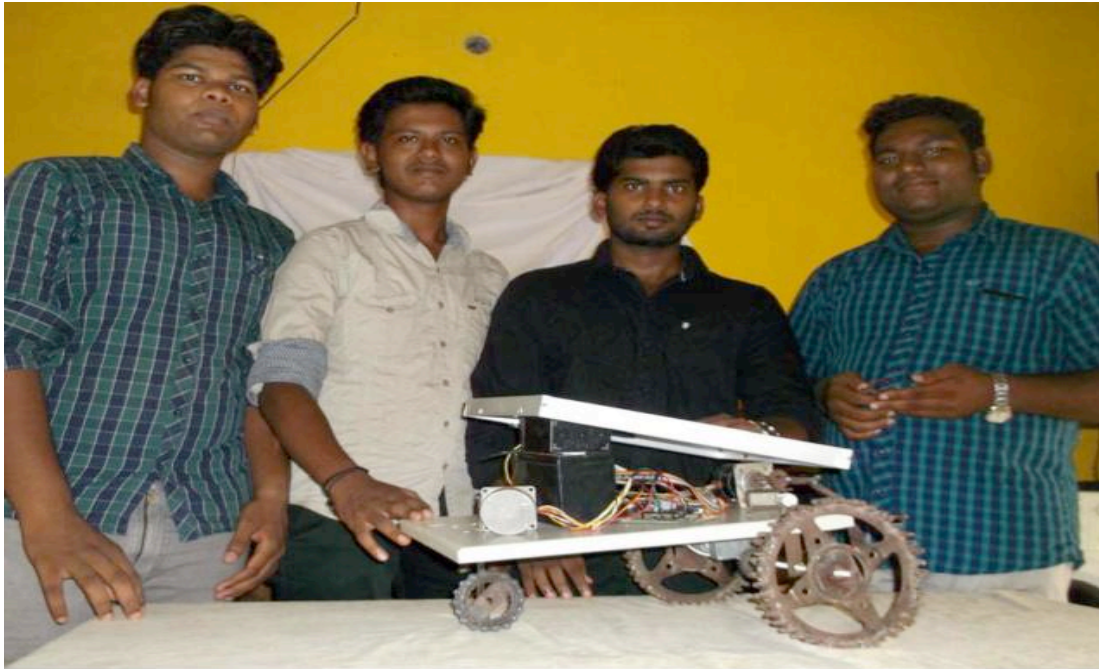


DATE:18.12.2014

THE HINDU

Remote powered solar ploughing machine developed by students



The Hindu

BRILLIANT INITIATIVE: Fitting a camera and ultrasonic sensor is also being discussed. Photo: Special Arrangement

Ploughing is an arduous task. It takes time and involves physical labour. More farmers now use a tractor for ploughing, than those who still depend on traditional bullocks.

But a tractor does not come for free. The fuel charges, the driver's wages all need to be borne by the farmer who rents it. And the charges easily work out to anything between Rs.3,000 to Rs. 3,500 for ploughing an acre.

Nonavailability

And the next issue is the vehicle's availability to source it on time. In some villages, farmers book the vehicle in advance since it would be busy on rent for days together.

These things can change — seems to be the concept of a group of engineering students from Mailam Engineering College, Tindivanam, Villupuram district, Tamil Nadu which has devised a new solar powered plougher to till fields.

The three wheeled machine operated using remote control seems promising.

Mr. I.Vetrivel, Mr.V.K.Arun, Mr. K.Sivaraman and Mr. V.Premnath comprise the group of final year electronics and communication engineering students who developed this device.

“Basically our college is situated in an agricultural region and there are plenty of fields surrounding our campus. And many of our students come from agricultural families. As part of annual project work these four students wanted to try doing something different.

“They could easily relate to the problems faced by farmers in sourcing a tractor during the season and decided to work on something on that line. And the outcome is this device,” says Mr. Rajapartheeban, Assistant Professor and Research Coordinator, Electronics and Communication Engineering Department.

Before starting

Before working on the idea the students had interviewed several farmers in the region to know what their problems in cultivation were.

Many farmers had told them that sourcing labour for ploughing and marketing were major issues for them.

Being students, they decided to work on the ploughing issue since it was something within their purview.

Work started on the same bearing in mind that something should be developed that could run on solar energy as this would reduce the dependency on the regular fuel inputs. The result was a remote controlled solar powered plougher that is eco friendly and cost effective. The sample machine, if popularised, can to an extent effectively solve dependence on human labour as well as the tractor.

Easy operation

Operating this machine requires no technical knowledge or training and it is very much user-friendly according to Mr. Rajapartheeban.

Sensors are fixed on the front wheel of the machine by which the machine deviates itself from getting blocked by stones and other obstacles in the ploughing field.

This mechanism can be operated automatically from 15 metre distance by a remote using radio frequency control unit. It can run for two hours at a stretch. Being solar powered, there is no problem of battery getting overloaded.

“This is only a demo unit developed by our students. We have still not fixed any price for this. We are sure that being an agricultural country this type of innovation can be, refined, scaled up easily, on being provided the right type of encouragement. To manufacture several units like this and make it popular, the government or some big industries should come forward to encourage this innovation,” says Mr. Rajapartheeban.

Enhancing the idea

The students are planning to enhance the idea using smart phones and tablets to operate the device. Ideas on how to further customise the plough for each user, and upgrading it with headlights for working in the night is also on.

Fitting a camera and ultrasonic sensor for live information to the operator is also being discussed, according to Mr. Rajapartheeban. Patent has also been filed for this device.

For details contact the guide Mr. M.Rajapartheeban mobile: 9710419007, email: parthe86@gmail.com, Mailam Engineering College, Villipuram, Tamil Nadu.

“Mountain farming needs right approach”

The threats from globalisation should be faced with holistic, participatory and integrated approaches that should address all aspects of sustainability, said environment educator S.S. Davidson here.

Addressing the International Mountain Day celebrations at Vellambi tribal settlement in the Western Ghats in Kanyakumari district recently, Mr. Davidson

said the specific needs and inter-linkages of different aspects of sustainable mountain development such as water, biodiversity, tourism and infrastructure should be taken into consideration.

The Kani tribals participated in the celebrations organised by the Tribal Foundation.

Low impact on ecology

Mr. Davidson also said practically green mountain agriculture had a very low impact on the environment.

In general, farming was the main source of food in mountains. Globalisation offered opportunities for mountain producers to market their high quality products such as coffee, cocoa, honey, herbs, spices and handicrafts.

Organic ‘corai’ mats were distributed to the tribals who participated in the celebration in which Kaani elders Raman Kaani, Unni Kaani and Mundathi Kaani were present.

Farmers demand separate budget for agriculture

Members of the Tamizhaga Eri and Aatru Paasana Vivasayigal Sangam staged a demonstration here on Wednesday in support of their charter of demands.

Led by the State president of the sangam, P.Viswanathan, the demonstration was held near the Chathram bus stand.

The demonstrators urged the Central government not to accord permission for constructing reservoir across the Cauvery River at Mekedatu in Karnataka and a check dam across the Paambaaru in Kerala.

While demanding a separate budget for agriculture, the sangam wanted the Central government to bring back the old crop insurance scheme.

It wanted the State government to announce Rs.75 per kilogram for cotton and Rs.2,000 per quintal for maize.

Grant of Rs.3,000 as pension for every farmer above the age of 60 years and dredging of tanks and supply channels in Tiruchi district were among their other demands.

Rapid roving team to resolve pest menace

The University of Agricultural Sciences, Dharwad (Karnataka) has initiated a new concept to help chickpea and pigeonpea farmers in the districts of Vijayapur and Bagalkote regions by ensuring timely suggestions to save their crops from pests and infestations.

