavur and Tiruvarur districts on Thursday, extending the current wet spell deep into the week. Holiday was declared for educational institutions for the day in view of the torrential rain. Even during the short respites, the sky remained dark and cloudy.

The low pressure in the Bay of Bengal had brought copious rains for the delta districts this northeast monsoon season. Tiruthuraipoondi in Tiruvarur district recorded 14 cm rainfall while nearby Muthupettai registered 11 cm during the period.

In Thanjavur, Madukkur registered 9 cm to top the table followed by Tiruvidaimarudur and Kumbakonam 5 cm each. Pattukottai and Lower Anicut clocked 4 cm each.

The chief amount of rainfall (in cm) recorded in various centres during the corresponding period include Adirampattinam and Manjalaru - 3 each; Budalur and Tiruvaiyaru - 2 each; Ayyampettai, Papanasam and Eachanviduthi 1 cm.

In Tiruvarur district, the bout of rains that intensified on Monday continued to wet all areas on Wednesday night and on Thursday.

In Tiruvarur district, the town of Tiruvarur recorded 9 cm; Kudavasal and Nannilam - 6 cm each; Mannargudi and Needamangalam 4.5 cm each; Pandavaiyaru Head 3 cm and Valangaiman 2 cm.

A 65-year-old woman belonging to Pykkanadu near here was electrocuted on Thursday.

Police said K.Vasammal had come to be with her sister at Karikkottai near here when she accidentally tripped and fell on the earthing chord of an electric pole.

PERAMBLAUR: Fairly widespread rainfall was experienced in this district on Wednesday and Thursday.

Rainfall recorded till 8.30 a.m. on Thursday (in mm): Thaluthalai 33.60, Veppanthattai 21.60, Perambalur 21, Chettikulam 19 and Padalur 7.

Farm varsity takes up study of Panjappur water samples

'Objective is to know level of metals in water'



Scientists and research scholars of TNAU-Anbil Dharmalingam Agricultural College and Research Centre in Tiruchi on Thursday testing the samples of treated sewage water used for irrigation.—
PHOTO: A. MURALITHARAN

The Tamil Nadu Agricultural University's Anbil Dharmalingam Agriculture College and Research Institute in Navalur Kuttapattu near here has taken up a research project on the impact of the use of treated sewage water being let out for irrigation in the peripheral villages of Tiruchi.

The project was sanctioned in April this year under the All India Coordinated Research Project on Management of Salt-affected Soil and Use of Saline Water in Agriculture.

The sewage water from the treatment plant in Panjappur reaches the Cauvery via Koraiyar, covering a distance of 18 km. En route, about 300 acres of land is being irrigated, with 200 acres accounting for paddy while banana and flowers are grown on about 100 acres.

“The main idea of the research is to ascertain the presence of heavy metals in the sewage water,” says P. Pandiyarajan, Dean of the college.

A team of scientists and research scholars of the college have been working on the project, collecting samples of the sewage water at eight places every month.

“We have identified Panjappur inlet area, outlet point, Sri Kuzhumayi Amman temple zone, Uyyakondan Tirumalai, Woraiyur, Thaalavar Ubayam, Ettarai, and the tail-end point near the Cauvery for collecting the samples of water every month,” say P. Balasubramaniam, Head of Department of Soil Science, and L. Chitradevi, Associate Professor.

The scientists monitor the variation in the water samples from place to place and from season to season. They have noticed a distinct

change in the water samples last week after the onset of the monsoon.

Two laboratories are used for conducting the analysis. The results of the research would be released after one year as more number of samples were to be collected, they say.

Livestock research, management institutes needed in new State

'Araku-Paderu area is ideal to set up Veterinary Biological Research Institute'

Leveraging the strength of existing veterinary colleges for basic research and development, seeking an ICAR Central Livestock Production and Management Institute, a cutting edge discipline of livestock development incorporating economics, extension and entrepreneurship development, upgrading existing facilities to high standards and the Animal Husbandry Department and opening one more veterinary college are among the measures suggested by Dr. N. S. R. Sastry, a livestock specialist, for improving livestock and poultry production in the new State.

On the new state not having any Central research and development institutes, he suggests with some modifications in the policies the situation can be overcome.

Stressing the importance of the new State developing its own Veterinary Biological Research Institute, Dr. Sastry suggests that Araku-Paderu area would be the ideal location in view of the cooler climate, with sub-centres in Rayalaseema and South Coastal Andhra.

To meet the requirement of Disease Diagnostics and Epidemiology Lab, he suggests existing centres in each of the three regions may be developed into referral labs instead of one big centre.

To facilitate research, all-India coordinated ICAR and National Agriculture Innovation Project (NIAP) research and development projects should be set up in the veterinary colleges, he says.

Besides the new State should seek regional centres of National-level Avian Research Institute, Buffalo and sheep research institutes in the colleges.

Since livestock rearing is a crucial livelihood activity in the North Andhra a new veterinary college should be set up in the region as suggested by an ICAR Technical Committee as early as in the mid-eighties, says Dr. Sastry, a recipient of Eminent Scientist in Livestock Production award.

To overcome the recurrent problem of feed and fodder scarcity, he suggests that using modern technology and unconventional feeds and dry fodder feed blocks should be made at some centres and distributed in the deficit districts.

Communication from field level via video conferencing and tele-medicine and filling vacant posts are among the other measures he suggests.

Araku-Paderu area is ideal location to set up Veterinary Biological Research Institute, in view of cooler climate, with sub-centres in Rayalaseema and South Coastal Andhra.

