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# THE HINDU

## **Plan to raise samba paddy on 60,750 acres**

Samba paddy cultivation has so far been completed on 45,350 acres in the district. Cultivation in the rest of 15,400 acres will be completed before December 2014. The plan is to raise samba paddy cultivation on 30,000 acres in delta area and on 30,750 acres in non-delta area. Announcing this at the grievance day meeting, Collector A.Saravanelraj said that paddy cultivation has been done under System of Rice Intensification method on 4,918 acres in 81 villages out of the target of 5,400 acres in 95 villages.

Samba cultivation has picked up in the district thanks to copious showers. Till Thursday, the district received 586 mm of rainfall as against the annual average rainfall of 954 mm. This is 15 mm more compared to last year on the same date.

Regarding fertilisers, there is a stock of 228 tonnes of urea, 624 tonnes of Di-Ammonium Phosphate (DAP), 548 tonnes of Potash and 597 tonnes of complex fertilisers. As much as 251 tonnes of certified seeds have so far been distributed through Agriculture Extension Centres and 16 tonnes through co-operative department and 176 tonnes have been distributed through private companies. Totally 443 tonnes of seeds have been distributed. Farmers said there was demand for urea in the district.

## **Farmers open to exploring alternative agricultural methods**

Ploughing an unchartered terrain and taking the accompanying risks in adopting alternative methods in agriculture is becoming common among farmers in Mysuru region.

This is being attributed to the shrinking agricultural income owing to increase in cost of cultivation that is eroding the profit margin.

As a result, there is growing acceptance of natural farming, organic farming and natural zero-budget farming. The shifting pattern stems from a growing realisation of rise in cultivation cost due to excessive dependence on chemical pesticides and insecticides that has devastated the eco-system and soil fertility.

A case in point is that of Krisnappa, a farmer from Bannur who has changed his fortunes from being a debt-ridden cultivator to cash-rich and crop-surplus farmer.

But the transformation of Mr. Krishnappa, who owns about 20 acres of land, was not an overnight phenomenon. As he explained, “I was neck-deep in debt. Agriculture was least remunerative and had run up a debt of Rs. 20 lakh.”

Having learnt of zero-budget farming of Subhash Palekar — a traditional practice that entails no extraneous additions to soil like fertilizer and pesticides — Mr. Krishnappa recalled that he decided to take the plunge as it entailed no investment and the results were impressive.

“Over the years, not only have I cleared the debt but I am better-off and even the food I cultivate, sell and consume is devoid of carcinogenic material,” he said. Another practitioner of zero-budget farming in H.D. Kote is M.N. Anand.

At the last count, there were anywhere between 500 to 1,000 farmers into zero-budget agricultural practice in Mysuru region.

This is besides the existence of organic farmers like Vivek Cariappa, who spearheaded organic cultivation that spanned association like Savayava Krushikara Sangha in H.D. Kote; Kailash Murthy, a natural farmer near Kollegal, and scores of others. Also, organisation such as Sahaja Samruddha is not only promoting organic and natural farming but also networking with such farmers and providing them a platform to sell the produce.

Even the Karnataka Rajya Raitha Sangha is promoting them on a wider scale among its members.

Badagalpura Nagendra of the KRRS said for too long farmers have been at the mercy of seed manufacturers, financial institutions for loans, fertilizer companies and insurance companies and the alternative agricultural practice provides a ray of hope for farmers.

*The shifting pattern stems from a growing realisation of rise in cultivation cost owing to excessive dependence on chemical pesticides and insecticides*

### **Horticulture exhibition held**

To increase productivity, and familiarise farmers to the state-of-art technology, an exhibition, and training programme was held at Government Fruit Farm at Karumandurai here on Thursday.

District Collector K. Maharabushanam inaugurated the exhibition. P. Saroja, MLA, and officials from Departments of Horticulture and Agriculture were present.

He said mango, jack fruit, and medicinal plants were present at Kalvarayan Hills, located at an altitude of 815m, for many years. "Tribal people here used to cultivate these apart from small millets," he added.

The Collector said that the average rainfall is 1,200mm. Clay sand was present at the hills. A farm was established during 1981-82 at 1,037 acres.

Mango, sapota, guava, pomegranate, and other fruits were cultivated here. About six lakh saplings were sold to farmers fetching a revenue of Rs. 75 lakh every year, he said.

The Collector inspected the two water bodies in the farm, and asked officials to clean them to improve storage. Fruits that were traditionally available in the hill were displayed.

Scientists explained to the farmers the measures to increase productivity, and the use modern gadgets available with the department.

## **Prisoners harvest groundnut crop**

*The variety called TG 37-A was developed and released by Bhabha Atomic Research Centre*

The day was drawing to a close but a group of inmates of the Vellore Central Prison were busy at field harvesting the groundnut crops that they had carefully cultivated over the last three months.

This week, groundnut cultivated on 4.5 acres of land by the Vellore Central Prison was ready for harvest. The TG 37-A variety of groundnut, which was developed and released by Bhabha Atomic Research Centre (BARC), was sowed during the end of August.

The Prisons Department had brought in the initiative to reform and rehabilitate prisoners. Those with an agriculture background were engaged in these agricultural activities, said V. Karuppannan, Superintendent of Vellore Central Prison.

BARC had distributed 350 kg of the groundnut variety to the prisons at Sivagangai, Madurai and Palayamkottai.