Named Rapid Roving Survey Team, it consists of experts who will make an extensive survey of the chickpea and pigeonpea growing areas of the districts.

Travel

Every week the team will travel to around 25 to 30 villages taking stock of pest and disease incidence on the crop.

Immediately after each survey the team is expected to prepare a status of each insect pest and disease along with the suitable management strategies to be followed by the farming community.

This information on pest status and the adoptable management strategies will be made known to the needy farmers and agriculture department officials through print media, radio, television and SMS. The team, during their visit, will also educate the farmers by giving training and distributing technical folders containing the measures to be taken to keep the pest at bay.

For example the team found that pigeonpea was susceptible to leaf webber, pod borer, infestations. The team advised the farmers on the right type of recommendations to be taken to tackle it.

Susceptible

Since the farmers in most of the areas grow the same pigeon pea crop for years the same variety becomes most susceptible to these infestations.

To reduce the incidence in the ensuing season farmers were advised to adopt crop rotation like sorghum, bajra, safflower, cotton etc based on the soil type and the moisture availability. Farmers were also suggested to go for seed treatment with trichoderma viridae before sowing.

Similarly for chickpea crop farmers have been asked to install bird perches . The rapid roving team is spearheaded by a well-known experts from the University.

(Dr. D.N. Kambrekar is Scientist, Regional Agricultural Research Station, UAS Campus, Bijapur-586 101, Karnataka, email: kambrekardn@gmail.com Phone: 08352-230568.

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Funds sanctioned to buy farm equipment

The district administration has announced allotment of funds under the National Agriculture Development Programme for subsidising purchase of farm equipment by those who are socio-economically backward through the Agricultural Engineering Department.

Threshers, weed removers, fertilizer sprayer, power tillers, farm waste shredders, and equipment that could be operated with tractors could be purchased with 50 per cent subsidy benefit.

For large-scale cultivators, 40 per cent subsidy is provided, said District Collector S. Prabakharan in a press release here.

For those in the general category, Rs. 96.7 lakh has been sanctioned as subsidy for the purchase of 257 equipment, in Erode Revenue division.

As for backward communities, Rs. 4.7 lakh will be released as subsidy for purchase of 12 implements.

Farmers can contact the Assistant Executive Engineer, Agricultural Engineering, 759, Brough Road, Erode — 638001, Ph: 0424 — 2266672, in Erode division, and the AEE, Gobichettipalayam, No. 31 / 15 A, South Park Street, Gobichettipalayam — 638452, Ph: 04285-229159

Millet farming project for 192 tribal settlements

Agriculture Department to launch Rs. 1.8-cr. project next year

In a major initiative aimed at ensuring food security of tribals in Attappady, the Agriculture Department is planning to implement a mega millet cultivation drive in the backward region with the active involvement of the local community. The programme will cover all the 192 tribal settlements in the region.

To be started in April next with an initial outlay of Rs 1.8 crore, the project would ensure cultivation of different kinds of millets including Ragi. Groundnut and various lentils also would be cultivated as part of the drive.

A comprehensive survey was conducted in this regard across Attappady and tribals have responded positively to the move.

Experts have already recommended revival of the traditional practice of cultivating millets would help the tribals of the region in achieving self-sufficiency in food apart from fighting poverty, malnutrition and different ailments.

Millets, which once formed part of the staple diet of the tribespeople in the region, had gradually disappeared from their traditional cuisine after agriculture began incurring loss and daily wage work on lands owned by non-tribals became more profitable.

Alienation of tribal land in massive level and change in land use patterns have also contributed to the grim situation.

No pesticide residue in field bean samples, says laboratory report

Price of crop has fallen as people are hesitating to buy it

The Pesticide Residue Analysis Laboratory in Bangalore has sent a report after analysing samples that the field beans (avare) samples that said there was no pesticide residue in the field beans (avare) crop in Hunsur taluk.

The laboratory, in its report, stated that besides the beans' pods, there is no pesticide residue found in the leaves and stem of the crop.

With the report, residents of Mysuru district can relish the beans without fearing residual effects.

A farmer died and over 92 others were admitted to the taluk hospital in Hunsur taluk in Mysuru district after spraying Lannate 40 SP on the crop. The Mysuru district administration banned the sale of the pesticide and the Agriculture Department launched a campaign in Hunsur about the adverse affects of using Lannate 40 SP for field beans. There are reports that farmers obtained the pesticide from neighbouring districts like Mandya, Chamarajanagar and Madikeri and found it to be effective in controlling pigeonpea pod borer.

As a result of fear among consumers, the price of field beans has fell from Rs. 40 to Rs. 45 a kg to Rs. 20 a kg about a fortnight ago.

Bhagyamma, who sells avare on the roadside at Jayanagar Entrance, said she used to sell a couple of quintal of beans earlier. However, she could not sell even 50 kg now.

Similarly Kariamamma and Lakshmi, who sell beans outside the HUDCO complex in Kuvempunagar, said that the demand for 'avare kai' had come down considerably for the first time in the last 14 years.

Up to 48 hours

Joint Director of Agriculture M. Mahanteshappa, who gave a copy of the laboratory report to *The Hindu*, said that the effect of the pesticide would be there for 48 hours, by which time the pod borer would be destroyed.

He said that the department had deployed a team of officers to ensure that farmers would wear masks and gloves before spraying pesticides. The department had also organised camps to create awareness among farmers not to spray while on empty stomachs or when not sober.

Holy cow! Vatican to open pope's farm to public

Pope Francis is opening the doors to an earthly paradise- the working farm at the papal summer residence here that produces the dairy, meat and vegetables for the pope and his staff.

The Vatican is planning to open the farm at Castel Gandolfo to the public next year, after finding success with its guided tours of the surrounding gardens, fountains and Roma-era archaeological treasures on the sprawling estate 25 kilometers (15 miles) south of Rome.

Francis has decided not to use the hilltop retreat overlooking Lake Albano, preferring to stay put in his suite at the Vatican hotel during vacations. The last time the palazzo was used was when Emeritus Pope Benedict XVI took up residence for a few months after his dramatic resignation in 2013.

Supplying fresh food

Soon, the public will be able to see the free-range hens housed in a majolica-decorated chicken coop, the ostriches, turkeys, rabbits and 80 cows that feed Francis and his staff at the Santa Marta hotel.

“We wait for the order from Santa Marta,” said Osvaldo Gianoli, who runs the villa. “We proceed according to that order and put together a special basket for the Holy Father that reaches his table and his kitchen.”

Pope Pius XI had the farm built between 1929 and 1934, and it still operates according to the agricultural methods of the time- It's not an organic farm, but works with natural fertilizers. Synthetic chemicals are used only when strictly necessary, Gianoli said.

Eight people currently tend to the animals and vegetable patch where potatoes, zucchini, tomatoes and other produce are grown. One of the staffers, Emilio Scarsella, has been here for 33 years and served four popes. “For them I made milk, yogurt, mozzarella, butter, fresh cheese”, Scarsella said, as he lifted a mound of cheese from its water.

The Castel Gandolfo complex has three villas, including Villa Barberini, the gardens of which were built over the residence of Roman Emperor Domitian. In all, the estate extends over 55 hectares (135 acres), significantly larger than the Vatican itself, which occupies 44 hectares in central Rome.

Francis himself wanted the Villa Barberini gardens to open to the public, and since its March opening some 8,000 people have passed through. Gianoli says that while plans aren't final yet, he hopes to add a visit to the farm and a more comprehensive visit to the gardens "and, why not, even the possibility of tasting our products."AP

Valuable spin-offs from carbon nanotube research

With the sophisticated computerisation of the instrument, the measurements can be done in a fully programmable and controlled manner.