N. S. R. Sastry

Livestock specialist

1350 cr. for evacuation lines for solar and wind projects

Centre to give funds from National Green Energy Fund

Giving a fillip to the State government's efforts to promote renewable energy, the Central government has agreed to provide Rs. 1,350 crore to the State energy utilities for construction of evacuation lines for solar and wind power projects. The funds would be provided from the National Green Energy Fund.

The Centre had also agreed for a proposal to enhance the number of agricultural pumpsets to be replaced by solar based piumpsets from 4,000 to 8,000. The Centre would, accordingly, provide 30 per cent cost incurred on the replacement of pumpsets as grant to the State.

The Union Ministry of Power, according to Energy Department officials, had directed the Western Coal Fields to supply an additional quantum of one million tonne coal to Andhra Pradesh to enable increase in coal stock position and make thermal power generation comfortable. The Centre had declared several other sops to the State during a high-level review meeting held at New Delhi on Thursday. Energy Secretary, Ajay Jain who participated in the meeting said the State had requested the Centre to extend its assistance in renovation and modernisation of the thermal power plants in Dr. Narla Tatarao Thermal Power Station in Vijayawada and Rayalaseema thermal power station that served more than 20 years. The Centre's assistance was also sought in strengthening of distribution and transmission networks of the southern and eastern power distribution companies as also the network of the Transmission Corporation of AP.

Mr. Jain had explained the Central authorities that the State was in the process of preparing detailed project reports for improving distribution network in rural and urban areas. The State was ahead of its counterparts in its preparedness for implementation of the ambitious power for all programme launched by the Central

government for providing qualitative and reliable supply to consumers. The meeting was chaired by Union Power Ministry's special secretary R.N. Choubey.

Centre eyes anti-dumping tax on imported arecanut

Union Minister for Chemicals and Fertilizers Ananth Kumar said here on Thursday that the Union government was thinking of the possibilities of imposing anti-dumping tax on imported arecanut.

Speaking to presspersons on the sidelines of a function here on Thursday, Mr. Ananth Kumar said the government was aware of the hardships of arecanut growers due to the crash in prices.

There was a demand to impose special import duties on imported areca nut to safeguard the interest of the Indian growers.

The Union government had already imposed the anti-dumping tax on silk. "The same may be extended to arecanut also. I will take up the matter with the Union Commerce and Finance Ministers," he added.

The Union government was holding parleys with the International Crops Research Institute for the Semi-Arid-Tropics (ICRISAT) to take up the soil test mapping of the agriculture lands in the entire country.

Monsoon calamities claim 123 lives

Monsoon calamities have claimed 123 lives in four months starting June 1 this year.

The highest toll was reported from Malappuram, 16 deaths, followed by Kasaragod and Kannur, 15 deaths each. The State will have to distribute Rs. 1.84 crore as compensation to these deaths that have direct bearing on the monsoon calamities.

The four-month-long period, which was marked by heavy rain battering the State, left another 24 injured. The rising waters also ravaged the agriculture sector leading to crop loss besides destructing a large number of houses. The calamity figures were accounted till September 15.

The State Relief Commissioner has sought Rs. 184.5 crore as Central assistance to be distributed as compensation for the calamity-hit areas. A Central team is currently touring the State for taking stock of the damage.

Kerala has pointed out that its State Disaster Response Funds (SDRF) would soon be exhausted, as it had huge commitments to meet. The SDRF “has a commitment deficit of not less than Rs. 147 crore,” which has forced the State government to seek Central assistance again.

Raichur growers hit by cotton price crash

Price dropped from Rs. 4,000 last week to Rs. 3,500 on Thursday

It was a bad day for Sharanabasava, a grower from Devasugur village in Raichur taluk, who had brought two mini lorries of cotton to Raichur hoping for a good price.

Unfortunately, the price of cotton had fallen from Rs. 4,000 a quintal a week ago to Rs. 3,500 a quintal on Thursday. With no other alternative before him, he sold his crop and was returning home unhappy.

“I have spent around Rs. 20,000 for growing eight quintals cotton in an acre this year. We could survive only if we get a price of Rs. 4,500 a quintal. The price crash has destroyed my hopes of repaying loans,” he said.

Mr. Sharanabasava was one among the thousands of growers in the district who had cultivated cotton in most of their agricultural land this year considering the price of around Rs. 5,000 per quintal for the produce last year. The price drop was indeed an additional blow to the farmers as they had already suffered low yield due to fluctuating rainfall. The drought and floods this year had shrunk their yield to eight quintals per acre compared with last year's 13 quintals an acre.

On Thursday, when *The Hindu* visited the Raichur cotton market, once known as the second-largest cotton market in Asia, most of the cotton coming to the city was sold out before entering the market yard.

Nexus

"The cotton ginning mills in the city have a wide network of commission agents who negotiate with growers before they reach the APMC cotton market, and bring their cotton-laden vehicles directly to the mills on the promise of better price. After half of the cotton is unloaded from the vehicles, the mill owners quote lower prices raising questions over quality. The growers normally don't take the pain of reloading the crop or return to the APMC market as they are not sure of getting a better price over there. They would simply sell at the price quoted by the mill owner," said Shashidhar Haravi, a grower who was a victim of such a deal. The collective understanding among mill owners and their nexus with commission agents was largely responsible for price crash, he said.

State president of Karnataka Rajya Raitha Sangha (KRRS) Chamarasa Malipatil blames the State government's "insensitivity" towards farmers for the price decline. "Cotton growers were first hit by draught and then floods. Now they are being hit harder by the government that has not come up with a scientific minimum support price (MSP) for cotton," he said.

Considering the investment of around Rs. 20,000 an acre in dry land and around Rs. 25,000 an acre in irrigated land for cotton cultivation, the government should fix an MSP of Rs. 6,000 per quintal, he said.