“The Palayamkottai prison harvested the groundnut crop in June. They had received 140 kgs of seeds and harvested 5,600 kgs in 102 days. These seeds were again distributed to the prisons at Coimbatore, Salem, Cuddalore, Vellore and Puzhal in Chennai for cultivation,” J. Daniel Chellappa, senior scientist, Technical Coordination Wing, BARC said.

BARC had developed 42 varieties of seeds, including oil seeds and pulses, considering various factors such as environment, climate and soil condition. “The TG 37-A variety of groundnut is rich in oil and protein. The pod filling is good,” he mentioned.

He said that the Vellore Central Prison had worked hard to convert an almost barren land into a cultivable one.

The prison had taken up cultivation of the groundnut variety with technical assistance from the Department of Agriculture, Vellore. G.C. Singh, assistant director of Agriculture, Vellore said they had tested the soil and found that it was suitable for cultivating groundnut.

“The seeds were treated with pseudomonas, a bio pesticide, before sowing to prevent diseases. It was then sowed using seed drill machine. Basal fertiliser was applied to the soil as per the recommendation of the soil test lab and micro nutrient mixture was also applied,” he explained.

The seeds were already three to four months old when it came to Vellore for sowing, he said, adding that no water was applied and there was no pest attack. “This is a rain-fed crop. The prisoners had cultivated red gram and horse gram as intercrops,” he said.

Sixty-six-year-old Natarajan, an inmate of the prison, said a total of 44 prisoners were working in the field and all were farmers. “We have cultivated red gram, lady’s finger, coriander, cholam and vegetables in the surrounding area of the prison,” he said. They spend eight hours at the field from 8.30 a.m.

Mr. Karuppannan added that once the groundnut was harvested completely, they will approach government for direction on what to do next with the seeds.

## ‘Supply more millets’

All India Samuthuva Makkal Katchi leader R. Sarathkumar has urged the government to make a range of low-cost millets like ‘kambu’, ‘kezhviragu’ and ‘cholam’ available to people through ration shops and cut back on rice supply. This would help farmers grow alternate crops that need less water. Millets are a rich, traditional source of nutritious food, he said in a statement here.

## Ragi flakes, anyone?

*The nutritious millet is now available as cereal to appeal people*

If ragi dosai, roti, puttu, and kanji are not your type, how does ragi flakes sound? Or ragi nuggets filled with chocolate and vanilla? An agro foods company has come up with a range of breakfast options made using the nutritious millet. Launched at the M.S. Swaminathan Foundation in Chennai, it includes banana-flavoured ragi flakes and fills that are crunchy on the outside with a dollop of chocolate, vanilla, and strawberry cream on the inside.

Speaking at the launch, genetic scientist M.S. Swaminathan explained how India was once home to about 1, 50,000 rice varieties, 10,000 years ago. “Men went hunting and women collected plants and grew them,” he said. “This is the origin of agriculture.” As years went by, the ‘food basket shrunk’. The market gradually went down for pulses other than major crops such as rice, wheat, and soybeans leading to the ‘genetic erosion of a range of nutritional food,’ he said.

However, Swaminathan said that the minor millets, he called “nutri-cereals,” were important elements in the food basket, given their “climate-smart” nature and nutritional value. Only if there was a market for them, can the nutri-cereals such as samai, thinai, kezhvaragu, among others, be revived. “Food and health security go together,” he observed. Swaminathan added that it’s for this purpose that “we are pressing the UN to declare one year as the year of nutri-crops.”

But it's not just the millets, our traditional rice varieties are disappearing too. In Koraput, Odisha, for instance, rice varieties have come down over the years from 3,500 to 300. "These crops will have a sound future only if we assure farmers remuneration," said Swaminathan. The consumer plays an important role in this — it could make all the difference to the farmer if consumers create a market for millets by including them in their everyday diet. Which is why "putting them in a form of contemporary value" is essential, feels Swaminathan.

The ragi flakes, for instance, were an attempt at this, according to Prashant Parameswaran, the Managing Director of Kottaram Agro Foods that manufactures the cereal. He explained how the dietary fibre-rich millet was much more nutritious than rice and wheat. However, bringing our traditional grains back to the fore is "not a one-man-show", he explained. People and companies should come forward to do their bit.

### *Ragi facts*

- - *Ragi is a rich source of calcium, iron, and amino acids*
- *It helps keep sugar, and blood cholesterol levels in check*
- *Since ragi is gluten and fat-free, it's good for babies and people looking to lose weight*

### **Pickle seller at trade fair inspires**

A corner stall manned by a couple at Pragati Maidan is rather impressive. It is where Bihar resident Rajkumari Devi, in her 60s, is selling different kinds of pickles, including litchi, mango, karela, mushroom, banana and jimikand.

However, this alone is not what brought her to the Capital a few days back. She came here for the 6th edition of the Aadhi Aabadi Women Achievers Award 2014, an honour meant for women achievers across the country.

Rajkumari received this award recently at a function organised by the Federation of Indian Chambers of Commerce and Industry. She shared the honour with people like Sumedha Kailash, the wife of Nobel Prize winner Kailash Satyarthi, boxer Sarita Devi and choreographer Saroj Khan, among others.

What did Rajkumari do to deserve all the award? She tells her tale while quickly attending to customers.