Irrespective of its goal, a scientific research project may sometimes throw up gifts for the researcher that are worth being showcased as well. This is what has happened in the case of Piyush Jagtap, research scholar at Indian Institute of Science's (IISc) Department of Materials Engineering, who found not one, but two such gifts. One, the invention of a device to measure changes in material property as it moves through an electric field and two, the discovery that carbon nanotube foam can form an effective smart shock absorber in devices such as cell phones.

Guided by his thesis adviser, Dr. Praveen Kumar, Piyush's research into the properties of carbon nanotubules in an electric field led him to build up, from scratch, an instrument to study the properties of small objects moving in an electric field and also develop the methodology to analyse the measurements.

With the sophisticated computerisation of the instrument, the measurements can be done in a fully programmable and controlled manner. For instance, they can study what happens when the electric field is increased in a pre-programmed way or is switched off while loading and switched on while unloading, or any complicated sequence that is desired. Before they built up this device, there existed no other way of executing this task.

Second spin-off

One of the first things the researchers did was to study the mechanical properties of carbon nanotube foam. They found that the shock-absorbent properties of this material actually get enhanced when it is subjected to an

electric field. “If subjected to an electric field of 2 volt per millimetre length of the material, its shock-absorbent properties are enhanced six to seven times,” says Dr. Praveen Kumar. This is good news, for it conveys that carbon nanotube foam would make a good inclusion in mobile phones and such small devices as a shock absorber — smart shock absorber is the word for it. Such shock absorbers become particularly relevant and important as the electronics inside mobile devices such as phones and tablets are becoming increasingly fragile with miniaturisation and increasing current density (electric current per unit area).

The duo is the first to have studied this behaviour, especially because such a device for measuring the effect of a field on a small moving item never existed earlier.

“Developing the instrument took us about four to five months, but we had spent more than a year thinking about the larger problem — the mechanical behaviour of the response of carbon nanotubes in an electric field,” says Dr. Kumar, adding that this work will further pave the way to exploration and collaborations to study different materials.

An opportunity to outmuscle China in oil

China’s dominance over India in overseas oil has been on clear display, but there is reason to believe that the competitive landscape may be changing

The race between China and India for global oil resources was over before it started. From Central Asia to Africa, China’s large and powerful national oil companies outmuscled their smaller Indian counterparts.

But the recent plummet in international oil prices, from a peak of \$115 per barrel in mid-June to below \$70 in early December, presents a rare opportunity to India. If lower oil prices are sustained throughout next year, Indian national oil companies will find the cost of overseas mergers and acquisitions more affordable. They may also discover Chinese competition to be less severe. China’s oil giants have slowed down their international activity of late and become preoccupied with developments at home.

Advantages

It was not long ago that China's dominance over India in overseas oil was on clear display. Last year, in oil-rich Kazakhstan, India's Oil and Natural Gas Corporation Videsh (OVL) was [closing in on a coveted stake](#) in the Kashagan project, which contains some of the largest oil discoveries made in the world in the past 40 years. But before it could seal the deal, China National Petroleum Corporation (CNPC) entered the scene and outbid OVL. CNPC came out in front thanks largely to billions in loans from the China Development Bank and the China Export-Import Bank.

Drawing on sizeable capital from China's policy banks is one of the biggest advantages of Chinese national oil companies abroad. But even without Beijing's deep pockets, China's national oil companies have had plenty of cash to spend overseas.

Although China is known for its enormous appetite for overseas energy resources, it remains the world's fourth largest oil producer at over four million barrels per day in production. CNPC alone controls half. India's leading company, the Oil and Natural Gas Corporation (ONGC), produces a fraction of that amount at home, with slightly over 5,00,000 barrels in daily production. While fuel price controls and subsidy burdens drag down the earnings of both Asian oil giants, CNPC's profits were six times higher than ONGC's last year. India's oil firms also do not have the same political power as Chinese national oil companies wield at home. In China, oil executives are often high-ranking members of the Communist Party. They have political clout that matches or surpasses government ministers and have been known to deviate from official government policy in making overseas investments.

Unlike China, India has a Ministry of Petroleum and Natural Gas, which offers a bureaucratic buffer between oil executives and political leadership. The Indian cabinet must approve any large overseas deals. While New Delhi has generally been supportive, at times it has stepped in to block bids when it deemed the risk too great.

“If lower oil prices are sustained throughout next year, Indian national oil companies will find overseas mergers and acquisitions.”

Finally, Chinese national oil companies command a large variety of oil service and construction subsidiaries within their corporate groups. They engage in everything from well drilling to road construction to even catering services. This comprehensive approach has given China a leg-up on the competition. CNPC has been able to make such a deep-imprint in Africa because it is able to offer refinery and pipeline construction and infrastructure development that African oil producers crave, alongside its exploration and production work. Even when they band together, Indian national oil companies can only offer a limited scope of oil infrastructure.

Changing landscape

But there is reason to believe that the competitive landscape may be changing. After years of leading the pack with tens of billions of dollars in annual investments, Chinese national oil companies are now shouldering high debt levels and engaged in fewer international ventures in 2014. Their focus is now squarely on profitability and consolidation, not new big and bold deals. In hopes of repeating the shale oil and gas revolution of the U.S., China’s national oil companies are also increasing their domestic investment.

There is a political dimension to this decline in international activity among Chinese national oil companies. On top of a weakening economy in China, President Xi Jinping’s widespread [anti-corruption campaign](#) has discouraged all Chinese state-owned enterprises from making large overseas acquisitions. During the first three quarters of 2014, overseas investment from Chinese companies dropped by 23 per cent compared to last year.

China's national oil companies are some of the main targets of the corruption probe. Along with dozens of CNPC executives and managers, former CNPC boss Zhou Yongkang was detained earlier this year for 'serious disciplinary violations.' Early this month, after being sacked from the Communist Party of China, he was arrested for corruption.

President Xi could be reining in the political power of Chinese national oil companies in an effort to push forward systematic reform. There are few things that India has that China's political leadership wants, but greater control over its national oil companies may be one.

Even when it comes to oil infrastructure, China's well-oiled machine is experiencing some difficulties. Oil producing countries across the globe are becoming increasingly concerned with the investment method of Chinese national oil companies in terms of service contracts and employment. They are pushing forward stronger local content regulations to counter the Chinese crush.

Regardless of the extent of China's retreat, there is a fair deal of risk in plunging into overseas oil. Falling prices will hit the bottom lines of Indian national oil companies, which will have to increase borrowing from domestic and international financial institutions to make new, large overseas deals.

But if Prime Minister Narendra Modi's promise of a more muscular diplomacy is true, he could instruct Indian state-owned banks to lend a hand to promote Indian foreign investment. As China looks inward, it may be a ripe time for India to reinvigorate its global oil quest.

(Luke Patey is the author of The New Kings of Crude: China, India, and the Global Struggle for Oil in Sudan and South Sudan, 2014.)

QUESTION CORNER

Why is the ozone hole concentrated over Antarctica?

ANANTHU KRISHNA, Kochi, Kerala

Ozone is a colourless gas. Chemically, it is very active and reacts readily with a number of substances. These reactions cause rubber to crack, hurt plant life, and damage people's lung tissues. But ozone also absorbs harmful components of sunlight, "ultraviolet B", or "UV-B, protecting living things below.

Ozone can be destroyed by a number of free radical catalysts, the most important of which are the hydroxyl radical (OH), nitric oxide radical (NO), chlorine atom (Cl) and bromine atom (Br). Human activity has dramatically increased the levels of chlorine and bromine in the atmosphere.