Krishna dist. officials gear up for green drive



THE HINDUVillagers passing through lush green paddy fields and coconut orchards at Konaseema in West Godavari district of Andhra Pradesh. Photo: Ch. Vijaya Bhaskar

The areas of Paritala, Nandigama, Vissannapet, Avanigadda and Nuzvid in Krishna district may soon be flush with greenery, thanks to the State-sponsored '*Karthika Vanamahotsavams*' designed to usher in greenery around. The Krishna district administration is gearing up to host the green drive in these five regions on November 17.

Addressing a meeting held in this connection with officials of the Social Forestry Department on Thursday, Collector M. Raghunandan Rao said in keeping with the decision of the State government to celebrate the occasion as a State event on a grand scale, a posse of officials had been appointed to ensure effective result.

An action plan had been drawn for planting of saplings on a large scale under the drive and free saplings could be acquired from the Social Forestry Department, he said.

Informing that the Municipal Department would be given 500 saplings against 200 to the Panchayat Raj wing, Mr. Rao said the sapling-planting activity could go a long way in paving the way for ecological and social development.

As part of a five-year plan (2015- 2020), a target has been set to plant saplings in 15,752 hectares across Krishna district in 2015-16.

He said the authorities were keen on growing banyan, peepal, neem and other medicinal trees and officials must identify spots such as government offices, panchayats, social welfare hostels, irrigation tanks and canal bunds and inform the respective department heads.

He said the government had decided to take up plantation of 1 crore saplings every year under the drive and every individual must feel responsible towards making this drive a grand success. DFO P. Ashok Kumar said the district had 21 per cent of forest and there was a need to enhance the geographical area to 33 per cent.



The sweet spot

There were two recent significant events in the *world* of sugar. First, the Supreme Court upheld the Allahabad High Court's order to force sugar mills in *Uttar Pradesh* to sell sugar stocks to pay arrears to sugarcane farmers. Second, the results of the *Maharashtra* assembly elections and the *new* BJP government threaten to shake

up state politics, which are firmly linked to the sugar industry. While the two are seemingly unrelated, a deeper analysis shows how both are important in the context of the complicated web that is the sugar industry in India.

It is difficult not to sympathise with the situation of cane farmers and the subsequent high court and Supreme Court decisions. But this is hardly a simple story in which capricious mill owners and greedy banks are exploiting poor farmers. The real culprit lies farther afield, having to do with perverse government policies in setting excessive sugarcane prices along with prohibitive controls on sales of sugar.

To understand this mess, let us start with sugarcane pricing. Pricing cane is far from straightforward, given characteristics peculiar to growing, harvesting and processing sugarcane. First, since cane takes a long time to grow before it can be harvested, production cannot adjust quickly to demand. Second, after it is harvested and cut, it must be crushed to extract juice within a day, or else it dries out and loses value. This means farmers cannot just cut cane and shop around for the best prices. Finally, there are economies of scale in cane crushing, which means large factories need to optimise the harvest, transport and crushing of cane, and can't just rely on buying it in spotmarkets.

Because of this, and in order to incentivise investment in sugar mills, governments have historically given mills local monopsony power

through a system of command areas under which farmers were only allowed to sell cane to mills in their area. Even though this system has since been abolished in many places, new mills still cannot be located within 15 km of current ones, and farmers remain beholden to the mills in their area. In order to protect them, Central and state governments set MSPs for cane.

Under such conditions, most economists would agree that some state intervention is warranted. Economic theory, however, clashes with the reality of Indian politics. Populist governments face the constant temptation to raise support prices, particularly in election years, and state advisory prices for cane are often much higher than even the Central statutory minimum price. Overall, India has some of the world's highest sugarcane prices.

At the same time, India is the largest consumer of sugar in the world. So how does the government meet the need for sugar while keeping cane prices high? Controls on the sale of sugar. The level of intervention is such that anyone looking at the sugar market may well believe she has been transported to the pre-1991 control raj: the government regulates monthly quantities of sugar that can be sold by mills; it controls exports and imports; it forces mills to sell a certain proportion of their sugar stocks at a loss to the PDS. It even mandates that sugar only be sold in jute sacks.

At this point, you would be right to believe that something doesn't add up with high input but low output prices. You would be wrong, however, to feel too sorry for sugar mills. In order to support this untenable situation, the Central and *state* governments direct an impressive array of sops towards sugar mills through subsidised credit and other inputs, forgiven loans, loan guarantees, bailouts etc. Such policies contribute to boom and bust cycles in the sugar market. So why do they continue? This is where elections and politics come in. It is an open secret that, in the major sugar-producing states in *India*, control of sugar mills — set up as cooperatives — allows one to control rural politics. A recent article in this newspaper described how this “gives political leaders control over *economic* activity and an opportunity to provide patronage to people”.

Hence, it is the *importance* of sugar mills in politics that has been *responsible* for confused policy. This is exemplified by the political manoeuvring following the election results in Maharashtra: a BJP MLA openly admitted that the party was considering “its strategy to get power in this [sugar] sector”. This is not necessarily limited to Maharashtra. Reports suggest that UP Chief Minister Akhilesh Yadav wants to open a sugar mill in Azamgarh, an area where previous mills have failed.

Yet there are some signs of change. After decades of propping up failing cooperatives, Maharashtra was slowly retracting subsidies,

leading to the gradual acquisition of these mills by private companies. Private sugar mills now produce almost 30 per cent of the sugar in Maharashtra, a scenario inconceivable 10 years ago. Meanwhile, the Supreme Court verdict could make banks more cautious about lending to sugar mills, making it harder for governments to keep financing unviable ones.