“I come from Muzaffarpur, located 90 km from Patna. They call me Kisan Chachi there. I am the first woman from the area to who gathered women farmers belonging to the Scheduled Castes and Scheduled Tribes to form 36 self-help groups.”

What makes Rajkumari, who is always wears a yellow saree, unique is that she rides a bicycle and motorcycle to spread the message of self-sufficiency in an area largely orthodox and patriarchal.

She was forced to dare so, she said, after she was asked to leave her in-laws' home when her father-in-law remarried and threw her out due to her new wife's influence.

“We had two daughters and a son, and barely had anything to survive. Then someone told me about the Bihar Government's scheme in 2006 for farmers below poverty line. The scheme promised financial support for those who could perform better in the field of agriculture. So I decided to 'do good' by growing vegetables in my tiny field. I grew mostly green vegetables, besides *khaini* [local tobacco]. And instead of giving the produce to middlemen, we sell it ourselves in the local *mandi*.”

Since waiting two hours for the bus to reach the market and back started affecting her domestic work, Rajkumari learnt to ride a bicycle.



“I didn’t approve of it,” says her husband Avdhesh Kumar Chaudhary, “but she wouldn’t relent. My son taught her cycling and she started selling the produce all by herself.”

However, this led to criticism from society. “People called me names, complained to my husband that I was not virtuous and so on. But it only made me more determined to continue.”

Since the government banned tobacco, Rajkumari gathered the women gradually and formed 36 SHGs with representation from all castes. The groups were assigned different works, like rearing cows, buffalos, goats, fish, and even honeybees, besides craft work like image-making and idol-making. For herself, Rajkumari chose to make and sell pickles, besides doing social work.

A “ matric pass” Rajkumari knows English, Hindi, Sanskrit and is well-versed with the poetry of Kabir and Rahim, besides being an expert at weaving and stitching.

## A bitter pill for sugarcane farmers



[The Hindu](#) Sugarcane Farmers taking food on premises of sugar factory as crushing started at Sangareddy in Medak. Photo: Mohd Arif

*Factories refuse to offer anything more than Rs. 2,600 per tonne, the price that was fixed last year. He found fault with the farmers' unions stating all that they did was for publicity and not for addressing the problems of the farmers.*

Farmers, no doubt, have to battle several odds right from deciding which crop to grow till selling the yield. Adverse weather conditions, lack of groundwater and other financial woes have continuously been hitting their prospects. In Medak district, the situation is no different and this time around, it's the sugarcane farmers who are facing hard times as they are being exploited by market players.

The sugarcane price has not yet been finalised despite the Joint Collector, A. Sarath, holding two meetings with the managements of sugar factories and farmer representatives in the recent past. While the farming community settled for Rs. 2,800 per tonne from their initial demand of Rs. 3,600, the factory managements clearly stated that it was impossible to give anything more than Rs. 2,600 per tonne, the price that was fixed last year.

Commencing crushing process without finalising the rate is not new in the district as factories have been doing so for the past few years. But now, they neither have fixed the present purchase price, nor the price that would be offered next year as demanded by the farmers. "We are in a catch-22 situation. We have already cultivated sugarcane and the harvesting season has begun. We have no other way but to sell our produce to the factories and they are taking this as an advantage," says Pandu Ranga Reddy, a farmer from Zaheerabad.

"Holding discussions with farmer representatives has become a farce. It's not possible for farmers to wait till the rate is finalised as they already have given advance amount to labour and for transportation. The administration has also not taken any action against the managements who had agreed to pay Rs. 2,700, but paid only Rs. 2,600," asks another farmer.

He found fault with the farmers' unions stating all that they did was for publicity and not for addressing the problems of the farmers.

## **Steps on for cent per cent organic farming: Minister**

*Policy should not be imposed on people, says Thomas Isaac*

Agriculture Minister K.P. Mohanan has said that the government is taking comprehensive steps to turn farming in the State completely organic.

He was addressing a workshop on 'Lessons learnt from implementing an organic policy in Kasaragod', organised by the Kerala Agricultural University's (KAU) Agricultural Technology Information Centre (ATIC) and the State Horticulture Mission (SHM) here on Thursday.

Former Minister T.M. Thomas Isaac said organic farming should not be imposed on people. "It cannot be a mandatory practice imposed by a sudden government directive. It should be a people's movement," he said.

He urged agricultural scientists to make available a list of technologies from which farmers could choose the most appropriate ones. He attributed the success of organic farming to factors such as innovative branding, modern salesmanship, effective use of natural resources and creation and management of agrarian institutions. He spoke about the success story of the Kanjikkuzhy model farming.

Presiding over the function, V.T. Balaram, MLA, stressed the need for a strong political will to realise cent per cent organic farming in the State.

The workshop observed that the sudden imposition of cent per cent organic farming in the State, without sufficient preparations, was neither advisable nor sustainable. It recommended a gradual transformation to organic farming through integrated crop and pest management using available organic inputs and safe inorganic agents in acute necessity. The workshop called for research to develop bio-pesticides, preserve soil health and enhance the efficacy of available bio inputs.