Each year for the past few decades during the Southern Hemisphere spring, chemical reactions involving chlorine and bromine cause ozone in the southern polar region to be destroyed rapidly and severely. This depleted region is known as the "ozone hole". British scientists discovered this hole in 1985.

The hole in Antarctica occurs in the spring (September to December). It begins with this overall ozone thinning, but it is assisted by the presence of polar stratospheric clouds (PS clouds). During the extreme cold of winter, with no sun for six months, polar winds create a vortex which traps and chills the air; the temperature is below -80 Celsius. The ice in these PS clouds provides surfaces for the chemical reactions that destroy the ozone. This needs light to kick-start the reactions. By the end of spring warmer December temperatures break up the vortex and destroy the PS clouds. Sunlight starts creating ozone again and the hole begins to repair.

Every March to April during the Northern Hemisphere springtime similar, but less pronounced ozone hole forms above the Arctic. The natural circulation of wind, the polar vortex, is much less developed in the Northern Hemisphere above the Arctic.

Yeddyurappa urged to raise issues of arecanut growers in Parliament

He should raise bagair hukum farmers' issue too: Ramesh Hegde

B.A. Ramesh Hegde, secretary of the Shivamogga District Congress Committee, has urged MP and national vice-president of the Bharatiya Janata Party B.S. Yeddyurappa to raise the problems being faced by arecanut growers and bagair hukum farmers in Malnad region in the Parliament and prevail upon the Union government to initiate appropriate measures to resolve them.

While campaigning for Lok Sabha elections, Mr. Yeddyurappa had claimed that, if elected, he would raise these issues in Parliament. It was unfortunate that Mr. Yeddyurappa had failed to keep his promise, Mr. Hegde said at a press conference here on Tuesday.

The price of arecanut had come down to Rs. 300 a kg this from Rs. 800 a kg last year. The import of low quality arecanut was responsible for the crash in the prices. With the objective of curbing the import of arecanut, the National Democratic Alliance government at the Centre had increased its minimum import price from Rs. 130 a kg to Rs. 170 a kg.

However, the order had not been enforced. It was essential to impose a total ban on the import of arecanut to protect the interests of local growers. Mr. Yeddyurappa should put pressure on the Union government to bring in a law to ban the import of arecanut, he said.

He urged the Union government to implement the recommendations of Gorakh Singh committee on providing financial assistance to arecanut growers, who were in financial distress owing to the yellow leaf and fruit rot diseases.

Mr. Hegde expressed displeasure over the alleged slowness in conferring ownership rights for bagair hukum farmers on the land they had been cultivating under the Forest Rights Act in Malnad region. The Act specifies that it was mandatory for farmers not belonging to Scheduled Tribes to furnish records to show their domicile in the forest region for three generations or for the past 75 years while applying for ownership rights.

Prior to the Lok Sabha elections, the BJP leaders, including Mr. Yeddyurappa, had raised a hue and cry over this issue by stating that the rigid conditions laid down in the Act were responsible for the slow pace of its implementation. As Mr. Yeddyurappa is now an MP, he should initiate a debate on the issue in Parliament and put pressure on the Union government to suitably amend the Act, he said.

Member of Shivamogga City Corporation P.V. Vishwanath, functionaries of the Congress Shamsundar, C.G. Madhusudan, Chethan and Girish were present.

A new lease of life for medicinal plants

RESOURCE CONSERVATION	
AIM	CRITICALLY ENDANGERED SPECIES
• Conserve critically endangered medicinal plants in Western Ghats	Idinhil (<i>Pterospermum rubiginosum</i>)
• Ensure sustainable income to tribesmen	Njettippana (<i>Caryota urens</i>)
	Vizhalari (<i>Embelia ribes</i>)
	Maramanjal (<i>Coscinium fenestratum</i>)
	COMMERCIAL CULTIVATION
ESTIMATED COST	Kasturi manjal (<i>Curcuma aromatica</i>)
Rs.50 lakh	Koova (<i>Maranta arundinacea</i>)
Aid from National Medicinal Plant Board	Chethikoduveli (<i>Plumbago indica</i>)
	Kaypan Padavalam (<i>Trichosanthes lobata</i>)
PROJECT AREA	
Grama panchayats: Thavinhal Thirunelly Moopainad Poothadi Noolpuzha	

The Kerala State Biodiversity Board (KSBB) has launched a project ‘resource conservation, augmentation, sustainable harvesting and value addition of medicinal plants resources’ to conserve the critically endangered medicinal plants in the Western Ghats region.

The project implemented with financial assistance of the National Medicinal Plant Board also aims at ensuring sustainable income to the tribal people who earn their livelihood collecting minor forest produces.

The project will be executed in association with the biodiversity management committees functioning at the grama panchayat level and the Forest Department.

Conservation

The project aims at conserving the critically endangered medicinal plant species, S. Rajasekharan, senior programme coordinator of the KSBB, told *The Hindu*.

Minor forest produces such as Kurmthotti (*Sida alnifolia*); Nellikka (*Phyllanthus emblica*), Thanika (*Terminalia bellirica*), and Moovila (*Pseuderthria viscida*) would be collected and processed under the project, Dr. Rajasekharan said.

Value-added products

He said the KBB was planning to make value-added products from medicinal plants and improve the standard of living of the tribesmen engaged in collecting minor forest produces, Dr. Rajasekharan said.

The project would be executed at an estimate of Rs.50 lakh at Thavinhal, Thurnelly, Moopainad, Poothadi, and Noolpuzha grama panchayats in the district in the initial phase and would be expanded to other grama panchayats in the State later. North Wayanad divisional forest officer Narendranath Veluri inaugurated the programme at Mananthavady on Tuesday.

Chennai - INDIA

Today's Weather

Clear

Rain: 0

Humidity: 89

Wind: normal

Tomorrow's Forecast

Thursday, Dec 18

Max 29° | Min 24°  Partly Cloudy

Sunrise: 06:22

Sunset: 05:44

Barometer: 1014

Friday, Dec 19

Max 29° | Min 25°

Extended Forecast for a week

Saturday
Dec 20



30° | 25°

Partly Cloudy

Sunday
Dec 21



30° | 25°

Partly Cloudy

Monday
Dec 22



24° | 23°

Partly Cloudy

Tuesday
Dec 23



24° | 23°

Partly Cloudy

Wednesday
Dec 24

26° | 24°

Partly Cloudy

Recipe: Masala khichdi

When back from office and are not in the mood to cook anything exotic, here's a quick and healthy recipe for you:

Ingredients

1 cup rice

1 cup yellow moong daal

2 chopped onions

2 chopped potatoes (medium)

1 cup mixed boiled veggies (cauliflower, capsicum, carrot)

Turmeric powder

Chilli powder

Mustard seeds

Garam masala

Oil

Ghee

Salt

Fresh coriander leaves

Method

-Wash the daal and rice. Soak it in water for 15 minutes.

-After 15 minutes, in a pressure cooker, fry onions in a combination of 1 tablespoon ghee and 1 tablespoon oil.

- When the onions are light brown add the mustard seeds and green chillies.
- Then add the red chilli powder, turmeric powder and garam masala. Fry for a while, put in the rice and daal and fry both for 2-3 minutes. Now add mix veggies and saute it.
- Pour in 2 glasses of warm water.
- Add potato cubes and salt.
- When the water starts bubbling, cover the cooker with its lid and pressure cook for 3 whistles.
- Sprinkle coriander leaves and ghee on top before serving.

How to make a quick Sindhi dish!