Of course, private mills could also be captured by politicians. Credit from state-owned banks could still be directed to sugar mills. Ultimately, as long as the dual interference by governments on both sides — unreasonably high minimum cane prices and unreasonable limits on sugar sales — continues, so will the volatility and unpredictability.

The writer is assistant professor of economics at Dartmouth College, US

Cow's milk can deliver AIDS drug to infants

A novel method of altering a protein in cow's milk to bind with an antiretroviral drug promises to greatly improve treatment for infants and young children suffering from HIV/AIDS, according to a *new* study.

One of the most commonly prescribed antiretroviral drugs for treating and preventing HIV infection, Ritonavir, has undesirable side effects and important oral-delivery problems.

Its physicochemical properties challenge its administration to infants, said Federico Harte, associate professor of food science at Pennsylvania *State* University.

“Ritonavir has a high hydrophobicity and low solubility in water, which lead to a low dissolution rate in the gastrointestinal fluid and, hence, to insufficient bioavailability.

“The liquid formulation used to treat infants over one month of age contains 43 per cent ethanol and has an awful flavour that has been described as bitter-metallic, medicinal, astringent, sour and burning,” Harte said.

“Moreover, when coming into contact with the stomach mucosa, Ritonavir causes nausea, vomiting and diarrhoea. Therefore, we need to develop alternative paediatric formulations of Ritonavir and overcome its poor water solubility to improve its oral administration to infants and children,” added Harte.

To solve that problem, Harte looked to a group of proteins in cow’s milk called caseins. Casein proteins form spherical aggregates called casein micelles, which *are responsible*, incidentally, for the white colour of milk.

The casein micelles in mammals’ milk are natural delivery systems for amino acids and calcium from mother to young, and might deliver Ritonavir molecules as well, Harte said.

“I have been working with bovine casein micelles for a few years now, and we have investigated the structure and functionality of these proteins,” he said.

“What we found is these micelles are able to carry molecules that have very little solubility in water, that have low molecular weight and that are very hydrophobic – such as Ritonavir,” said Harte.

Harte discovered that subjecting milk to ultrahigh-pressure homogenisation enhances the binding properties of the casein micelles.

Milk was homogenised at between 400 and 500 megapascals, disassociating the casein micelles and improving the protein’s binding qualities to attach to drug molecules.

An estimated 3.4 million children are living with HIV/AIDS, according to the *WorldHealth* Organisation.

Nine out of 10 of them live in resource-limited countries in sub-Saharan Africa, where effective antiretroviral treatments still are not widely accessible or available, researchers said.

The research was published in the *Journal of Pharmaceutical Research*.

INDIAN CITIES

INTERNATIONAL CITIES

Chennai - INDIA

Today's Weather



Partly Cloudy

Rain: 0

Humidity: 79

Wind: normal

Tomorrow's Forecast

Friday, Nov 14

Max 27° | Min 24°
Cloudy

Sunrise: 06:07

Sunset: 05:39

Barometer: 1015

Saturday, Nov 15

Max 27° | Min 24°

Extended Forecast for a week

Sunday
Nov 16



28° | 23°
Cloudy

Monday
Nov 17



29° | 23°
Cloudy

Tuesday
Nov 18



34° | 27°
Sunny

Wednesday
Nov 19



33° | 27°
Partly Cloudy

Thursday
Nov 20



33° | 26°
Partly Cloudy

DECCAN Chronicle

Love the jackfruit: Hawaii farmer



On a visit to Dakshina Kannada and Kasargod districts, Mr Love met progressive farmers and fruit growers with the help of friends and feels they have a lot to offer people of Hawaii.

Mangaluru: Mangaluru farmers are proving an inspiration to their counterparts in Hawaii and elsewhere thanks to progressive farmer, Ken Love from the famous US island.

On a visit to Dakshina Kannada and Kasargod districts, Mr Love met progressive farmers and fruit growers with the help of friends and feels they have a lot to offer people of Hawaii.

Spotting the unique grafting method followed by farmer, Jack Anil in Puttur for growing jackfruit, Mr Love posted photographs on Facebook and his friends back home were so impressed that they now want to use it too.

“Anil has developed a unique system of young tree bud grafting which I saw when I met him four days ago. I took photographs and my friends in the USA and Philippines were so glad to see it that they too want to follow it,” says Mr Love , adding that India has a large number of jackfruit varieties which people from other countries would like to taste.

“They want the saplings, fruit and also its value -added products. But there is nobody or no place from where one can get complete information about jackfruit in India.

Growers need to form something like a “Jackfruit Club,” which would be a one -stop shop for jackfruit,” he suggests.



Food habits to age gracefully

Here are some food habits that will help you age gracefully

Nobody can reverse one's age and ageing is an inevitable part of one's life. But here are some food habits to keep in mind that will help you age gracefully

Control your fat intake: Fat is high on calories which is bad for the skin and body. Avoid foods that high on fat content.

Pile up on fresh fruits and vegetables: Avoid packed food items and food that is not very fresh. Instead, eat lots of fresh, raw fruits and vegetables which will give you a fresh look.

Control your medicine intake: Substitute your calcium and iron tablets with food items which are natural supplements of these. Add more fish, fruits, leafy greens and nuts to your diet.

Not too much oil: Avoid eating very greasy food and using too much oil to cook your food in. Substitute unhealthy oil with olive oil, but only if you are not going to fry your food in it.

Improve cooking techniques: Make more use of roasted, boiled and stir fried food. Avoid fried food, frozen food and packed food items.