KAU Director of Extension P.V. Balachandran presented the recommendations of the workshop at the valedictory session. Krishi Vigyan Kendra (KVK) head Ranjan S. Karippai was the moderator. Papers were presented by C.K. Peethambaran, former Director of Research; Jim Thomas, Associate Director of Research; Usha Kumari, coordinator, KAU Organic Farming Cell; C. Thampan, Principal Scientist, CPCRI; K.M. Sreekumar, professor, College of Agriculture, Padanakkad and N. Jayaraj, head of KVK, Kannur.

### **‘Haryana Fresh’ outlets in Delhi soon**

Delhiites may soon be able to enjoy reasonably priced vegetables from Haryana as the State Government has decided to open ‘Haryana Fresh’ outlets across the National Capital so that the growers may be able to get remunerative prices for their produce. Announcing the initiative during the Kisan Mela in Karnal, Haryana Agriculture Minister Om Parkash Dhankhar said on Thursday that while farmers of Uttarakhand, Jharkhand, Uttar Pradesh and Punjab were supplying vegetables in the markets of Delhi, Haryana would now strive for a lion’s share of the Capital’s lucrative market.

### **All farmers to get soil health cards in the next three years: Krishna Byregowda**

Stating that soil test was crucial in cultivating any crop for better yield, Agriculture Minister, Krishna Byregowda has said that the government intends to cover all the farmers of the State for giving soil health cards in next three years.

Addressing presspersons at a farm in Angadageri village of Basavanabagewadi taluk of the district on Thursday, he said that since a large section of farmers in the State were not aware of the importance of soil testing, the government would test the soil in their farm and provide soil health card.

“The card would held the farmers to know which nutrient/fertilizer is important and in what quantity for which soil. The precise information helps in reaping higher crop yield”, he said.

The Minister said that in order to help the rainfed farmers to get better yield, he said that the government was offering Rs. 2 lakh financial aid to the farmers for constructing a water pond under ‘Krishi Bhagya’ scheme.

Calling it as ‘protective irrigation method’, the Minister said that the government wishes all the rainfed farmers to make use of the scheme.

He said that farmers who have no irrigation facility often lose their crop to deficient rain. To ensure adequate water to the crop to prevent it from withering, the ponds would help in storing the rain water, which could be used in emergencies, he said.

Mr. Byregowda said that the government has already received some 1.85 lakh applications under the scheme for this year itself. To a question, he though admitted that the production of Jowar was still not sufficient in the State to be given under Public Distribution System for the people of North Karnataka, he however said that the decision has been taken to procure the commodity at Rs. 2000/quintal to encourage the farmers for more cultivation of Jowar.



## **Deep ocean has no role in sea level rise**

In these times of global warming, it is a well-known fact that the sea levels of the Earth's oceans are rising due to melting icebergs and glaciers and thermal expansion due to ocean warming caused by the heat trapped in the atmosphere by greenhouse gases.

A new study by NASA (National Aeronautics and Space Administration) scientists has found that the contribution to sea level rise is only from the upper half (0-2,000m) of the ocean and the ocean below this depth has no role to play in sea level rise. This conclusion was arrived at by subtracting the sea level changes occurring at 0 to 2,000 metres depth from that of the entire water column. The subtraction provided only zero values.

### **Satellite altimetry**

The total contribution to sea level rise from the entire water column was determined using satellite altimetry (measuring height) using NASA's Jason-1 and Jason-2 satellites. Satellite altimetry measured the changes in sea level and annual mean sea level increases were obtained for the study period (2005 to 2013).

From the values obtained by this method the contributions due to thermal expansion as measured by the Argo array of floats were subtracted. Water expands as it gets warmer. The sea level is rising partly because of this expansion.

### **Argo array**

Scientists have been recording the temperature and sea levels of the top half of the ocean directly since 2005, using a network of 3,000 floating temperature probes called the Argo array of floats. The Argo floats are used to measure sea level variations due to thermal expansion (steric sea level) of the ocean in the 0-2,000m ocean layer.

To subtract the sea level variations due to ice berg and glacier melt data from the GRACE (Gravity Recovery and Climate Experiment) of NASA were used.

These data also pertain to the upper (0-2000m) half of the ocean. The two subtractions resulted in zero values indicating that the lower half (2,000 m to bottom) has no role to play in sea level rise due to both climate change derived melting icebergs, glaciers and thermal expansion due to rising temperatures (ocean warming).

The study, whose first author is William Llovell of NASA, was published recently in a paper in *Nature Climate Change*.



## Food Story: The saga of Panchmel Dal



There is something endearing about Panchratna Dal

It may not have the global reputation of Dal Makhani or the ancient connect of the Channa Dal (guguni), yet there is something endearing about Panchratna Dal (also called Panchmel Dal) that makes it one of the few lentil preparation that has a version for every state, well at least most of it.

If there is one ingredient with which Indian cuisine, and in that sense India, shares an umbilical-like connect, it has to be lentils or dals. History talks about dal recipes as old as the pre-Harappa culture, where lentils – of all kinds – were a staple food.

It was in the menu even before rice and wheat arrived in India and became an indispensable part of the Indian thali. In fact, the sheer fact that most of the dal tempering doesn't have the culinary quintessential tomatoes indicates that dal existed during the earlier days of Ayurveda, and hence the oldest of the recipes in the Great Indian Cookbook. A fact seconded by old texts that often speak about simple recipes of dal that was served to guests as a celebratory meal. Like in the Helen of Troy and Chadragupta Maurya wedding back in 303 BC. It's believed that a special kind of channa dal was prepared to mark the auspicious occasion. The recipe that was deemed as a culinary masterpiece among others like Malpua (Yes, it is that old!) and Patala (which is the first iteration of the gajjak) for the burst of flavours each spoon delivered was Guguni – a lentil preparation that is still prevalent in East India and can be often found being sold in street side shops as part of the morning breakfast.



