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THE HINDU

Carbon tax to meet climate concerns



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MUCH NEEDED: “The carbon tax is an idea whose time has come given the current oil price situation.”

India can display bold leadership by imposing a carbon tax on all fossil fuels in proportion to carbon dioxide emissions

Oil prices have plummeted since June 2014 by almost 60 per cent. This has obviously proved to be a bonanza for oil-importing countries like India just as it has seriously hurt oil-producing nations like Russia and Iran. The fall has been unexpected and what has added to the mystery is the behaviour of Saudi Arabia, the traditional “swing producer” in OPEC which has chosen not to cut production in order to boost prices.

The main reason now being adduced for the oil price decline is the re-emergence of the U.S. as a major hydrocarbon producer because of exploitation of its substantial shale deposits. Lower than anticipated demand, especially from countries like China, and anaemic economic growth in Europe have added to the pressure. As to the response of Saudi Arabia, the best guess is that it does not want to lose market share like it did the last time when it cut output to keep prices up. There are, of course, the usual

conspiracy theories — that the Americans have put pressure on major OPEC oil producers not to cut output so that Russia could get hurt from falling prices. Another Byzantine view is that Saudi Arabia is not too unhappy with these prices since its arch-rival Iran is getting hurt and because over the medium-term it would discourage the development of new sources of supply that would threaten the Saudi position.

Revisiting an old idea Whatever be its backdrop, the current oil price scenario offers the right moment for the international community as well as for major carbon emitter nations to revisit an old idea that has been around for quite some time as a way of dealing with the challenge of climate change — and this is a carbon tax. Economists mostly agree that such a carbon tax is the way to go, but it has faced tremendous political resistance, especially in the U.S. A couple of days ago, however, the influential economist Larry Summers, who has been a close adviser to both President Barack Obama and former President Bill Clinton, came out publicly in its favour, pointing out that a tax of \$25 per tonne of carbon would add just 25 cents to the price of gasoline. There have been other intellectually weighty voices in the past who have advocated a carbon tax, William Nordhaus being perhaps the most prominent amongst them.

It is the political resistance to any form of taxation (what the late Sukhamoy Chakravarty, the distinguished Indian planner, had called the emerging fiscal sociology) that has led to systems of cap-and-trade being adopted to deal with the emissions problem. The EU has such a system, the Chinese have seven pilots and have announced a national initiative beginning next year, and the Americans too are putting it in place for carbon emissions from power plants. A cap-and-trade system puts a cap on the quantity of emissions (which is flexible) and the “rights” to emit are then traded for a price among classes of consumers. It has considerable appeal since it is “market-based” and it has actually been used very effectively to deal with the consequences of sulphur dioxide emissions from power plants in the U.S. (the “acid rain” problem as it is usually called). The cap-and-trade system does provide incentives for emission levels to decline. On the other hand, a carbon tax is much simpler and straightforward to design and administer

since it does not involve fixing emission “quotas” for each emitting industry, which is technically very cumbersome.

“A carbon tax is simple to administer since it does not involve fixing emission 'quotas' for each emitting industry, which is technically very cumbersome”

William Nordhaus himself in his classic “The Climate Casino,” after an elaborate analysis of the two approaches, writes: “If I were put on the rack and forced to choose, I would admit that the economic arguments for carbon taxation are compelling, particularly those relating to revenues, volatility, transparency and predictability. So if a country is genuinely unsure, I would recommend it use the carbon tax approach.” Dale Jorgenson, one of the pre-eminent economists of our times, has taken the Nordhaus approach and asked the question: how to make it politically acceptable? In “Double Dividend: Environmental Taxes and Fiscal Reforms in the United States,” Mr. Jorgenson and his colleagues make out a persuasive case for a carbon tax in the U.S., but with a twist: that the revenues be used for a capital tax reduction with other countries free to recycle revenues in the matter they deem fit. Actually, India has a carbon tax of sorts. It is not called as such but the United Progressive Alliance government’s budget of 2010-11 introduced a cess of Rs. 50 per tonne of both domestically produced and imported coal. Last year, this was doubled. However, the idea of this cess, it must be admitted, was less to curb carbon emissions but more to raise revenues for the National Clean Energy Fund. Of course, the Fund itself could well support carbon mitigation initiatives but its take-off has been slow so far since Finance Ministers see it as a source of mitigating not carbon but the fiscal deficit. The Fund has close to Rs. 15,000 crore already accumulated in it and this will grow rapidly as coal consumption increases. But the important point is that India already has an important half-step, even though its version of a carbon tax is not economy-wide and it is far below the levels that are generally accepted as being desirable (around \$20-25 per tonne of carbon).

Mr. Summers' plea comes with a catch: he wants the U.S. to impose a carbon tax on its own as well as a tax on the carbon tax on its imports, in order to goad other countries to adopt the carbon tax route. Perhaps he has China in mind since it has been estimated that at least a fifth of China's emissions are because of its export sector. He seems to think that this will be World Trade Organization-compatible. But it will pose a huge threat to the world trading system which has produced tangible benefits for those who have harnessed its potential — like China and India — if it were to be used to meet climate policy objectives.

Requiring a different response Some years ago, drawing inspiration from no less a person than Lord Keynes himself, the Nobel Laureate James Tobin proposed a tax on short-term currency transactions. This was later expanded to cover all short-term financial transactions and is widely known as the Tobin Tax. But it remains on paper as to which periodic obeisance is paid. The carbon tax is a similar development deity but it is an idea whose time has undoubtedly come given the current and expected oil price situation. In the past, oil prices have declined as they have in recent months; the commitment of countries to make the transition away from fossil fuels has perceptibly wavered. This time around, however, given the climate change imperative, our response has to be dramatically different. A carbon tax imposed on all fossil fuels in proportion to carbon dioxide emissions would signal that transformed thinking. It would generate the needed resources for low-carbon investments in a manner that does not add to the fiscal deficit and provide the impetus to a meaningful global agreement in Paris later this year in December. This could well be India's moment of bold leadership.