Eating too much of a good thing is also bad

Just because nuts and fresh fruits are good for you doesn't mean you eat a bowlful. Dieticians discuss the science of portion
It's greed of another kind. But city dieticians are concerned that health conscious Mumbaikars are taking it too far when consuming foods they believe are good for them."Often, when they learn something is healthy, they consume it in excess," says Bhakti R Samant, chief dietician at Kokilaben Dhirubhai Ambani Hospital. Just like with tasty carb-packed snacks, healthy eats can also wreck havoc with your body if you don't keep count. Oats, every weight-loss chaser's favourite, is a common example. "I've also seen patients who ate three bowls of dalia (broken wheat) in one meal. This defeats the purpose of staying fit," she says.

Portion size, explain experts, is gauged according to the nutrient value and calorie count each individual must meet per day. This is related to your frame, weight and activity level. To plan your meals,

lifestyle nutrition consultant Tripti Gupta, offers a simple rule of thumb, "For most cereals and pulses, your source of protein, the recommended intake should be two grams per kg of body weight. Excess can lead to weight gain."

Underestimate your physical activity and you are likely to run out of energy by the end of the day. Consulting dietician Jyoti Lalwani says, "If you are active, you will burn calories acquired from food. If not, the body will convert it into fats."

Regardless of whether a packaging insists its content are 'low fat', overindulgence will make you put on weight. Here's our list of popular healthy eats that need to be consumed in moderation.

SOYA

SERVING SIZE 200 gm in one meal; occasionally Whole soy foods contain high levels of healthy protein and fibre that help reduce bad cholesterol. But soya also contains large amounts of biologically active compounds called isoflavones. Excessive and regular consumption can activate the oestrogen receptors in the body, causing hormonal imbalance." For men, it means infertility, poor libido, for women, infertility.

LEAFY GREENS

SERVING SIZE 30-35 gm per meal. Slight steaming veggies high in oxalic acid can reduce their acidic content and increase nutrients. Large servings are dangerous since greens contain oxalic acid, a chemical that can lead to calcium deficiency, kidney stone and gout. "It steals the body of calcium, causing muscle pain and kidney stone," says Gupta. Spinach has the highest level of oxalic acid.

FRESH FRUIT

SERVING SIZE 5-6 pieces of strawberry, 10 of grape, 3 long pieces of papaya, watermelon, muskmelon, 1 medium-sized apple or orange Rich in fibre, vitamin C and nutrients, fruits can do no wrong, right? Too much, however, can lead to weight gain and make you acidic. "Never eat more than three fruits in a day. They can be high in calories and sugar. An apple is equal to two oranges in calorific content," says Samant.

OATS

SERVING SIZE 60 gm or 1.5 cup Oats are packed with soluble fibre which reduces 'bad' cholesterol (1.5 cup of oatmeal provides 6 gm of fibre). The problem is with eating too much. To make it palatable, you add sugar or worse, pick flavoured packs with additives. That knocks the break fast staple right off its pedestal.

WHITE MEATS

SERVING SIZE 2 medium pieces of fish/chicken Fish and chicken breast have long been canvassed as heavyweight carriers of protein with minimal calorific content. A grilled fish or chicken paired with salad is believed to be the ideal mid-day meal. Sometimes, eating it in excess can tip your protein intake. "Each gram of protein has four calories. The body stores all excess calories as fat," explains Samant. Excessive protein can also lead to liver and brain disorders since it leads to the production of ammonia, which the liver is unable to filter.

DRY FRUIT

SERVING SIZE 15 gm/day is all you need A dried apricot is a fraction of the size of a fresh one, but it packs in the same number of calories and sugar. Also, methi and pumpkin seeds and almonds. They contain oxalates and phytates -acids that cause kidney and gall bladder stone if eaten in excess. "Luckily, they are water soluble. So, soak them in water before eating," Gupta suggests.

10 easy steps to pain-proof your body

With time, we start conditioning ourselves to accept that joint pain and arthritis are natural signs of aging and are to be expected.

Many things can lead to chronic joint pain, but it is important to remember that pain is your body's way of sending a message - in this case it's that your body needs help. While you can take away the pain with medication, but to really help your body, you should identify the root cause of the pain and then apply the correct method to get rid of it.

If any part of the joint is compromised, be it through trauma, injury or inflammation, you will experience pain. Joint pain has become more common with age as years of physical strain takes its toll on the shoulder, elbows, hips and wrists mostly.

You can practice these simple precautionary measures to ensure a pain-free lifestyle.

1. Start with the basics by evaluating your exercise pattern, injuries, bed and even your work station.

2. Keep track of your pain by maintaining a daily journal, which will help in identifying recurring pattern.

3. Assess your stress levels and accordingly consider stress relief activities - light exercise, yoga, and meditation.

4. If the pain is persistent, you can opt for some advance therapy with magnets. Magnetic therapy is effective in controlling arthritic pain. 'Magnet wraps' strapped above the kneecap has proven to have reduced arthritic swelling and softening of joint inflammation.

5. Dehydration has been one of the underlying causes of joint pain. Consumption of magnetized water has a positive effect on relieving joint pain.

6. Poor posture, over the course of time, affects our joints. Fatigue, bad sleeping position, sitting in front of the computer at work for long durations, and extensive travelling has an adverse effect on your posture. Light stretches during the course of the day can help in maintaining a good posture, which will also help in minimizing backache and muscular pain.

7. Wearing high heeled and ill-fitted shoes frequently weaken body alignment, eventually putting pressure on the joints. Opt for shoe inserts/gel heels and insoles, they not only absorb shocks but also keeps your ankle from rolling.

8. Post menopause, women suffer from gradual bone loss. This can be controlled by consuming mineralized water on a regular basis. Calcium is particularly important as it is one of the major constituents in keeping your bones strong and healthy. Magnetized water contains essential minerals such as iron, calcium and magnesium that are crucial for maintaining bone density and preventing osteoporosis.