(Source: [tasty-indian-recipes.com](http://tasty-indian-recipes.com))

The dish was described as follows: Bengal gram soaked overnight with turmeric and coriander, boiled with cold pressed mustard oil, cumin, crushed pepper, ground ginger, bay leaf and cardamom, topped with sliced onions and cooked on dum on low heat.



For the modern day culinary mind this may not come across as something exceptional, albeit thoughts may differ, back then it did trend set two things: first the dum cooking technique that saw a full revival under the Mughal dynasty. And two, it rose Bengal gram or channa dal to the stature of the queens of dal. So much so that in years to follow, serving any other dal except channa was considered suicidal. This was the image that the advent of Panchmel or Panchratna dal helped change with its unique flavour foreplay.

When did the panchmel dal come into the culinary scene is a fact that is hard to ascertain, as little is known about the origin of this lentil preparation.

However, many believe that the first mention of the panchratna dal was in Mahabharata. It is said that it was one of the preparations that Kunti and thereafter Draupadi, would prepare as an amendment to the elaborate royal cuisine, and also to fulfill the Pandavas need of nutrition, during their exile. Folklores down East India talk about how Bhim after accidentally making the ariyal in King Virat's royal kitchen also created the first panchratna dal by boiling all the five dals in a pot and garnishing it with a good amount of ghee. Interestingly, it was Bhim, who when asked what he made, called his dish 'panchratna' or five gems, which was befitting as dal in ancient India was considered an important ingredient of every kitchen.

Whether Bhim really made the first panchratna dal or not can be a topic of another debate, but by the medieval times, the Indian culinary world had progressed to combining two to three dals together. One of the finest examples of the same is the kali dal that went on to take the shape of Dal Makhani under the expertise of Kundal Lal Gujral, who also invented the famous Butter Chicken. The real Panchmel dal first came into limelight from the Mewar Gharana, where it was introduced more out of the need to have a subtle flavour to balance the fiery flavours that were dominating the table. It was also the recipe that went beautifully with the use of

curd and buttermilk. Such was the interest in this tomato-less yet flavouful lentil that it was one of the few dishes that was introduced into Akbar's court from Jodha Bai's kitchen that introduced many a vegetarian dishes into the predominantly non-vegetarian dining area.

The use of five different lentils aside, what gave panchmel dal, which was named due to the use of five different dal, is the nice smokey flavour that the spices tempered in ghee imparted to the dish. The marriage of the lentils and spices was such a hit that by the time Shah Jehan took over the throne, the Mughal court had a Shahi Panchmel Dal recipe that had become a month feature, and was often demanded by Aurangzeb, who being a strict vegetarian, fancied the dish more than roast meat, which was a favourite with Babar and Akbar.

Many believe that much like the dalma and aviyal that were results of a wife/cook's ingenuity to create something interesting from limited/leftover food, panchmel dal was the necessity of creating something new for the royal meal every day. The dal, while being high on flavour, did allow immense scope for the khansamas to work around. Tempering for instance could make a lot of difference as to how the dal would taste. So they could use a series of combination to create a new dish the next time. And two, the combination of dals ensured that the dal wasn't presented the same way at any time.

This may explain why even after all these years, tomato isn't a part of the recipe that uses subtle flavour spices and relies heavily on clarified butter or ghee to do the trick. Understandably then this could have been a reason why the simple dal was picked up by the homemakers across India, and each household had its very own Pachratna Dal, which was slow cooked and extremely flavourful.

In fact, India currently has over 9 different varieties of Panchmel dal that is identified by the way it is tempered – which is still with ghee and no tomatoes.

## Three cups of coffee a day reduce Alzheimer's risk



Drinking three to five cups of coffee a day could reduce the risk of developing Alzheimer's (Source: Thinkstock Images)

Drinking three to five cups of coffee a day could reduce the risk of developing Alzheimer's by up to 20 per cent, scientists claim.

The study, released by the Institute for Scientific Information on Coffee in UK, noted that a Mediterranean diet, consisting of fish, fresh fruit and vegetables, olive oil and red wine, has already been associated with a reduced risk for development of Alzheimer's Disease.

The latest research suggests that compounds called polyphenols and caffeine can also be responsible for this protective effect – and these exact compounds are also found in high quantities in coffee, according to the study.

“The majority of human epidemiological studies suggest that regular coffee consumption over a lifetime is associated with a reduced risk of developing Alzheimer’s Disease, with an optimum protective effect occurring with three to five cups of coffee per day,” said Dr Arfran Ikram, an assistant professor in neuroepidemiology at Erasmus Medical Centre Rotterdam, who contributed to the study’s findings.

The study found that moderate coffee consumption was associated with a lower risk of developing dementia over a four year test period – by up to 20 per cent.

However, the effect diminished over a longer follow up period, ‘express.co.uk’ reported.

The researchers found caffeine helped prevent the formation of amyloid plaques and neurofibrillary tangles in the brain – two hallmarks of Alzheimer’s Disease.