An 'India exception' for climate talks

If the U.S. partners with India for more efficient industrialisation, it could be the kind of investment that cements ties between the two countries

As India and the U.S. build closer ties, they should pursue a win-win agreement on climate. It is in the U.S.'s strategic interest that India grows into a regional power, which can only be accomplished if India is given sufficient development space to grow its economy and eliminate poverty. It is in India's interest to diversify its energy portfolio — a prospect that can be strengthened with the U.S.'s assistance. The way to achieve these objectives

is to forge an “India exception” at the global climate talks in Paris; doing so is the only realistic pathway to a global climate deal and will cement the growing ties between the two critical actors in an evolving international order.

A unique dilemma India faces a predicament which previous countries that used energy to grow their economies did not face. It stands on the cusp of industrialisation just as the world may finally be willing to take multilateral action to reduce carbon emissions. As it possesses vulnerable coastlines and is reliant on the monsoon and glacial melt, India is as susceptible as any other country to the consequences of collective action failure on climate. But for India, the tradeoffs between environment and growth (and poverty elimination) are harsher than perhaps anywhere else. India’s overall size of both population and emissions makes it the most critical low-income country at the Paris climate talks.

Despite India’s importance to the climate debate, it continues to pollute below its weight. Though India’s emission intensity would be expected to rise in the coming decades, it has committed to reducing emission intensity by 20 to 25 per cent by 2020 (from 2007 levels). Prime Minister Narendra Modi’s victory has created the opportunity for all of India to benefit from the renewable energy-friendly policies he pursued as Chief Minister of Gujarat and has opened up the possibility for it to become a leader in cost-competitive renewables. India is already the world’s largest biomass, third largest solar and fourth largest wind energy producer.

“If India chooses to grow through the traditional carbon-intensive pathway, there will be no credible prospect for global carbon reduction”

There is a strong strategic imperative for the U.S. in supporting India's role in Asia. A successful India can play a major role in stabilising Asia during an otherwise turbulent transition, and can be a vital partner to the U.S. India could act on climate change on its own by reprioritising spending away from its planned naval expansion or other defence expenditures, but as China's defence budget soars, nations around the region are becoming more invested in a balance of power that includes India. It is profoundly in the U.S.'s interest that there be a strong India — an India that is prosperous and contributing to a stable Asia and Indian Ocean.

The U.S. could reappropriate part of its international development budget towards India's green modernisation, create a way for U.S. cities that have successfully used clean building techniques to work with Indian cities, and invest in Indian efforts on energy-efficient urbanisation. It can help ensure that the Green Climate Fund and the World Bank support and crowd in private sector and other investments towards this end.

There would have to be a generational partnership between the U.S. and India. Challenges in aligning the private incentives of U.S. financiers with public incentives in India can be solved by a high-level agreement between President Obama and Prime Minister Modi on public monies through bilateral or multilateral tools.

India as an exception India's unique circumstances necessitate specific exceptions. Any climate agreement must exclude India from obligations that do not befit a country in an earlier stage of development. It must be allowed lifeline energy at affordable prices. India cannot agree to a peaking date; Indian poverty cannot be frozen by a dateline. A global peaking date will depend on other nations taking on mitigation commitments to account for India's exceptional challenge. However, certain pathways could be pursued that would allow a U.S.-India partnership to contribute to the global effort. These could include: continuing and supporting India's voluntary emission intensity reduction goals that move its economy from a 'business as usual' trajectory; focussing the spending of the Green Carbon Fund and similar instruments, including technology transfer, on Indian energy options;

following common but differentiated responsibility within India, requiring rich states and cities to develop further mitigation methods; initiating a universal agreement on corporate emissions mitigation that would involve large Indian companies on equal footing with developed country corporations and mandating sectoral efficiency goals for these large corporations; and a decadal review of India's development status, as no exception should outlive its rationale.

Such a deal is the only way to maintain climate progress. If India chooses to grow through the traditional carbon-intensive pathway, there will be no credible prospect for global carbon reduction and India will soon add another European Union to the world's carbon emissions budget. India has a veto on a global climate agreement — both in the room, and more importantly in how any deal is implemented. India has walked away from global deals like the World Trade Organization, when they are perceived to be counter to its core interests.

If the U.S. partners with India for more efficient industrialisation and supports an “India exception” in global climate talks — using bilateral ties and the Major Economies Forum on Energy and Climate to help build a clean energy ladder for India — it could be the kind of investment that cements ties between these two countries. From the perspective of a stable international order, it would be a big deal; from the perspective of global climate talks, it is the only realistic path forward.

Agriculture university's one-cent poly house a hit



Space saver: The model of a one-cent poly house set up at the venue of the National Agriculture Fiesta organised by the Regional Agriculture Research Station at Ambalavayal.

Designed as vertical garden with layers of iron galleries

The model of a one-cent poly house set up at the venue of the National Agriculture Fiesta organised by the Regional Agriculture Research Station (RARS) at Ambalavayal in the district is drawing the attention of visitors including progressive farmers.

The model is based on the one-cent poly house project funded by the Kerala Agricultural University (KAU). Various vegetable and fruit plants such as strawberry, tomato, capsicum, chilli, and cucumber have been grown in the small structure.

Vertical garden

The model poly house on one cent of land will provide ample information to a progressive farmer to replicate it on his orchard or on the terrace of his house to get pesticide-free vegetable round the year.

The 40-sqmt poly house, erected on fabricated structure, has been designed as a vertical garden with five layers of galvanised iron galleries to utilise maximum space inside it.