Sail or Seyal is the process of a dish slow cooked in its own juices without the use of water. Says food aficionado Saloni Malkani, "Slow cooked is very important as the meat or any preparations slowly cooks in its own juices, giving the dish an outstanding and typical flavour." Here is her recipe to try...

Recipe of Seyal Mutton

Ingredients:

500 to 750 Grams mutton or lamb - with bone or deboned as per your choice

The lamb should be cut in cubes, or sized pieces as desired

3-4 normal medium sized onions chopped and then puree in a mixer

4 medium sized tomatoes chopped and pureed

200 grams curd (either hung or thick)

4 garlic pieces finely chopped

1 tablespoon garlic paste and 1 tablespoon ginger paste

1 cup coriander leaves and 2 green chilies finely chopped and pureed

1 teaspoon garam masala, jeera powder and dhania powder

1/2 teaspoon of cardamon which should be powdered

1/2 teaspoon of ajwain powder

3 tablespoons ghee

A pinch of haldi

Salt to taste

Method:

1. Marinate the mutton in a mixture of the ginger ,garlic , coriander leaves puree along with the curd , leave in the for a few hours outside or if overnight refrigerate the mixture.

(Overnight marination does wonders to the dish)

2. Saute the onions in ghee, when slightly brown add the tomatoes and masalas and saute between 4-6 min.

3. Cool the sauteed onions, tomatoes and masala mixture then add to the marinated mutton and mix.

4. Keep aside 45 minutes and cook the mixture over high heat for 7-10 minutes.

5. Reduce the heat and cover the discharge to simmer for 60-75 minutes to ensure the mutton is tender

6. Once tender, serve in a nice bowl and garnish with fresh coriander leaves.

Your seyal mutton is ready.

A marinade is the flavour secret of a dish

Have you ever wondered what gives a dish its distinct taste, and put that down to some old wives' cooking secret?

It's not. That meat, chicken or even fish that you're relishing may have been well-marinated! Used as a liquid, spice rub or a paste, a marinade can add immense flavour to meat and poultry, seafood and vegetables and even tenderise tougher cuts of the meat.

How it works

You can use a variety of liquid marinades with vinegar, lemon juice and or yogurt, which can be combined with spice powders, flavoured oils and herbs. The acids present in the marinade try and soften the surface texture of the meat, allowing it to cook quickly, while the oils add moisture to the meat and prevent it from burning while being cooked. Aromatics such as dried herbs, minced red chillies, garlic and shallots are used too. The process of marinating can last for a few hours or even a day.

Tips to get it right

Marinating can be done in two key ways: one, via a syringe, where the thin liquid marinade has to be injected into to the meat, and two, through soaking where the meat, poultry or seafood is immersed in the liquid and put into a dish or a sealable plastic bag, which seals the outside air.

Seasonings and rubs

Seasonings are used to enhance the already present flavour and they must always be used sparingly. Rubs, on the other hand are coarser and can be used more liberally. When using a rub, first brush the surface of the meat with oil and then add the rub to it, before grilling.

Timings:

Seafood like prawns, pomfret and rawas: One hour for pomfret, two for rawas.

Chicken breasts: Roughly two hours

Meat: Three hours to overnight (in the fridge).

Recipe: Potato cake with chilli jam

A Mediterranean twist to our favourite potatoes and cauliflower

Preparation time: 20 mins

Cooking time: 30 mins

Serves: 4

Recipe ingredients for Gobi Sauce

2 Tbsps oil

1 Tsp Chopped Garlic

1 Cup sliced Onions

400 gms Chopped Cauliflower

1 Cup Vegetable Stock

½ Cup Milk

2 Star Anise

Salt to taste

Pepper to taste

For the aloo cake

2 Potatoes sliced

½ Deseeded, Roasted and Peeled each red, yellow and green Capsicum

3 Tbsps Cheese

3 Tbsps cream with salt and pepper

Hot Water

Salt

Ingredients for the Chilli Jam

1 sliced each red yellow and green capsicum

1 cup apple vinegar/ regular vinegar

¼ cup honey

Salt

Parsely/coriander to garnish

Method to make Gobi Sauce

-Heat the oil in a pan. Add garlic and onion. Fry till onion is soft. Add cauliflower and stock and cook till stock reduces.

-Add milk, star anise, salt and pepper and cook for 2 mins.

When cauliflower is soft put the mixture in a mixi and grind till a smooth paste is formed.

-Keep aside.

Method to make aloo cake

- Cook Potato slices in boiling water and salt till soft.
 - Take a greased mould and layer the potato slices with the red yellow and green capsicum adding cheese and cream in between the alters.
- Top with some more cheese and bake in a preheated oven at 180 degrees for 15 to 20 mins.

To make Chilli Jam

- Cook the capsicum with vinegar and honey till it gets a jam like consistency.
- Serve aalu cake with gobhi sauce and garnish with chilli jam and parsely/coriander leaves.

Lip-smacking recipes for Christmas

Winter is in full force and Christmas is also here. Time to cook with dairy products, dry fruits and meat.

Here are some Christmas food item recipes:

1. Eggnog by Executive Chef Aashish Joshi, Jaypee Siddharth, Delhi

Ingredients:

- Egg yolks (2)
- Sugar (1 spoon)
- Milk (1/2 cup)
- Cloves (1 whole)
- Cinnamon (a pinch)
- Cream (1/2 cup)
- Freshly grated nutmeg (1/2 teaspoon)
- Vanilla extract (1/2 teaspoon)
- Cognac (60 ml)

Method:

- In a large bowl use a whisk or an electric mixer to beat egg yolks until they become lighter in colour. Add sugar and beat after each addition and whisk until fluffy.

- Combine milk, cloves, and cinnamon in a thick-bottomed saucepan. Go for medium heat until the milk mixture is hot, but it shouldn't be boiling.

- Temper the eggs by adding half of the hot milk mixture into the eggs, whisking constantly while you add the hot mixture. Pour the mixture back into the saucepan.

- Cook on medium heat, stirring constantly with a wooden spoon, until the mixture begins to thicken slightly, and coats the back of the spoon. It helps to have a candy thermometer, but not necessary; if you have one, cook until the mixture reaches 160 degree Fahrenheit. Do not allow the mixture to boil, or it will curdle. Remove from heat and stir in the cream. Strain the mixture through a mesh strainer to remove the cloves. Let it cool for one hour.

- Mix in vanilla extract, nutmeg, and cognac.

- Serve in a glass and top it with whipped cream.

2. Honey X-mas Cake by Chef Ranveer Brar, Senior Executive Chef at Novotel, Mumbai and host of Zee Khana Khazana's "Breakfast Express" and "Snack Attack".

Ingredients:

- Eggs Whole (36)
- Sugar Demerara (3000 gram)
- Honey (600 gram)
- Rum (120 ml)
- Clove Powder (30 gram)
- Cinnamon Powder (40 gram)
- Ginger Powder (30 gram)
- Chopped Chocolate (720 gram)
- Flour Refined (3000 gram)
- Chopped Roasted almond (1500 gram)
- Mixed Peels (600 gram)
- Baking Powder (30 gram)
- Baking Soda (30 gram)

Method:

- Heat up honey, sugar and water, beat eggs and honey mixture. Place all the dry ingredients into a mixing bowl. Put the honey mixture into it and knead for short time. Portion the batter and bake it for one hour.