Both caffeine and polyphenols reduced inflammation and decreased the deterioration of brain cells – especially in the hippocampus and cortex, areas of the brain involved in memory, researchers found.

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### Today's Weather



Partly Cloudy

Rain: 0

Humidity: 79

Wind: normal

### Tomorrow's Forecast

Friday, Nov 28



Max 29° | Min 24°  
Cloudy

Sunrise: 06:13

Sunset: 05:39

Barometer: 1010

Saturday, Nov 29

Max 29° | Min 23°

### Extended Forecast for a week

Sunday  
Nov 30



28° | 23°  
Cloudy

Monday  
Dec 1



33° | 27°  
Cloudy

Tuesday  
Dec 2



34° | 27°  
Cloudy

Wednesday  
Dec 3



34° | 27°  
Partly Cloudy

Thursday  
Dec 4



34° | 26°  
Partly Cloudy



## Sleep-deprived schoolchildren run obesity risk

*Children of mothers who work full time may not be getting the amount of sleep they need each night, placing them at higher risk of being overweight or obese within a year, finds research.*

"We looked at night-time sleep in particular, because studies show that the amount of nighttime sleep matters for regulating weight," said co-author Janet Liechty, a professor of medicine and of social work at University of Illinois.

"We think that it might be the more hours that mothers are working, the less time they have, and there may be some sort of tradeoff going on, 'Do I spend quality time with my child or do we get to bed early?'" explained lead author Katherine Speirs, a postdoctoral research associate.

"And then in the morning, when mothers leave for work, their children also wake up early to get to day care," Speirs added.

The researchers followed 247 mother-child pairs for one year.

The children, who ranged from three to five years old, were weighed, measured and had their body mass index (BMI) calculated at the outset of the study and again one year later.

At the second weigh-in, 17 percent of the preschoolers were overweight and 12 percent were obese, according to BMI-for-age growth charts.

Children whose mothers worked full time got fewer hours of sleep than peers whose mothers worked less than 20 hours per week.

The children of women who worked full time also tended to have higher BMIs at the second weigh-in.

The study appeared online in the journal Sleep Medicine.

## **Fibre-rich diet helps you lose weight**

*Certain fibres contained in prepared foods such as cereals, cereal bars, baking mixes, and drinks may cause a shift towards beneficial bacteria in the gut and assist in weight loss when made part of a long-term, daily diet, says a new research.*

The researchers focused on two fibres - polydextrose, which is a common fibre food additive and soluble corn fibre.

"We need more fibre in our diets from lots of different sources," said Hannah Holscher from the University of Illinois in the US.

"These two fibres look like they could be beneficial when included in a balanced diet along with whole grains, fruits, vegetables and legumes," Holscher added.

The researchers found that there were significant shifts in the gut bacterial populations with fibre supplements and when the supplements were stopped populations seemed to go back to where they were before.

What was most surprising and novel in the recent study was a shift in the Bacteroidetes:Firmicutes ratio towards more Bacteroidetes, something the researchers had not viewed previously.

"This was of particular interest to us because other research works have shown that having more Bacteroidetes may be beneficial because the higher that proportion is, the individual tends to be leaner. With higher Firmicutes, that individual tends to be more obese," Holscher said.

The researchers used whole-genome sequencing to explore the full range of bacterial genomic information in the gut after fibre supplementation.

Previous research has shown that dietary fibre can also help reduce the risk of colon cancer, type 2 diabetes and other diseases.

## **Try these healthy, winter delights**

*It's that time of the year when the fruit and vegetable markets are awash with the best seasonal produce.*

Says city-based dietitian PriyaKarkera, "Not only dark red carrots, but orange squash, spinach, leafy greens, turnips, fresh peas and more are all available and taste excellent at this at this time." She tells you why you ought to tuck into three of these..

**Amla:** This fruit, loaded with vitamin C can be found even in small market nooks now. Since amla is rich in polyphenols, it aids in better absorption of insulin and hence is very beneficial for diabetic patients in managing blood sugar. It's high iron content and aids in relieving menstrual cramps if taken regularly. It serves as an excellent immune booster, must be given to children less than five years of age to prevent frequent coughs and cold.



**How to have it:** It can be taken as amla juice, dried and powdered, and can be used in chutneys, gravies to add a pungent flavour. Raw amla can be used in salads.

**Sweet potato:** An excellent low glycemic index tuber, it is loaded with fiber. It is also antioxidant rich and contains beta carotene, which is converted to vitamin A in the body. Sweet potato is also an excellent source of vitamin B6, manganese, zinc, magnesium. The high vitamin A content proves it to be beneficial for excellent vision.

**How to have it:** This can be given to diabetic patients as it has a low glycemic index. It can be used as a substitute for potatoes in recipes like pavbhaji, wada.etc.

**Singhara:** This is an energy-loaded winter fruit also called water chestnut. It is rich in antioxidants and has high carbohydrate content, hence must be avoided by diabetic patients.

It is rich in antioxidants and helpful in prevention of cancer. Singhara can also boost energy and is thus apt for athletes and those with a strenuous schedule.

**How to have it:**

Dried shinghara flour is used during fasts.

Boiled shinghara in water. This can be used to cure dysentery.