“When a poly house is changed to a vertical garden with four or five layers, we can accommodate as much as five times more plants and get more income from it,” P. Rajendran, Associate Director of Research, RARS, Ambalavayal, says, adding that vegetables now being cultivated on five cents can be grown in the poly house easily.

“Any vegetable can be grown on each gallery, after filling it with a medium of coir pith, organic manure, and sand, irrespective of the climate,” Dr. Rajendran, who is the master brain of the project, says.

“We have cultivated even strawberry this way successfully at the Anakkayam research station under the KAU in Malappuram district,” he adds. Irrigation in the poly house can be automated with a garden hose to minimise manpower.

The poly house has been constructed by self-help group members of the RARS at a cost of Rs.50,000, which is provided by the KAU.

The services of the trained SHG members will be provided to interested farmers anywhere in the State, he says. The fiesta will conclude on February 2.

A run for agriculture



Volunteers and students participating in the 'Yanaimalai Mini Marathon' to

create awareness of Agriculture in Madurai on Friday.— Photo: S. James
As part of the golden jubilee celebrations of the Agricultural College and Research Institute (AC&RI) Madurai, students from the Tamil Nadu Agricultural University, school and college students from educational institutions from the southern districts and the public participated in the ‘Yanamalai Mini Marathon’ here on Friday.

Both the enthusiastic men and women runners began running from as early as 6.45 a.m.

While the men started from the Madura College to reach the AC & RI campus, the women runners began their marathon run at the Gandhi memorial museum to reach the same end point. A distance of 16 km and 8 km were covered respectively under both categories.

76-year-old participant

Faculty from the AC & RI said that while they had opened the marathon to persons above the age of 15 years, they had a number of participants across different age groups with the oldest participant being 76 years old.

The marathon was flagged off by District Collector L. Subramanian and M. Ravi, Inspector General of Police. Corporation Commissioner C. Kathiravan and V.K. Subbu Raj, Secretary to the Government of India, New Delhi were present at the start of the marathon. C. Sylendra Babu, ADGP, an alumnus of the TNAU participated in the marathon. K. Dakshinamoorthy, a physical education student from Alagappa University, Karaikudi, completed the marathon first in the men’s category and S. Padmavathy, an M. Com student of the Dr N.G.P. Arts and Science College Coimbatore bagged the first place in the women’s category.

Both the winners were awarded cash prizes of Rs. 15,000 each. As many as 25 other prizes were distributed to participants for competing in the marathon as well.

Funds for Agricultural College to improve infrastructure, says Minister



Remembrance:S.S.Krishnamurthy, Agriculture Minister, releases a souvenir during the Golden Jubilee celebration of Agriculture College and Research Institute in Madurai on Friday.— Photo: S. James

Stressing on the importance of uplifting agricultural activities in the State, Minister for Agriculture S.S. Krishnamoorthy encouraged farmers to adapt new technologies and support research carried out in the sector which would benefit them.

He was addressing the inaugural of the ‘Vivasaya Thiruvizha 2015’ jointly organised by the Confederation of Indian Industry (CII) and the Agricultural College and Research Institute (AC &RI) Madurai, supported by the State government.

Mr. Krishnamoorthy further announced the allocation of funds for AC & RI as part of their golden jubilee celebrations to improve their infrastructure and facilities. “Based on a long standing request from the college, Rs. 1.9 crore has been sanctioned for the construction of a new auditorium. For the improvement of infrastructural facilities for students Rs. 3 crore has been allotted, Rs. 3.2 crore has been allotted towards the construction of quarters for visiting farmers and researchers and an additional Rs. 3 crore has been sanctioned towards building more research labs and creating more facilities,” he also said.

The Agriculture Minister, along with Minister for Cooperation Sellur. K. Raju, Mayor V.V. Rajan Chellappa, District Collector L. Subramanian and MLAs A.K. Bose and M. Muthuramalingam released a special souvenir to mark the occasion.

M. Rajendran, Director of Agriculture emphasised the need to adopt practices involving lesser use of chemical fertilizers. “In Tamil Nadu, it is estimated that farmers use more than 250 kilos of urea per acre. The State government has drawn a number of schemes for farmers to adopt bio-fertilizers and green manure which should be focussed on,” he said.

A host of conference sessions on inputs and techniques, value addition and marketing and technological advancements will be organised during the three day ‘Vivasaya Thiruvizha’ which will go on till January 25, said Rohini Sridhar, chairperson of the CII Madurai zone.

Ploughing on



Kudumbam team leader Oswald Quintal at the Ammankorai community forest between Killukulavaipatti and Ulangankathanpatti villages, one of 11 such sacred groves re-afforested by the NGO in the 1980s. Photo: M. Srinath

The NGO Kudumbam has focused on the development of the rural family and sustainable farming since its establishment in 1982

“Pongal was not only a festival of rice. It was a festival of sharing your best produce – rice, pulses and millets, and vegetables – with your neighbours,” says Oswald Quintal, team leader of the non-governmental organisation (NGO) Kudumbam.

For over three decades, Quintal, originally a civil engineer specialising in irrigation management and known by many as ‘Ozey’, has been toiling with his team of field workers in Tamil Nadu and beyond to bring home the message of how agriculture and forestry are essentially inseparable.

“Agriculture in India is 4,000 years old. And home-forestry and home-gardening are not new concepts, so every farm produced its own vegetables,” he says. Inter-cropping rice with pulses and millets, plus animal husbandry had insulated the farmer from financial ruin in the past. The emergence of big farming and monoculture (single-type) cropping has created food shortages and a whole host of related problems, Quintal contends.

And as the country faces its fourth year of drought and low-rainfall, keeping the next generation of farmers attached to their calling is getting harder. “This year, for the first time, we’re worried about drinking water for the whole of Pudukottai,” says Quintal. “Every year, as the water table dropped, we have been trying to tell the farmer not to farm with the ground water, but by harvesting every drop of rain where it falls.” But a state policy that until very recently subsidised the sinking of deep bore-wells in villages has taken its toll, he rues.