9. Consuming a wholesome diet consisting of essential minerals and proteins will make the bones healthy and strong. Avoid foodstuff that is rich in carbohydrates and fatty acids, like fried and processed food items, sugar & dairy products, because these food items can constitute to the swelling of joints.

10. Lightly massaging the knees and the shoulders using olive oil can help significantly in relieving joint pain and inflammations. While massaging the joint, the direction of your strokes should be towards the heart. However, if you feel the pain is unusual and is causing extreme difficulty in your day-to-day life, then consult a physician

Nearly 70,000 children suffer from diabetes!

Five-year-old Krati Dhawan often complained of abdominal pain and even lost weight. She underwent a series of tests for stomach infection, which tested negative. It was only after the girl's mother said her daughter was drinking a lot of water and urinating frequently that she got blood-sugar tests done which confirmed type 1 diabetes.

Krati, who had to be immediately put on insulin - which if not started could have pushed her into coma - is not the only one.

An increasing number of children are developing diabetes, with up to 90 percent of all childhood diabetes being type 1, where children are dependent on insulin for survival.

"Most children with type 1 diabetes are not diagnosed on time. The awareness levels about the disease are not as high as they should be, a common assumption being that diabetes affects adults and not children," I.P.S Kochar, paediatric adolescent endocrinologist and diabetologist at Indraprastha Apollo Hospital, told IANS.

According to Richa Chaturvedi, diabetologist and endocrinologist at Pushpawati Singhania Research Institute (PSRI) Hospital, though there has not been an increase in type 1 diabetes among children in India, type 2 diabetes has recorded an increase, which she attributes to rising childhood obesity.

Chaturvedi said it was also because children were having a "high caloric diet, junk food, there is a lot of inactivity, less outdoor games and more of indoor games".

"Around 70,000 children under the age of 15 suffer from type 1 diabetes. Another 40,000 have been diagnosed with type 2 diabetes and this figure is growing by five percent each year.

"Sixty-eight percent urban children don't exercise regularly. Obesity is also a common factor. Nearly nine percent of adolescents between nine and 18 years of age have more abdominal fat," Chaturvedi said.

Diabetes describes a group of metabolic diseases in which the person has high blood glucose (blood sugar), either because insulin production is inadequate, or because the body's cells do not respond properly to insulin, or both.

While type 1 is an autoimmune disease where children are dependent on insulin for survival, type 2 is due to insulin resistance and is seen in obese children with a family history of diabetes.

According to the Diabetes Foundation of India, about 50.9 million people in India suffer from diabetes, and this figure was likely to go up to 80 million by 2025, making it the 'Diabetes Capital' of the world.

Manoj Chadha, consultant endocrinologist at Hinduja Hospital in Mumbai, told IANS that type 1 diabetes in children was in large majority, with certain pockets in the south and the northeast reporting equal incidence of both types in children.

Listing a few symptoms, Chadha said: "Excessive urine, thirst and hunger, unexplained weight loss and fatigue are some of the common symptoms. All of these occur due to insulin deficiency."

Anup Misra, chairman of the Fortis C-DOC centre of excellence for diabetes and metabolic diseases, said: "Diabetes is beginning to appear much earlier in life in India, meaning that chronic long-term complications are becoming more common."

"There is a 100 percent rise in diabetes in the age group of 20-40 years," he said, adding that many patients were below 20 years.

Abhishek Kulkarni, paediatric and adolescent endocrinologist at the Jaslok Hospital and Research Centre in Mumbai, said the diet of children with type 1 diabetes should have age appropriate calories with normal proportions of carbohydrates, fats and proteins.

Experts said only type 2 diabetes can be prevented with a healthy lifestyle, exercise and avoiding obesity.

While type 1 diabetes can be well managed and detected early, the experts all unanimously called for greater awareness levels.

"The society and government should promote healthy lifestyle through advocacy and legislation, if required," Ajay Kumar Ajmani, senior consultant, endocrinology, at BLK Super Specialty Hospital, told IANS.

He said schools and teachers can also adopt a few measures like focussing on the quality of canteen food, replacing junk food with light, healthy food and also giving preference to outdoor games.

Why people cry even when they are happy

People overcome strong positive emotions with tears of joy, says a study, adding that crying actually helps them recover from the situation.

"Tears flow when people are overwhelmed with strong positive emotions and people who do this seem to recover better from those strong emotions," said psychologist Oriana Aragon at the Yale University in the US.

"People restore emotional equilibrium with these expressions," she added.

Aragon and her colleagues at Yale ran participants through some emotional scenarios such as cute babies or a crying spouse who is reunited with her soldier husband returning from war, and measured their responses.

They found that individuals who express negative reactions to positive news were able to moderate intense emotions more quickly.

They also found people, who are most likely to cry at their child's graduation are most likely to want to pinch a cute baby's cheeks.

There is also some evidence that strong negative feelings may provoke positive expressions.

For example, nervous laughter appears when people are confronted with a difficult or frightening situations, and we also smile during extreme sadness.

"The new discoveries begin to explain common things that many people do but do not even understand themselves," Aragon said.

"These insights advance our understanding of how people express and control their emotions, which is importantly related to mental and physical health, the quality of relationships with others, and even how well people work together," she concluded.

The paper was published in the journal *Psychological Science*.

Researchers studying climate change adaptation among Tamil Nadu farmers

TIRUNELVELI: Researchers from Ashoka Trust for Research in Ecology and the Environment (ATREE) and Azim Premji University (APU) have initiated an 18-month study on climate change adaptation among farmers in the Manimutharu Irrigation area in the Tirunelveli district of Tamil Nadu.