## **Power up with pistachios**

*Termed as one of the best sources of antioxidants among plant-based foods, pistachios are also low-cal. Here are some more benefits of pistas...*

**The Skinny-Nut:** Dubbed the "skinny nut" by nutrition experts, pistachios are one of the lowest calorie, lowest fat nuts and yield

the most nuts per serving; 49 kernels per ounce, compared to 23 almonds, 14 walnut halves and 18 cashews. Just a handful of pistachios - about 30 kernels - offers a deliciously satisfying 100-calorie snack.

**A "Mindful" Snack:** New research recently presented at the American Dietetic Association's national conference found that because they're in-shell, pistachios take longer to eat, slowing consumption and reducing overall calorie intake by 41%.

**Nutrient-Rich:** Pistachios are an excellent source of vitamin B6, copper and manganese and a good source of protein, fiber, thiamin, and phosphorus.

**Rich in antioxidants:** A recently published study by Italian researchers reveals that pistachios pack in a variety of beneficial antioxidants and phytonutrients commonly found in tea (catechins), fruits, vegetables, red wine (anthocyanins) and soyfoods (isoflavones). The researchers concluded that pistachios are one of the best sources of antioxidants among plant-based foods.

### **Recipe: Batti chokha**



*Recipe: Batti chokha (Thinkstock Photos/Getty Images)*

## *Grilled battis served with Indian mashed potatoes*

### **Ingredients:**

#### **For the battis**

Whole wheat flour 200g

Salt ½tsp

Oil 2tsp

#### **For the stuffing:**

Roasted gram flour (sattu) 200g

Chopped ginger 1tsp

Chopped garlic 1tsp

Salt to taste

Crushed black pepper ½ tsp

Oil 1tsp

Stuffed whole red chili pickle 1

Desi ghee (Clarified butter)

#### **For the mashed potatoes:**

Mustard oil 1tbsp

Potatoes 250g

Salt to taste

Chopped onions 2tbsp

Chopped garlic 1tsp

Chopped green chillies 1tsp

### **Method:**

-Mix the oil & salt in the flour and knead into a smooth dough with lukewarm water. Let stand for sometime.

-Boil the potatoes. When done, peel the potatoes and mash well. Mix in the chopped onions, chopped garlic, mustard oil, salt, green chillies and mix well. Remove the filling from the red chili pickle. Discard the skin. Use 1tsp of this to mix in the stuffing. Mix in the

all the ingredients for the stuffing.

For the baatis — knead the dough for another minute and divide into six balls. Cook over glowing coals till the outer crust is lightly browned and the baatis are firm to touch.

Remove and immerse in desi ghee. Serve hot with the potato chokha.

### Recipe: Lauki ki kheer



Recipe: Lauki ki kheer (Image Courtesy: [www.pankajbhadouria.com](http://www.pankajbhadouria.com))

*Bottle gourd and milk pudding*

**Preparation time:** 20 mins

**Cooking time:** 1 hour

**Serves:** 4

#### **Ingredients:**

1 cup grated lauki/ghia/doodhi(bottle gourd)

1 cup sugar

1l milk

½ tsp cardamom powder

2tbsp mixed dry fruits

**Method:** Bring the milk to boil in a heavy bottom pan. reduce for 20 minutes on low flame and stir occasionally. Add the grated lauki and cook till the milk thickens. Add the sugar and cook for 5 more minutes. Add the dry fruits and the cardamom powder and serve.

### Recipe: Aloo Tikki



*Recipe: Aloo Tikki (Thinkstock photos/Getty Images)*

*Why bother to buy it from outside when it can be prepared easily at home?*

### **Ingredients:**

Half kg potatoes, bread crumbs, about five green chillies (chopped), chopped coriander leaves, one tsp cumin powder, salt to taste, oil.

### **Method:**

Boil the potatoes, then peel and mash them. Mix with bread crumbs, green chillies, coriander leaves, cumin powder and salt. Make a few balls from this mixture and flatten between your palms. Now shallow fry in hot oil on a griddle and garnish with chopped coriander leaves.

## Tricks to prepare a delicious lobster



### *Tricks to prepare a delicious lobster*

*Considered a delicious bite, lobster is certainly the creme de la creme of seafoods. Actor George Clooney had it on his wedding banquet menu at the Cipriani hotel in Venice and it can also be made European style — a la a Lobster Thermidor (baked with cheese) and in everything from a dimsum to a soup and tossed in a wok! Eating lobster with a nutcracker and bibs, is akin to a challenge in restaurants.*

Though boiling it is the most popular way to cook it, use these other tricks to prepare the crustacean... Steam it. This will keep the meat more tender. Ideally, a one-pound lobster should be steamed for 10-12 minutes. You can roast the meat in the oven, which will give it a sweeter taste.

Another way to cook it is to grill the meat. Place it with the shell (meat side down) on medium heat and once it is done, flip and finally baste with butter.

Always remember, it is best to cook a live lobster immediately.

### **DID YOU KNOW?**

Lobster is actually a great source of protein. It is also low in calories - a five-ounce serving is said to contain just 0.3 gms saturated fat.

# Business Standard

India's groundnut oil output may drop by 41 per cent

**Poor crop output results in oil production dip**

India's [groundnut oil](#) production is expected to be low this year on account of poor crop output.

Reduced production, according to industry sources, is expected to drive the prices higher, forcing people to divert to other edible oils.