Kudumbam is the brainchild of organic farming pioneer Dr. G. Nammalvar (who died in 2013), Dr. Gandhimathi (a sociologist and environmental consultant from Tiruvannamalai now based in Bengaluru), and Quintal. And, as its name implies, the NGO has focused on the development of the rural family and sustainable farming since its establishment in 1982. Besides its head office in Tiruchi, it has centres in Tranquebar and Nagapattinam.

Starting from scratch

Quintal, from Tiruchi's Golden Rock area, and Nammalvar, who was a native of Tirukattupalli near Thanjavur, first met while working on a water management programme for the people displaced by the Mettur Dam in 1979, who had been re-settled in the Anchetty village (Dharmapuri district).

A little abashed that their engineering and farming skills had nothing to offer to the small farmers who were using the slopes of a high mountain as their field space, Quintal and Nammalvar spent two years documenting the more successful native agricultural techniques of the region.

As knowledge of these techniques spread, queries started pouring in from farmers in other districts. The duo shifted to Valambakudi village (20 kilometres from Tiruchi), and decided to start a programme that would keep the farming community engaged in sustainable and eco-friendly agriculture.

“It was very hard to take agricultural science across to the people,” says Quintal. “So we went into street theatre to collect information on the history of the village tank, the productivity of the land there, the diversity of the cropping pattern and what it is today.”

But a key challenge has been the farmer's single-minded quest for just irrigation.

“We were trying to tell them that we need to enhance soil moisture by increasing bunds and adding biomass to soil, go for drought-tolerant rice varieties and crop diversification, too,” he says.

In the 1980s, Kudumbam initiated a campaign against a government sanctioned programme, supported by Sweden, to plant eucalyptus on 13,000 hectares of shrub forest in Pudukottai district, ostensibly to help create pulpwood for paper manufacturing.

Criticised by the Forest Department for not providing an alternative, the

Kudumbam team decided to show how it could be done. With financial support from the National Wasteland Development Board, in 1987, the NGO worked on re-forestation of 11 sacred groves surrounding temples, spread over 400 acres.

The scenic and tranquil Ammankorai community forest today bears very little resemblance to the barren wasteland it was in 1987. As monkeys frolic in the tall trees, and the harsh sunlight diffuses in the verdant foliage, it's easy to see how this green belt supports Killukulavaipatti and Ulangankathanpatti villages. Kudumbam tapped into youth groups and women workers from here to ensure that the forest was kept clean and safe.

Rengaraj Karuppan, from Ulangankathanpatti, joined Kudumbam when he was 16, and has been working as a field co-ordinator at the forest for several years now.

“While developing this forest, the people here wanted trees that would provide them with food and firewood,” he says.

“We started getting the seedlings ready in 1986. Now we notice that though we planted only 40 varieties, there are 170 types of trees here, thanks to the migrant birds and wildlife.”

“For the past five years, we have been noticing that this area receives rainfall even though the neighbouring farms have been dry. So the green cover seems to have had an effect,” says Quintal. “The forest lake also used to be a breeding ground for fish.”

Training ground

Despite the success of the community forests, the question of making farming visibly profitable remained unanswered. So in 1990, Quintal, Dr. Nammalvar, and Dr. Gandhimathi, each invested Rs.20,000 to purchase 10 acres of land in Odugampatty village, 20 kilometres from Keeranur. “We chose it for various reasons – we had only that much money, and we were

looking for land that resembled the small farmers' fields that we had seen in our travels," says Quintal.

This was to be the birthplace of the Kolunji Ecological Farm, which today has expanded by another 20 acres, and also has on its premises, a home for local children who have been by their relatives after their parents die, and a training school that offers free and paid courses to farmers.

"We realised that farmers don't believe something they can't see. So we went about creating community alternatives," says Quintal. The Kolunji farm is a living example of how barren land can be transformed through innovative cropping. As guests enjoy a simple vegetarian lunch in the community dining hall, two guinea fowls scabble around for food scraps. Later, Quintal reveals that they also double up as 'anti-snake policemen'.

To a large extent, Nammalvar's responsibility was in training, while Quintal's was grounding the project and marketing it through the Low External Input and Sustainable Agriculture (Leisa) network, also set up in 1990. "We started with about 20 farmers and 11 NGOs. Today we have a membership of 82 NGOs and 50,000 farmers," says Quintal. A group of 500 certified organic farmers – the largest in the state – is spread within a 15 kilometre radius of the Kolunji farm. Organic millets and grains are available at Kudumbam's Highways Colony office in Tiruchi.

In addition to the biodiversity, a number of native irrigation and soil fertilising methods are in practical use here, which have attracted foreign and local research scholars in growing numbers.

As part of Kudumbam's female empowerment objective, a collective of single women and widows is engaged in agriculture on a shared plot of land at the Kolunji farm. The NGO has also worked to rehabilitate teenaged girls from the Pudukottai district rescued from harsh working conditions in the Tirupur garment industry. On the spurt of genetic engineering, Quintal says, "Our farmers and livestock breeders have been doing small changes for hundreds of ages. [But] multinational corporations are claiming minimally

modified seeds to be their invention and putting a price on it. This is a theft on a country's sovereignty.”

Asked if he misses his days as a civil engineer, Quintal smiles. “Sometimes,” he admits. “But this is far more satisfying.”

Bid to revive traditional banana varieties

In commemoration of the 105th birth anniversary of C. Subramaniam, architect of the Green Revolution and founder of the National Agro Foundation (NAF), a joint project of the Tamil Nadu Banana Producers Company Limited and NAF is to be signed on January 30 at the foundation's Centre for Rural Development at Illedu village, Choonampet, Kanchipuram district.