3. Mulled wine by Fio Cookhouse & Bar, Delhi**Ingredients:**

- Red wine (750 ml)
- Orange (one)
- Amaretto (60 ml)
- Cloves (8 to 10)
- Honey (80 ml)

- Cinnamon stick (10 gram)
- Fresh ground ginger (10 gram)
- Star-anise (5 gram)
- Fresh mint (5 gram)

Method:

- Combine all ingredients in a heavy bottom pan except fresh mint and allow it to simmer over low heat for 20 to 25 minutes.
- Stir occasionally so that all ingredients mix up properly. Bring the wine to a boil so that the ingredients blend well.
- Muddle the fresh mint leaves in the serving glass and ladle the mulled wine then serve warm.

4. X-mas Pudding with Brandy Butter Sauce by Amit Pratap Singh, Pastry Chef, Kempinski Ambience Hotel, Delhi

Ingredients for Plum Pudding:

- Flour (300 gram)
- Butter (1000 gram)
- Brown Sugar (1000 gram)
- Eggs(12)
- Liquor soaked fruits (4600 gram)
- Bread crumbs (600 gram)
- Rum (300 ml)

Method:

- In a clean pan, mix butter and brown sugar together till sugar dissolves in butter.
- Then gradually add eggs in butter and make a smooth fluffy mixture.
- Add bread crumbs and flour then mix them well.
- Add soaked fruits and rum to the mixture and mix well.
- Place in a pudding mould and put in steamer for six hours.
- When the pudding is ready, cut into portions and serve with the brandy sauce.

Ingredients for Brandy butter sauce:

- Fresh cream (200 gram)
- Sugar (100 gram)
- Butter (400 gram)
- Brandy (200 ml)

Method:

- Bring the sugar and cream to boil.
- Add brandy.
- Whisking constantly, add the butter then set to one side and let it cool.
- Pour brandy sauce on top of plum pudding.

5. Roast Turkey, sage and apple stuffing, graving by Chef Abhishek Basu - Executive Chef, The Park, Delhi**Ingredients:**

- Whole Turkey (1, approximately 4 kg)
- Carrots (200 gram)

- Celery (200 gram)
- Leeks (200 gram)
- Onions (200 gram)
- Refined Flour (50 gram)
- Thyme sprigs (25 gram)
- Crushed black Peppercorn (10 gram)
- Salt (to taste)
- Water (200 ml)

For the stuffing:

- Chicken leg minced (300 gram)
- Fresh Bread Crumbs (150 gram)
- Eggs (3)
- Grated nutmeg (3 gram)
- Peeled, whole pistachio (80 gram)
- Peeled, small dices of apple (60 gram)
- Sage (5 gram)
- Finely chopped onion (100 gram)
- Peeled and chopped garlic (15 gram)
- Crushed black peppercorn (5 gram)
- Salt: to taste

Method:

- Marinate turkey with salt, crushed black pepper, thyme sprigs and olive oil and leave overnight.

- Roughly cut carrots, celery, leeks and onions and place in a roasting tray.

Place the turkey on the bed of vegetables.

- To prepare the stuffing mix together chicken mince, fresh bread crumbs, egg, grated nutmeg, peeled pistachio, peeled small dices of apples, torn sage leaves, sweated chopped onion and garlic, salt and crushed black pepper.
- Stuff the neck cavity of the turkey with the stuffing and tie it with thread to close the cavity.
- Heat the oven to 220-250 degree Celsius and place the turkey in the oven for roasting.
- Once the turkey gets an even golden brown colour remove the tray from the oven, add some water in the tray and cover it tightly with aluminium foil and place it back in the oven to roast for about one and a half hours to two hours depending on the size of the turkey. Check the internal temperature of the turkey with a thermometer to see if it has reached 75 degree Celsius.
- After the turkey is removed from the tray, add flour to the tray and add water and strain out the liquid into a pan. Bring it to a boil and serve the gravy along with the roast turkey.

6. Vanilla Kipferl by Illa Nicole, Executive Pastry Chef at Grand Hyatt, Goa

Ingredients:

- Butter (250 gram)
- Caster sugar (145 gram)
- Vanilla bean (¼ piece)

- Egg yolk (3)
- Almond powder (125 gram)
- Flour (300 gram)

Method:

- Cut the vanilla bean length-wise in half and remove the seeds.
- Mix butter, caster sugar and vanilla seeds together.
- Add the egg yolk and mix in well.
- Mix flour and almond powder together and add into the butter mixture.
- Mix the ingredients until dough is formed.
- Wrap the dough in plastic wrap and keep in the refrigerator for an hour .
- Divide the dough and shape into small crescents.
- Place the cookies onto a baking tray lined with baking paper.
- Bake at 180 Celsius for 10 minutes till it turns golden brown.
- Dust the cookies with icing sugar once they are cooled down.
- Store cookies in an airtight container.

DECCAN Chronicle

Climate change: Biodiversity hotspots likely to ‘shift’



Bharatpur Bird Sanctuary (Photo: PTI)

Hyderabad: Climate change will gradually force larger plant species, endemic to biodiversity hotspots in the country, to “shift” to other conducive environments, said researchers from University of Hyderabad and IIT-Kharagpur.

About 24 per cent of existing endemic species in Indian biodiversity hotspots will be reduced by 2050 while about 41 per cent will be lost by 2080, models predicted. UoH scientists are now taking up a study of endemic species in the Eastern Ghats and Nalla-malla forests, although they say many of them have already been lost.

Scientists from UoH and IIT Kharagpur studied about 637 large plant species endemic to biodiversity hotspots in Western Ghats, Himalayas and the Indo-Burma region.

Expansive studies of these species were taken up by Dr Vishwa Sudhir Chitale and Dr Mukund Dev Behera of IIT Kharagpur and Dr Parth Sarathi Roy of UoH. The scientists explained that “movement” of plant species was a part of their evolutionary process. “We wanted to see how endemism was getting affected due to different anthropogenic and climate processes. What we have

seen is that endemic plant species are trying to shift to cooler and humid climates.

These species are very sensitive to external factors,” Dr Parth Sarathi Roy, Geospatial chair professor, University centre for earth and space sciences, UoH said.

Various bio-climatic and anthropogenic factors are impacting this movement. Changes in the number of rainy days, total rainfall, temperature and disturbances due to humans are forcing this change.

Scientists predict that species endemic to the Western Ghats will shift to south and southwestern directions while species endemic to the Himalayas will shift north and northeastwards. “Where these species can’t shift, they are trying to confine themselves leading to range reduction,” Dr Roy said. UoH scientists will also take up a study of the East-ern Ghats and Nallamalla forests in AP and TS.

Cook smart this Christmas



Go the homemade way

During the festival, people have to stock up on a lot of ingredients. And while it seems easy to just go out and buy them, preparing things at home always saves a lot of money. Mary Mathai, partner in an ad agency, who always hosts a family Christmas lunch or dinner, says, “It might be a little time consuming, but preparing things like butter, and even the entire lunch at home can save a lot of money. It seems like the easier way out to just go and buy the ingredients, but making it at home saves a lot of money.”

Replacing meat

During Christmas a lot of families prepare roast turkey or even curries using red meat. Chef Francis from ITC Kakatiya says that replacing the meat is often cheaper. “Instead of a roast turkey, people can opt for a smaller bird like a chicken. Even when it comes to preparing a shepherd’s pie (usually prepared with beef) or other curries, people can opt for an alternative as well,” explains Chef Francis.

Get innovative

Instead of stressing over expensive sauces, you can always get innovative and prepare them at home or even replace the ingredients. “Cranberry sauce is one of the things that is placed with a turkey, but if you find them expensive, you can look for a sauce made out of any other berry or fruit,” says Mandaar Sukhtankar, executive Chef from The Park.