The study, funded by South Asian Network for Development and Environmental Economics (SANDEE), will look into how farmers are coping with irregular monsoon, frequent droughts and floods - some of the impacts of climate change.

A peculiar situation is prevailing in the Manimutharu Irrigation area. Water has not been released to the 80-foot channel from the Manimutharu dam in the last three years. However, water has been released to the 40-foot channel. This has resulted in a situation where a set of villages has received water whereas another set of villages have been experiencing a drought-like situation.

This has given researchers an opportunity to understand how farmers are coping with water shortage. The study will be helpful in policy making, according to researchers from ATREE.

After US-China deal, India may have to reset climate goals

NEW DELHI: The US-China joint pledge to take actions to limit their carbon emissions may put pressure on India to commit something substantial by March next year when all countries are expected to come out with their 'intended' goals of cutting emissions.

The development is also seen as something that may trigger a clamour within India to de-link itself from China ahead of the make-or-break global climate negotiations in Paris next year.

Climate experts and environmentalists, on the other hand, believe that whatever the top two emitters have pledged is well short of what is needed from them to limit warming to 2 degrees Celsius by the end of the century.

Shyam Saran, former special envoy of the PM on climate change, said, "This agreement was expected. With a declared peak year of 2030, China can continue to increase its carbon emissions until then, which could be a questionable achievement for climate change.

"India has, in a manner of speaking, already accepted an emissions ceiling. In 2007, then PM Manmohan Singh said India's per capita emission would never exceed the average per capita emission achieved by the developed world. The lower the latter, the ceiling for India too would have to be lower."

A section within the government believes the US-China deal would, by default, give India enough elbow room to peak its emission some 15 or 20 years beyond 2030 - the year around which China promised to reach its peak emission.

It means India may take it easy on its mitigation part and rather focus on adaptation and increasing its share of renewable energy in the country's total energy mix - the stand which the Narendra Modi government may take while de-linking itself from China at international platforms on climate issue.

Commenting on the deal, Sunita Narain, director general of Centre for Science and Environment, said, "It is a self-serving deal in which both countries have agreed to converge their per capita emissions at 12 tonnes in 2030. This is a high level of emission and not in line with meeting the 2 degree Celsius temperature target mandated by IPCC."

She added, "India should push for a principle-based emissions reduction target for all countries. This is the only way we can force the US and China to reduce their emissions which are in line with the planetary limits."



Experts say India should work with developing countries to reach a consensus on climate deal.

CSE experts believe that India should now work harder with developing countries and push for an ambitious global deal which is equitable and saves the world from catastrophic climate impacts.

Pointing out that the "deal puts a sub-standard benchmark for other countries to follow", CSE's climate expert Chandra Bhushan said, "In the name of getting a consensus in 2015, these two countries are forcing a catastrophic business-as-usual deal on the world. This deal is also a reality check for the government of India about its stance on global climate negotiations. India will have to decide whether it wants to follow the US-China deal or carve out a different path for itself."

THE HINDU BusinessLine

Organic vegetable fair

Bangalore, November 13:

Sahaja Organics, Nabard and SVP India will hold an organic vegetable fair in Bangalore on November 15 and 16 at Marigowda Hall, Lal Bagh, Bangalore. For details, call 080-26612315 or 9945382209. Our Bureau

'Harvesting a fruit crop a month can help tide over labour costs'

Mangalore, November 13:

Most Indian farmers complain about labour shortage these days. The case is no different in Hawaii.

In a recent chat with *BusinessLine*, Ken Love, a Hawaiian fruit grower and Executive Director of Hawaii Tropical Fruit Growers, said that he got feedback about labour shortage during his visit to India, and some farmers informed him that they pay \$4-6 a day for labour.

In Hawaii, the wage rate is around \$15 an hour. "Even at what we have to pay we cannot get help," he said.

According to him, the diversity of crops can help tackle this problem.

Stating that every month there is another crop or two to harvest for him, he said a half-acre gets picked very quickly.

Giving the example of different varieties of avocados, he said instead of harvesting Sharwil avocados in January, now there are a few trees of Kahaluu avocados to harvest in October, Malama avocados in November, and Linda avocados in March.

There is always something to harvest; something to sell to the wholesaler the grocery store or to some chefs who use fruits as ingredients, he said.

“We are better off when we can sell a little of many different crops at different times instead of a lot of one or two items at one time of year when everyone else has the same crop,” Love said.

In the long run, the grower makes more money with less work and lesser stress. However, he advised that the grower may have to build markets for some of the unusual fruits. “But once you do, you will be far ahead of those who don’t,” he added.

Business Standard

Price fall upsets rubber output

The sharp and sustained fall in prices has sparked a serious concern over India’s [rubber](#) output this year, as small-and medium-scale farmers have reportedly neglected the crop.

In October, the monthly production was 58,000 tonnes — 33 per cent less than the 86,000 tonnes in the same month last year.

October to December is the peak rubber season in India, as winter favours the production of more latex. Around 35 per cent of the total yearly production is carried out during this time.

But this year, the story is different. Planters claim that rubber tapping has not picked up. “No rubber is being tapped in most plantations, especially the small- and medium-scale ones, for the last three months, as the current price will not even cover the wages of the labourers,” said Benny Kuriakose, a planter based in Kasragode, around 550 km north of state capital Thiruvananthapuram. The price of benchmark grade [RSS-4 rubber](#) has dropped to Rs 118 per kg across the state. In the northern districts, many farmers want to dispose of their plantations. Many farmer have stopped tapping completely, leading to the whopping fall in production.