The banana producers company comprises about 50 grower societies and producer groups, covering 14 banana-growing districts. One thousand banana farmers in the State are shareholders of the company.

“The company will facilitate grower societies to establish post-harvest pack house facilities in production centres to evolve a business model to standardise the banana marketing that will reduce the post-harvest losses of fruits and improve the farm revenue. The company will also market the value-added products from banana from its member groups,” says A.P. Karuppiah, chairman of the company.

The tissue culture laboratory at the Foundation's R&D centre will make collaborative efforts with interested stakeholders to propagate these traditional varieties that can be used / marketed by the Banana Producer Company Limited.

Around 500 farmers from different parts of the State are expected to attend this programme, to be held at the Centre for Rural Development.

S.S. Rajsekhar, Managing Trustee of the Foundation, says the Tamil Nadu Agricultural University (TNAU) and the Foundation will jointly implement another project in Villupuram district with the support of the State Planning Commission, covering about 40 villages.

Called lean farming, the project will be inaugurated by Rajesh Lakhoni, IAS, Agricultural Production Commissioner and Secretary, Government of Tamil Nadu.

CCI urged to procure cotton in Perambalur district

To ensure farmers get minimum support price of Rs.3,750 per quintal

The district administration has urged the Cotton Corporation of India (CCI) to ensure that cotton cultivators of the district get remunerative price for their crop. As the open market price for cotton is low, the district administration has written to the CCI to procure cotton in the district.

If CCI procures cotton directly, the farmers will get the minimum support price of Rs.3,750 per quintal (for good quality) announced by the government. Price may vary depending upon the quality.

Farmers who spoke at the monthly grievances day meeting in Perambalur on Thursday said the open market price of cotton is quoting at Rs.3,200 to Rs.3,400 per quintal. Collector Darez Ahamed said that he has already written to CCI to open centres in Perambalur for procuring cotton. I have also cited the prevailing low price in the open market and high production in the district, he said.

This year, the production of cotton has been high in Maharashtra, Gujarat, and Andhra Pradesh, and also in China.

Open market price of cotton is quoting at Rs.3,200 to Rs.3,400 per quintal

Cotton has been cultivated on 40,000 hectares this year in the district

Gourds in your garden

As spring begins, it's time to start sowing vegetables that you can harvest in summer

Tamil Nadu has just celebrated the harvest festival of Pongal — a time when we enjoy the bountiful produce of crops such as rice, lentils and sugarcane. Pongal marks the end of the month of Margazhi, our winter, and welcomes

the month of Thai, the start of spring when the sun starts its journey in the northern hemisphere and the days become longer.

As one growing season ends, another starts. Chennai has one more growing season till the scorching heat of summer begins, the heat that is nature's signal that it's time to let the soil rest. So what can we grow from January to April?

Cool weather crops like cabbages, cauliflowers, carrots, spinach will continue to grow until February. Tomatoes do well in this season too. But this is the time to sow things that are light to cook, eat and satisfy your thirst in the summer. It's time to start planting gourds, greens and melons.

Gourds such as bottle, snake, ridge, bitter, ash, pumpkin, and cucumber, and melons such as watermelon and musk melon can be started now too. These need well-drained soil and space to trail or climb, and are great plants for fences and sunny balconies with grills. And if you let them trail on your terrace floor, they also help cool the house. Here's a quick growing guide.

Soil

It's all about soil and seeds. Gourds do incredibly well in permaculture soil. We've grown 3.5 foot long bottle gourds in the Cancer Institute's permaculture-raised beds. You can also use regular potting mix. Ensure the soil is loose, well-drained and well-mulched.

Seeding: Gourds and melons are sown directly. If you plan to start them in a different location, start them in containers that can be planted along with the sapling and will compost. Gourds don't do well with transplanting. There are many DIY, recycled or store-bought seed trays that you can start the seed in. When the seeds sprout and the true leaves emerge, plant the contents directly into the ground. At the Cancer Institute, we've started gourds in bamboo baskets and they've done very well. Ensure there is enough space for the vine to run or climb.

Support

For bottle, snake, bitter and ridge gourds, try to ensure a pandal or trellis of some sort. This can be a fence, a simple trellis using poles and rope, or even a broken ladder. It's easier to spot the fruit in a pandal, but a fence or balcony railing will do just as well. We've used ladders and even the sides of a broken baby cot to support gourds.

Pollination

Usually gourds have a series of male flowers before the female flowers begin to bloom. Female flowers carry the ovum and there is a fruit at the base of the flower. While bees will ensure the act of pollination, gourds can also be hand-pollinated successfully. Take a cotton ear bud or paintbrush. Gently dip it into the male flower and then into the female flower.

Watering

Gourds need well-drained but moist soil. They can withstand some amount of drought but cannot handle over-watering, when flowers and fruits will wither and die. Mulching will help conserve water. Organic mulch will feed the plant while reducing the need to water.

Heat

While the plant can tolerate heat, the fruit cannot, so place something beneath it — a pile of grass or some sacking to prevent contact with the hot terrace floor or ground.

Pests

Gourds attract flying insects as well as rodents. You can place the young fruit in a basket (large enough to hold the fully grown fruit) or alternately cover the fruit with a mesh. A light neem oil spray can help to some extent, but remember any pest control also gets rid of friendly pests and predators.

When to harvest

Gourds are covered with light fuzz until they are ready to harvest. It's a fine line between a tender gourd and an overripe one, so pick the gourd when the fuzz has gone; it feels tender to the touch but weighs heavy in the hand.

Seed saving

Gourds can gift many seeds to the seed saver. To save seeds, let your fruit ripen on the vine.

The colour guide: pumpkins should be entirely orange, bitter gourd should be bright yellow, ridge gourd should be left to dry on the vine, and snake gourd left until it turns almost golden red.