Buy veggies and fruits from markets

Since people buy huge quantities of vegetables and fruits during this season, shopping for cheaper and fresh produce is the need of the hour. Chef Mandaar Sukhtankar says, “It is a better option to visit a farmers’ market than shop at a supermarket. You’ll get fresher produce and you also get to bargain at these markets, hence cutting down the cost.”

Homemade vs. buying

If you love to distribute cakes or desserts or any other Christmas delights, it is always better to make them at home. But, if you just want to opt for one or two cakes, it is a better idea to just buy them.

Go for smaller cuts

If you still want to stick to turkey or other expensive meat, go for a smaller cut. “Instead of buying a huge turkey, opt for smaller cuts from the bird. Firstly, cooking such a huge bird could be a problem and most people don’t even have the oven that is needed to cook a bird this huge. So the best option to save money would be to opt for smaller cuts,” Mandaar Sukhtankar, Executive Chef from The Park explains.

Potluck lunches

Instead of slogging out and struggling to make each and every dish, it always helps to host a potluck lunch. Mary Mathai says, “My entire family gets together for Christmas, so it can get expensive if one person is cooking the entire dinner. So we always do a potluck. That way each member brings a dish to the table, the costs and effort is cut down and we still have a grand dinner.”

Make your purchases early: During Christmas the ingredients become very expensive, so plan your purchases a little ahead and that way you can save a lot of money.

Make use of the leftovers: If you use a bigger bird, after Christmas you can use the leftovers to prepare a meal. You can always whip up different dishes with a big bird and it can serve as lunch or dinner. Instead of slogging out and struggling to make each and every dish, it always helps to host a potluck lunch. Mary Mathai says, “My entire family gets together for Christmas, so it can get expensive if one person is cooking the entire dinner. So we always do a potluck. That way each member brings a dish to the table, the costs and effort is cut down and we still have a grand dinner.”

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THE HINDU BusinessLine

Manufacturing & services key to output, yield in agriculture

Farm sector should be lauded for its ability to employ a vast majority of the population

With the ‘Make in India’ slogan, Prime Minister Narendra Modi has touched upon the biggest problem faced by the country.

And by not repeating the agriculture/farmer rhetoric, he has done a great service to the agriculture sector.

A simple glance at the living standards of farmers could prompt many of us to write off our successes in agriculture.

Progress in agri

But we must remember that from the time of Independence, the sector has been growing consistently at the annual rate of 2-3 per cent. Let us also look at the

quantum of production as a barometer of success. India has the 7th largest arable area in the world.

Today, India is among the top five producers of almost all agricultural products. We are among the top five producers of rice, wheat, maize, cotton, millets, pulses, sugarcane, mustard, guar, soya, etc. India is also home to second largest cattle population in world and among the largest producer of poultry produce as well. We account for 10.5 per cent and 8.6 per cent of the world fruits and vegetables production respectively.

We are also the largest producer of potato, onion, garlic, cauliflower, brinjal, etc without genetic engineering. We would not be among the top five producers in these categories, if we were not doing something good in this sector.

And despite the losses in storage and transit, we are producing enough to feed 125 crore people with limited imports, and have also managed to create a good buffer stock.

In addition, the sector is amongst the largest foreign exchange earners by way of exports for our nation.

Bottlenecks

For those of us who should look at this success only from an efficiency point of view, arguments would be made on our lower per acre productivity.

But ours is a country with many agro-climatic zones and different levels of farm management understanding.

There are zones where production levels exceed most developed nations, and also zones or patches with the poorest production level.

Having said this, there, certainly, are areas that need improvement.

Being a democratic and socialistic country, we also need to contend with the resistance to genetically modified seeds, lower land holdings and lower levels of farm mechanisation which affect productivity. We should, however, also compliment the agriculture sector for its ability to employ a vast majority of our population.

This data is a reality check on the sector's well-being.

A good sector should attract more employment opportunities or should be able to afford to pay the employed population not only in cash; but also ensure a better living standard by way of providing housing and other facilities.

With the economic development of the country, manufacturing and services sector have attracted more employment.

However, food inflation has reduced the disposable income available with people in these sectors. Further, the effects of urbanisation reduce the living standards of the people in these two sectors to levels that are lower than the rural population engaged in agriculture.

Employment capability

It is only when technological development is introduced in the agriculture sector can a fewer people continue to produce more food for the country.

However, in our country since manufacturing and services sectors are not growing at the desired pace, the incentive to mechanise remains restricted. Hence the number of people “reported” to be engaged in feeding the country is huge impacting productivity in this sector.

The availability of cheap labour stifles innovation, and since over 50 per cent of our population is engaged in agriculture, the possibility of witnessing innovation and large investments in the near future is negligible.

Long value-chain

The employment capability of the humble sector is disguised by the long value chain it supports in our country, starting with the farmer, labour, farm owner, the consolidator, the primary commission agent, the broker, the secondary commission agent, the wholesaler, the processor, the metro retailer and finally, the consumer.

The problem is further complicated by political interference, farm debt waiver, and vote-bank politics discouraging investors and innovation.

In addition to this, the presence of structures that levy taxes, cess such as the APMCs and State taxes add a phenomenal 40 per cent to cost of agricultural commodities before they reach the end-user.

Other sectors

Credit must go to the agriculture sector for being able to bear these burdens and still managing to export some of the produce. The blame for this lies on our manufacturing and services sector.

In developed economies or even developing ones such as China, the manufacturing and services sectors have managed to generate sufficient employment and leave agriculture to be modernised/mechanised for better productivity.

The dragon has well outpaced our elephant in manufacturing by 10 times; the Chinese contribute 22 per cent of world output while India's contribution is a paltry 2 per cent.

The bottom line is that success of the agriculture sector is dependent on the robustness of manufacturing/services sector.

Till such time that reforms are made and a conducive environment is created for these sectors, the agriculture sector will bear the brunt of our population and continue to be termed a failure.

The writer is Senior Vice-President, Kotak Mahindra Bank. Views expressed are personal.

New registration norm may affect organic textile exports

Industry seeks more time as December 18 deadline looms

Mumbai, December 17:

Export of apparels made from organic cotton may come to a halt if the Government does not extend the December 18 deadline for mandatory registration of these products with the Agricultural and Processed Food Products Export Development Authority (Apeda).

The Directorate-General of Foreign Trade, through a public notice, has made it mandatory for any product exported as an organic to be certified under the National Programme for Organic Production (NPOP).

Currently, export of organic raw cotton is covered under the mandatory registration with NPOP. With the recent development, all finished organic textile products such as yarn, fabrics and garments will be covered under the registration process. However, exporters are no where near getting their products registered. RK Dalmia, Chairman, Cotton Textiles Export Promotion Council, said the process of registration with Apeda and attempts to convince importers to accept the certification issued by the government body will require at least one more year.

Moreover, Apeda is yet to appoint accrediting agency to issue certificate for exporters. Currently, importers insist on Global Organic Textile Standard certification for organic textile shipped from India. The transaction cost for exports will go up substantially with the process to get two separate certificates, said Dalmia. India is the largest producer and exporter of organic textile products followed by Turkey. "Export realisation from organic textile products

is about 10-15 per cent more compared to the convention textile exports,” said Dalmia.

Export target

The government has set a target of \$45 billion for textile exports this fiscal against \$39 billion achieved last year. Textile exports touched \$16.7 billion in first half of this fiscal. The Government recently removed the mandatory registration of cotton and yarn export with Directorate-General of Foreign Trade make exports more competitive and reduce transaction costs.

Manikam Ramaswami, Chairman, Loyal Textile Mills, said while the intention of the government to reward the organic cotton growing farmers is welcome, it has to ensure that the industry is given enough time to adapt the new policy and necessary infrastructure is established to certify organic cotton.