Country's groundnut oil availability for 2014-15 has been estimated at 240,000 tonnes by The Solvent Extractors' Association of India (SEA). It is down by 170,000 tonnes or 41.50 per cent from last year's 410,000 tonnes.

"Worldwide, groundnut crop has been estimated lower. Millers, as a consequence, will face scarcity of groundnut for crushing during the year, ultimately resulting in low groundnut oil production," said Samir Shah, president, Saurashtra Oil Millers' Association (SOMA).

Loose groundnut oil is currently priced between Rs 820 and Rs 825 per 10 kg in Saurashtra's wholesale markets. Rate has gained Rs 30 per 10 kg in this month and millers expect it to go up to Rs 900 per 10 kg in the next one month. Retail price also rose by Rs 40-45 in this month to touch Rs 1,455-1,460 per 15 kg.

Citing decline in [groundnut production](#) as the main reason behind drop in oil production, B V Mehta, executive director, SEA said, "Lower projection of groundnut oil production is based on decline



in production of groundnut, the main raw material required for it. Poor returns from groundnut last year shifted farmers to other crops resulting in decreased production."

As per SEA estimates, groundnut production in India will be around 3.30 million tonnes this year as against 4.71 million tonnes last year.

Suresh Kaneriya, managing director, Kaneriya oil industries, said, "Groundnut oil price will surely improve this year and it may shift people to other edible oils. Nearly 25 per cent people may divert to other oils this year from groundnut oil."

## THE HINDU BusinessLine

### Hyderabad Chemicals to sell 74% stake to Japanese agrochem maker

The Rs. 500-cr deal will help Nihon Nohyaku in building a marketing, manufacturing presence in India

**Mumbai, November 27:** Hyderabad Chemicals, a Hyderabad-based agrochemical and pesticides manufacturer, has decided to sell its 74 per cent stake to a Japanese firm Nihon Nohyaku, manufacturing basic and fine chemicals.

The transaction, valued at over Rs. 500 crore, is expected to close in January.

Nihon Nohyaku has been expanding its business and has chemical products, pharmaceuticals and animal health products, even as it caters to agrochemicals. Officials familiar with the transaction told *BusinessLine* on the condition of anonymity that the acquisition would help Nihon Nohyaku in building a marketing and manufacturing presence in India.



“The company has been looking to establish direct sales systems and production facilities in India, and wanted to acquire an Indian company to take their vision ahead,” said an official. Hyderabad Chemicals has its own distribution network, and research and development facilities.

The deal has helped Hyderabad Chemicals “divest at an attractive valuation and work under a Japanese partner.”

A statement from the Japanese company noted that the companies hope to start joint operation with current shareholders after completion of related procedures. The Japanese company is also intending to dispatch a team for the board of directors, officers and managers to jointly operate the company.

Yohichi Kohyama, Nihon Nohyaku’s President, said in the statement that the company had decided to invest in Hyderabad Chemicals since it matched the Japanese firm’s business strategy. He added that Hyderabad Chemicals also has a cost competitive production system, and by “utilising its technology and capacity, it is expected to boost our business not only in India, but also in other countries.”

## **Vegetable farmers’ collectives spark interest among foreign buyers**

FPOs also act as a potential vehicle to foster technology, improve yield and enable better access to inputs



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**Bengaluru, November 27:** The process of organising small farmers into collectives such as producer companies or co-operatives is attracting the interest of foreign buyers – mainly those from Europe and the West Asia.

“Large retail chains in Europe and West Asia are keen to source vegetables from farmer producer organisations (FPOs) here, provided they are offered guarantee on traceability issues,” said Pravesh Sharma, Managing Director of the Small Farmers Agri Business Consortium (SFAC) that is spearheading the creation of FPOs.

Retail chains are keen to source green vegetables ranging from cabbage to *okra* and baby corn among others.

“If all goes well, we should have some tie-ups in place by the next vegetable season in winter 2015, ” Sharma added. However, he declined to disclose the names of the foreign retail chains.

This is a significant development considering that the FPOs are in the nascent stage and is expected to give a further impetus to the creation of such collectives.

So far, about 350 FPOs have been set up across the country and another 500 are in the process of being formed, Sharma said.

Tamil Nadu tops the list of States with 50 farmer producer companies, followed by Uttarakhand with 45, Telangana 44, Maharashtra and Madhya Pradesh 34 each, Uttar Pradesh 27, Assam 25, and Rajasthan and Gujarat with 22 each.

Besides acting as aggregators of farm produce and helping establish market linkages with large buyers, FPOs are also seen as a potential vehicle to foster technology penetration, improve productivity and enable improved access to inputs such as seeds and fertilisers and services such as financial and insurance among the farming communities.

Apart from enabling the farmers to leverage the market for better prices, FPOs also provide a window for channelising the funds under various schemes such as the ongoing Rashtriya Krishi Vikas Yojana.

If the interest shown by European and West Asian retail chains fructifies into a formal arrangement, the shipment of vegetables to these regions could see a pick up, once traceability issues are addressed. In the middle of this year, the EU banned import of four Indian vegetables – including eggplants (brinjals and gourds) along with mangoes on the grounds they contained harmful organisms. Even Saudi Arabia recently banned the import of Indian green chillies on the grounds of high pesticide residues.

Exports of fresh vegetables from India, excluding onions, for the April-August period stood at 3.33 lakh tonnes, valued at Rs. 939 crore.