Pick the fruit when it is almost ready to burst. Extract the seeds and sun-dry them till they are toasted. Store in a seed bag, with some ash, in a cool dry place until the next growing season.

Where they breed paddy for over a century



Exhibits get ready to be displayed at the museum coming up at the Department of Rice, Tamil Nadu Agricultural University.— Photo: S. Siva Saravanan

Right in the middle of the paddy fields on Thondamuthur Road is an ochre, tile roofed room whose walls bear witness to the works of a few great men, who ensured food for the masses.

And it is in this room the Paddy Breeding Station was born over a century ago. It will soon become a museum showcasing the history of paddy breeding since the British Raj. And, at present, the room is part of the Department of Rice, Tamil Nadu Agricultural University (TNAU).

Vice-Chancellor K. Ramasamy says that the room will have old implements, photographs, paintings and everything that will bring alive the paddy breeding work that has been going on since 1912, starting with F.R. Parnell, who arrived here as the government economic botanist to collect paddy varieties. Thus was born the modern India's first paddy breeding station.

The Imperial Government did establish another paddy breeding station in 1911. But, that is in Dakha with the new name, Bangladesh Rice Research Institute.

S. Robin, Head of the Department of Rice, says Parnell's job was to collect various paddy varieties in South India, study and document them.

They had the help of an artist, whose paintings are intact and fresh even today and appear as good as photographs.

The museum to-be has a photograph showing the receipt of *Valwadam paddy* variety from the tahsildar of Bezawada (Vijayawada) on October 1903. Mr. Robin says that though the Imperial Government established the breeding station only in 1912, the work started at least a decade earlier.

The room also has old glass slides with picture negatives of paddy varieties to be projected and shown during seminars, a gold-plated microscope, equipment used in paddy collection, century-old books containing drawings of various paddy varieties and much more.

He says that Parnell, his successor R.O. Iliffe and his successor K. Ramiah and a few others collected close to 2,500 traditional paddy varieties from the Indian sub-continent.

To date, the university has the varieties stored in the Ramiah Cold Storage Bank.

The work of the scientists at the breeding station included plant protection research and crop management research. Mr. Ramasamy says that it was at the paddy breeding station that the first variety GEB 24 was identified and promoted. This GEB 24 was to later become a parent for more than 770 paddy varieties developed across the world.

As on date, Mr. Robin says, the breeding station has developed 51 varieties and four hybrids. The museum to-be will house all the details and soon be thrown open to the public.

Farm students register higher yield

Thanks to good crop management technique, application of manure and timely rain



GOOD RETURNS:Students of TNAU Anbil Dharmalingam Agricultural College and Research Institute harvesting paddy.— Photo: A. Muralitharan : For a group of students of Tamil Nadu Agricultural University's Anbil Dharmalingam Agricultural College and Research Institute, it was a happy occasion on Thursday when they harvested paddy on a plot of four acres.

The students raised the 135-day medium term 'TNAU Rice TRY 3' variety, suitable for the alkaline soil of Manikandam block where the college is located. The college has been taking steps to popularise the rice, which has a milling percentage of 71.30 and head rice recovery of 66 per cent. The variety was resistant to diseases, including leaf folder, stem borer, brown

spot, sheath rot, and sheath blight.

“Luckily, the harvest is more than last season’s yield,” says P. Pandiyarajan, Dean of the college, who has been guiding the students on crop protection techniques for registering a higher yield. From 2.4 tonnes last year, the harvest has shot up to 3 tonnes an acre this season. He said that timely onset of the North East monsoon, prompt application of green manure, close follow-up for nitrogen management using leaf colour chart and application of azola had all helped to increase the yield.

M. Raju, Assistant Professor of Agronomy, who coordinated the cultivation, said that the crop accounted for productive tillers numbering 25 and 30, indicating the good yield. The application of dhaincha further enhanced the yield. The variety was free from pest attack or disease, another advantage for the achievement. “Students kept an eye on protecting the crop all through the cultivation” the Dean added.

Sodic-specific variety

The college has been conducting research programmes for evolving and releasing paddy varieties suitable for sodic soil. Manikandam block accounts for the largest area of about 50,000 hectares affected with sodic soil.

‘Food policy should help poor’

The Union Government while designing the food production policy should keep in mind the weakest person in society, said T. Ramasami, former Secretary, Department of Science and Technology, at the inauguration of a seminar on ‘Doubling food production in 10 years,’ held here at the Tamil Nadu Agricultural University on Friday.

The government must adopt a cautious approach as going in for revolutionary approach would involve intensive use of energy and material and this would be against the nature’s evolutionary model of development. This in short would lead to the country following the Western model of development. But the country should learn from the mistakes the West made.

Being a labour-intensive occupation, the government must not push too

much mechanisation as it would lead to unemployment and no other section had the potential to absorb the labourers sent out.

Resources

Mr. Ramasami said that the country, however, had the technology and resources required to double food production.

Tamil Nadu Agricultural University Vice-Chancellor K. Ramasamy said that though there was enough talent and technology available, most of it was isolated, without network. The task, therefore, was to encourage institutions and individuals to network better.

He also spoke on increasing the financial allocation for agriculture research.

Palani G. Periasamy, president, South India Sugar Mills Association, said that appropriate policy measures were needed to bring about an increase in production. He called for increased interaction between industry and academia.

S. Viswanathan, trustee, Agriculture Consultancy Management Foundation, said that land available for cultivation was on the decrease while the demand for production was on the increase.

India, however, had an advantage vis-à-vis a few other countries in that cultivation could be taken up throughout the year, at least in majority of the areas. Using simple techniques and small interventions, the production could be doubled and the government must strive for the same.

He suggested agglomeration of land to bring about mechanisation.