A silver lining for duck rearing: thanks to bird flu, Kerala brings it under farming

State draws action plan to boost farming, consumption of ducks

Kochi, December 17:

The recent outbreak of bird flu in Kerala’s Kuttanad region that led to the culling of over three lakh ducks, may turn out to be a blessing in disguise for the duck-rearing sector.

The government has decided to declare duck rearing as an agricultural activity, bringing it under the category of “agriculture” and an action plan will soon be in place to boost duck farming and consumption of duck products.

“This is a major decision that will have long-term impact on the growth of duck rearing which has been a key source of livelihood in many districts in Kerala,” V Brahmanandan, Director-in-charge of the Department of Animal Husbandry, told *BusinessLine*. “For instance, duck farmers will be eligible for bank loans at a highly subsidised rate of 4 per cent.” They would also get insurance cover, subsidised power and a lot of economic benefits currently given to small and marginal farmers.

Brahmanandan said the government had decided to give a boost to the duck-rearing sector by modernising the sector. Some of the measures envisaged are:

getting duck farmers registered, issuing licences to them, modernisation of hatcheries and setting up of modern marketing practices. Only those registered with the department would be allowed to sell duck meat and eggs.

He noted that the sector was highly unorganised and traditional. “The current system will change drastically for the better of the sector and the farmers,” he said. The government was planning to set up a duck research centre and two new hatcheries in Kuttanad.

A hatchery-cum-breeding centre with a capacity of one million chicks would be set up. The bird disease centre at Thiruvalla would be upgraded to tackle future outbreak of bird flu or any other diseases. A nodal officer would be appointed to coordinate the efforts.

Brahamanandan said the bird flu outbreak was fully contained now and the State was declared free of it. However, the poultry industry was yet to recover from the impact. The government was now planning, ahead of the busy Christmas-New Year season, to hold food festivals in six cities to regain people’s confidence in consuming duck meat and eggs. At these festivals, meat and eggs of ducks and chickens would be consumed in public in the presence of MLAs, politicians, experts and bureaucrats. This was to convince people that eating duck products was 100 per cent safe now. There was now a glut of one million ducks in the market.

This was part of an action plan to boost the duck rearing sector that was badly hit by the flu. He noted that some 2.75 lakh ducks had been culled by a government campaign to prevent spread of the flu (apart from those killed en masse by farmers themselves.) The farmers had been paid compensation.

Volume hits 6-month low at Coonoor tea sale

Coonoor, December 17:

A volume of 13.34 lakh kg is being offered for Sale No: 51 of Coonoor Tea Trade Association auction to be held on Thursday and Friday.

This is less than last week’s offer and the lowest volume in six months.

Of this, a volume of 9.03 lakh kg belongs to the leaf grades and 4.31 lakh kg belongs to the dust grades.

As much as 12.42 lakh kg belongs to CTC variety and only 0.92 lakh kg, orthodox variety. In the leaf counter, only 42,000 kg belongs to orthodox while 8.61 lakh kg, CTC. Among the dusts, only 50,000 kg belongs to orthodox while 3.81 lakh kg, CTC.

With substantial volumes remaining unsold in previous auctions, as much as 1.42 lakh kg of such teas are being re-offered this week.

Among CTC teas last week, only Homedale Estate tea, auctioned by Global Tea Brokers, crossed Rs.200-a-kg-mark when Badusha Tea Company bought it for Rs. 201 a kg.

Vigneshwar Estate got Rs. 192, Deepika Supreme, Shanthi Supreme and Hittakkal Estate Rs. 188 each.

In all, 88 marks got Rs. 125 and more per kg.

Chamraj topped the Orthodox market at Rs. 248 a kg, followed by Kairbetta Rs. 234, Kodanad Rs. 228, Havukal Rs. 224, Craigmore Rs. 211, and Devashola Rs. 200.

In all, 84 marks got Rs. 125 and more per kg.

Sugar production up 13.5 lakh tonnes as more mills start crushing

New Delhi, December 17:

Domestic sugar production in the first two and a half months of this season that began on October 1 is higher compared with the same period a year ago.

According to the Indian Sugar Mills Association, production till December 15 was 42.35 lakh tonnes (lt), some 13.5 lt more than the same period a year ago. Mills produced 23.28 lt mills since the beginning of this month against 17.37 lt in the last season.

Some 442 sugar mills have begun crushing operations this season compared with 426 last season.

Crushing gained momentum this month with almost 100 mills beginning operations. As of November 30, 344 mills had started operations. “The main reason (for higher production) is that this year, higher numbers of sugar factories are already crushing sugarcane,” read an ISMA statement.

Around 166 mills had started crushing cane in Maharashtra, the country’s largest sugar producing State. In Uttar Pradesh (UP), 114 mills had started production while Karnataka recorded 53 mills. In terms of production,

Maharashtra recorded an output of 20.73 lt as of December 15 while UP and Karnataka registered 7.94 lt and 7 lt, respectively.

The figures for all three States are higher than at the corresponding stage last season. Other States have produced a combined 6.58 lt of sugar so far, up from 5.24 lt in 2013-14. Ex-mill prices have been falling daily between Rs. 10 and Rs. 40/quintal, ISMA said.

“The current ex-mill prices are at its lowest in the last 3 years and around Rs. 500-700 below cost of production,” the statement said.

The association feared that stagnant sugar prices could result in cane arrears getting accumulated with sugarcane prices higher than last season. The Government is in the process of examining an extension of the export incentive scheme for raw sugar that it had announced in February subject to mills clearing current arrears.

Domestic consumption is pegged at 247 lt and India is estimated to produce between 250 and 255 lt in the 2014-15 season.

Shrouded by thick fog, rabi crop faces ground frost threat

Thiruvananthapuram, December 17:

Night temperatures over parts of north-west India are expected to dip over the next couple of days raising threat of ground frost in Haryana, Punjab and north Rajasthan.

These areas are already witnessing thick fog during morning hours as the annual weather trend began to settle over the plains of north-west India.

Ground frost

Dense fog has combined with ground frost after a western disturbance left behind oodles of moisture – which can either drift as thick fog or settle on ground as frost.

This is because temperatures take a dip after the western disturbance yields space to colder westerly to north-westerly winds from across the international border with Pakistan.

Low temperatures are particularly good for the Rabi wheat crop, but fog that persists for a week to 10 days could prevent radiative heating of the plant.

This can make it vulnerable to pest attack and diseases. Farmers need to be wary of these conditions, more so if the low temperatures lead to ground frost.

No change

Forecasts rule out any drastic change to the scenario until the arrival of the next western disturbance by Sunday/Monday.

On Wednesday, the India Met Department warned of fog to dense fog conditions and ground frost for parts of northwest India until the weekend.

Fog to dense fog conditions develop after wind, temperature and moisture values freeze to 'critical' thresholds. Winds decelerate to 'calm' state ahead of the arrival of a western disturbance, the principal weather maker for the region during this time of the year.

Ensuing clear nights, below-normal temperatures and humidity (ranging between 80 to 90 per cent) conspire to set off bouts of fog/dense fog/very dense fog.

Dominant wind

'Advection fog' (advection refers to horizontal transfer of any atmospheric property by the wind and typical in northwest India) has a tendency to move with the dominant wind of the season (west to east). This is how fog to dense fog move along with the wind from Afghanistan/Pakistan to cross the international borders into north-west India.

Advection fog is a type of fog caused by the horizontal movement of moist air over a cold surface and the consequent cooling of that air to below its dew point.

Intervening small gusts of wind can trigger what is known as shallow fog.

This is a low-lying fog that does not obstruct horizontal visibility at a level two metres (6 feet) or more above the surface.