Consumption increased one per cent in October and a major chunk of the domestic demand was met through import, which increased 28 per cent. Last year, the import figure for October was 28,880 tonnes; this year, it rose to 36,865 tonnes.

“The low production has been continuous for the last eight to 10 months. It is likely to continue for the rest of the year,” said N. Radhakrishnan, a leading Kochi-based trader, adding that the rubber planters were in a serious quandary.

For the April-October period of this year, the production dropped by 10 per cent to 3,90,000 tonnes compared to 4,31,000 tonnes in the same period last year.

On the consumption side, however, the trend was reverse. According to the Rubber Board, it increased by 3.4 per cent. Total consumption for this period this year was 5,92,485 tonnes compared to 5,73,110 tonnes.

Sources said the difference between production and consumption was likely to cross a deficit of 2,00,000 tonnes till the end of the financial year, making imports inevitable.

Globally, the price of rubber was less than in the domestic market by Rs 16-18 per kg.

The import would weaken the price in the domestic market further, as the industries would not depend on the local supply anymore.

During the April-October period, India imported 2,63,683 tonnes — 25 per cent more than the figure last year, 2,10,580 tonnes. Sources said, imports may cross 4,00,000 tonnes in this financial year. This will be an all time high.

Although there is an outcry in Kerala for banning import, it will not be possible as the domestic production is too low. The end-use industries, especially tyre makers, have to ensure supply. So, any sort of action affecting import will jeopardise the industries.

Onion dehydration industry stares at reduction in season by two months

The season might be reduced to four months from the usual six months at onion dehydration unit located in Saurashtra

Higher [onion prices](#) arising out of short supply might mean a smaller season for the [onion dehydration](#) industry this year. According to dehydration units in Saurashtra, mainly concentrated in Mahuva taluka of Bhavnagar district, in Gujarat, the season might be reduced to four months from the usual six.

“White onion, which is generally used for dehydration, will reach the markets in December. We will begin purchasing by December-end or January beginning. We expect production to decrease because of delayed and weak monsoon and lower sowing. As a result, the season may be short by two months this time,” said Kirit Mehta, president, All India Dehydration Association.

According to industry sources, arrival of [kharif](#) onion has not yet begun from other producing states such as Maharashtra and Karnataka to Gujarat. Now, only 10,000-12,000 bags arrive a day at the Agricultural Produce Marketing Committee (APMC) at Mahuva, down from the usual 17,000-18,000 bags.

Under normal circumstances, onion dehydration commences in January and continues till July. However, the season is expected to end by May this time because of low production and unfavourable price.

The price of dehydrated onion in the international market is between Rs 120 and Rs 130 a kg. The industry needs to reduce the price to Rs 100-110 a kg during the season, for which the wholesale price in the domestic market of onion should be below Rs 10 a kg.

Asgar Chattariya, secretary, All India Dehydration Association, said: "Price is the biggest factor for the dehydrated onion industry and we have to maintain both the domestic as well as the international markets. If we do not maintain prices, we will lose business in the global market."

Any price above Rs 10 a kg in the domestic market is not viable for the dehydration industry. Onion price is in the range of Rs 7-12 a kg in the wholesale market.

He said, "If the price of onion goes above Rs 10 a kg during the current season, it will spell trouble for us and in that scenario, we have no choice but to close production before time."

The onion dehydration industry depends on the market as it has no big market in the country.

India has 75 dehydration units, of which 65 are located in Mahuva. Industry experts say while 15 per cent of dehydrated [onions](#) is consumed domestically, the rest is shipped to Europe, the US and Russia, among other countries. Industry sources say 10 kg of fresh onion gives 1 kg of dehydrated onion, as the raw commodity contains around 90 per cent of water. One kg of dehydrated onion turns into 10 kg once put into water.

The Statesman

Indo-US food deal at WTO

India today achieved a major victory with the USA agreeing to its proposal on food security issues at WTO, a development that will pave the way for a breakthrough to end the three-month long stalemate. The agreement comes two days ahead of the G-20 Summit in Australia, which will be attended by Prime Minister Narendra Modi and other world leaders including the US President Barack Obama. The two-day meet begins on Saturday in Brisbane and WTO related matters are likely to come up during discussion between world leaders.

As per the agreement, the USA will support India's proposal at WTO that 'peace clause', crucial for uninterrupted implementation of India's food security programme, should continue indefinitely until a permanent solution is found.

This will enable India to continue procurement and stocking of foodgrain for distribution to poor under its food security programme without attracting any kind of action from WTO members even if it breaches the 10 per cent subsidy cap as prescribed by the multilateral trade body.

As per the Bali agreement, the peace clause was to continue till 2017.

The differences on the public stock holding of foodgrains between the developed countries led by the USA and developing nations including India led to an impasse over ratification of the trade facilitation agreement (TFA) at Geneva in July. The agreement between the USA and India, according to WTO Director General Roberto Azevedo, will provide a basis to intensify consultations with other WTO members to overcome the present stalemate and promptly implement all Bali ministerial decisions.

Briefing reporters, Commerce Minister Nirmala Sitharaman said: "India and the US have successfully resolved their differences

relating to the issue of public stock holding for food security purposes in the WTO in a manner that addresses our concerns. This will end the impasse at the WTO and also open the way for implementation of the TFA". On the development, the USTR said that both India and the USA have reached an understanding on implementation of Bali decisions.

"The bilateral agreement makes it clear that a mechanism under which WTO members will not challenge such food security programmes under WTO dispute settlement procedures will remain in place until a permanent solution regarding this issue has been agreed and adopted," the USTR today said. Following the agreement between the two important players of the WTO, its highest decision making body General Council will deliberate upon the proposal in the second week of December.