58 DPCs to be opened

Of them, seven centres to be started within a week



DISCUSSION:Collector S. Ganesh presiding over farmers' grievances day meeting in Pudukottai on Friday.

A total of 58 direct procurement centres (DPCs) will be opened in the district to facilitate farmers to sell their 'samba' paddy to be harvested, Collector S. Ganesh said.

Presiding over the farmers' grievances day meeting here on Friday, he said that so far nine centres had been opened in parts of the district and another 58 would be started shortly. Of them, seven centres would be started within a week. Earlier, a farmer, Sebastian, urged the officials to open direct procurement centres.

Replying to a plea by Appavu Balandar, a farmer, for arrangements for procurement of minor millets by the district administration, K. M. Shahjahan, Joint Director of Agriculture, and K.V.S. Kumar, Joint Registrar of Cooperative Societies, explained the steps initiated for encouraging cultivation of minor millets in the district. While the Agriculture Department distributed free seeds, the Cooperation Department has planned to procure and market the produce, they said.

Former MLA S. Rajasekaran urged the Collector to impress upon the private sugar mill near Aranthangi to disburse the arrears due to cane-growers. He said the cane-growers should have the liberty to register their fields with the mills of their choice.

Durai Manickam, a farmer from Avudaiyarkovil, said that steps should be taken for supplying the Mettur waters to Avudaiyarkovil and surrounding villages.

When Dhinakarasingam, a farmer, urged the state government to revise the norms for installing higher capacity pump sets up to 7.5 HP under the green energy programme. Presently, pump sets up to 5 HP alone were being permitted for use. The depletion in groundwater posed a hindrance in drawing water, he said. Officials said that as per the norms, sets up to 5 HP alone could be used under the scheme.

The Collector said the district administration had taken steps for supplying seeds and fertilisers to the needy farmers.

Farmers allege underweight fertilizer in Tirunelveli

Urge officials to initiate action against such sellers

Even though over 14,000 tonnes of urea has been distributed in the district so far during the current 'pisanam' paddy season, a few farmers complained about the non-availability of fertilizers and the sale of underweight fertilizer bags in the farmers' grievance day meet held at the Collectorate on Friday.

Farmer Zakhir Hussein from Vadakarai said the sale of underweight fertilizer bags through a few outlets in the district should be checked and urged the officials to initiate action against such sellers.

Endorsing Mr. Zakhir's charges, a few more farmers said most of the 50 kg urea bags being sold through the retail outlets and a few primary agriculture cooperative banks were underweight even though the farmers were paying the right price.

Joint Director of Agriculture C. Chandrasekaran said the retailers had already been instructed not to open the fertilizer bags to sell the chemical nutrient in 1 or 2 kg in the local market.

A group of farmers from Thenkalam complained that they were incurring huge loss due to the invasion of wild boar into their paddy fields and displayed the photographs showing the crop damage to the Collector.

Mr. Chandrasekaran said the district administration would recommend to the government to remove wild boar from the list of scheduled animal.

When a group of farmers from Sengulam complained that the quantum of urea allotted to their area was insufficient, Collector M. Karunakaran, who chaired the meeting, assured that adequate supply to Sengulam area would be ensured within a day.

On the demand from farmer Shaik Maideen of Vadakarai that the park near the Adavinainar dam be beautified and thrown open to the public, the Collector ordered the officials to do the needful to make the park attractive and submit a report within a week.

Dr. Karunakaran also instructed the officials to open adequate number of paddy direct procurement centres across the district and appealed to the farmers to bring soil sample from their ranches from the next meeting onwards so that they could test it in the mobile laboratory to be stationed at the Collectorate during the grievance day meetings and get the results at the end of the meeting.

Deputy Director of Horticulture S. Raja Mohamed and senior officials participated in the meeting.

Retailers have already been instructed not to open fertilizer bags, says official

More farm ponds to come up in Ramanathapuram

Overwhelming response from farmers

As farmers overwhelmingly responded to 'Farm ponds', the state government has sanctioned funds for digging 4,000 more farm ponds this year for the benefit of farmers on private patta lands.

Announcing this at the farmers' grievance redressal meeting here on Friday, Collector K Nanthakumar said interested farmers could submit applications for digging farm ponds in their patta lands.

He said the ponds would be created by involving the workers employed under the Mahatma Gandhi National Rural Employment Guarantee Scheme under the back end subsidy model and the government has sanctioned Rs.50,000 per pond.

After the MGNREGA workers did the initial digging work, the Rural Development and Agriculture Engineering departments would complete the works, he said adding 1,500 farm ponds were dug up last year under this model.

After the harvest, farmers could apply for farm ponds to the Assistant Directors of Agriculture department in their respective areas, so that the work could be started in February, the Collector said.

This year, farmers received good rains during both the south west and north east monsoons but the farm ponds came to the rescue of many farmers when the district faced drought in the last two years, Mr Z Kamaldeen, Deputy Director, District Watershed Development Agency (DWDA) said.

Detailing the agency's performance last year, he said it has dug up 110 new farm ponds in the blocks of Kadaladi, Kamudhi, Mudukulathur, RS Mangalam and Nainarkoil and provided Capacity building training to 1,564 farmers. The agency has also renovated tanks and planted more than one lakh saplings of fruit trees on the banks, he said. Besides, the agency has renovated 296 Ooranis, 64 Kanmais and 93 supply channels, he said presenting an audio-visual.

The renovated Ooranis included those in Naranamangalam and Erwadi. Both became garbage dumping yards and now presented a great picture with pure water, he said.

To help the farmers to augment their income, the Agency distributed fingerlings to be grown in farm ponds on an experiment basis in the watershed areas in the district, Mr. Kamaldeen said. It gave revolving fund of Rs.27,000 each to 628 self-help groups, he added.

Farmers raise issue of farm workers' shortage at grievances meeting

Implement MNREGS only when there are no jobs for farmhands, they say



A farmer displaying the cauliflower, which he had raised in his field, during the agriculture grievances day meeting in Salem on Friday.—PHOTO: E. LAKSHMI NARAYANAN

A plea to implement the Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGS) only when there are no jobs for the farm workers and also only in those areas where unemployment problem persisted was made by the representatives of farmers associations here on Friday.

They were speaking at the monthly farmers' grievances day meeting presided over by K. Maharabushanam, Collector.

It was N. Perumal of Puliankurichi, who raked up the issue, when he said that farmers were not getting workers for the regular agricultural activities as they prefer to go for work in the projects implemented under the MNREGS. Due to this trend, the farmers are forced to pay higher wages.

He was supported by a host of farmers' representatives. K. Sundaram of Vaiyappamalai said that the implementation of this scheme practically affected the farm activities.

The drawback of scarcity of the work force for farm activities had been raised in both Parliament and Tamil Nadu Assembly.

S. Govindaraj of Ammanpalayam and C. Vaiyapuri, president, United

Farmers Association-Tamil Nadu, said that as per the norms, this scheme should be implemented only when acute unemployment problem persisted. But, officials never mind about this and provide jobs to workers even during the harvest period, creating scarcity of hands.

Mr. Govindaraj said that the implementation of the scheme should be suspended at least during the harvest season.

The Collector replied that the scheme is being implemented as per the Government norms.

He suggested that the land owners could induce the workers by paying increased wages.

Mr. Sundaram took exception to the move of the development authorities to construct anganwadis and panchayat union office over water sluices and water sources in Panaimarathupatti union. All these works should be stopped with immediate effect.

Mr. Govindaraj drew the attention of the forest department on the 30 per cent increase in the population of wild animals as per recent survey. There is every chance of animals entering the fields abutting reserve forests and destroying the crop during the summer. The department should take steps to check this by creating water facility for quenching the thirst of the animals.

As fodder of shortage is expected during the summer months, he demanded provision of fodder seeds at subsidised rates to the farmers, so that they could raise fodder for the summer months.

Mr. Vaiyapuri and Mr. Govindaraj said that the Kariakovil Reservoir, near Pappanayakkanpatti, already has 40 feet water. The water should be released into River Vasishtanadhi for farm activities and also for improving the ground water level. Due to the non-release of water for a long time, the Vasishtanadhi always posed a dry look and has lost its shape, they added. The Collector said that he has already sent a team to Chennai to appraise the PWD authorities about this issue. The PWD has sought a detailed proposal from the district administration, which will be sent soon.

Innovative products steal the show



For all: People taking a look at the items displayed at the exhibition during the Golden Jubilee celebration of Agriculture College and Research Institute in Madurai on Friday.— Photo: S. James

From a host of everyday food products given a healthy twist with millets, natural dyes, newly developed machinery and pest control measures, a number of stalls put up by different departments of the Agricultural College and Research Institute and Home Science College and Research Institute showcased such innovations as part of the ‘Vivasaya Tiruvizha 2015’ expo.

Speaking about the Sustainable Sugarcane Initiative (SSI) being developed at the AC & RI, A Gurusamy, Professor, Department of Agronomy said that single budded sugarcane sets removed from sugarcane are placed in trays with coir piths.

“These single budded chips when planted in the fields not only give at least 50 per cent more yield than the conventional method, but require less water as well,” he said. While the technology has been adopted by farmers in Madurai and Sivaganga, the faculty at the SSI stall said that it had generated a good response.

The Home Science department had showcased cookies, noodles, macaroni and a range of other snacks made of traditional millets for which the recipes were being developed by them.

“We have also formulated ready-to-eat instant sambar, Pongal and upma mixes which are made of vegetables and millets and simply need to be boiled with water,” said G. Hemalatha, Professor in the Food Science and Nutrition Department. “Regular training classes are conducted by the department for farmers who want to apply such value addition to the millets they cultivate as well, by the department,” she added.

Similarly, bags and other handicrafts dyed with natural dyes extracted from Badam leaves were on display by the Apparel Design and Fashion Technology department.

“Farmers, women’s groups and budding entrepreneurs are given training on how to manufacture these natural dyes as well,” said T. Padmini, head of the department. **A.P. keen to promote ‘sugar-free’ rice variety**

Andhra Pradesh will be identifying and promoting new varieties of rice with low content of carbohydrate, referred to as ‘sugar-free rice’ in common parlance that is more nutritious and can be consumed even by diabetic patients without the fear of their blood glucose levels shooting up.

In addition to BM 1100, a new variety of rice released in some pockets, two more new variants, 209 with longer grain and ‘Sonam’ are also being considered for cultivation in demonstration farms , according to government sources.

The issue of promoting cereals and millets with value addition to increase their nutrient value came up for discussion in the recent meeting of Agriculture Minister P.Pullarao with department officials.

He suggested that these varieties and also rice variety with low carbohydrates could be promoted for the benefit of all, specially the diabetics who are advised to cut down or avoid quickly digestible normal rice to keep their glucose levels in blood under control.

The Agriculture Department has been asked to promote the ‘sugar-free’ rice varieties by next Kharif.

However, agriculture scientists clarified that officially ‘no sugar free rice’ was being cultivated in Andhra Pradesh as yet.

The Seed Section in New Delhi Office of International Rice Research Institute (Philippines) also did not have ready information on the ‘sugar-free rice’ variety, they said. But out of all varieties of rice released so far in the State, ‘MTU 7029 Swarna’ has least amount of carbohydrates.

Some private seed companies in the State are into research to promote cereals and millets with value addition to enhance nutritional value and bring down carbohydrate content. However any value addition to cereals or millets will have negative correlation with yield, scientists observed.

The Agriculture Department will also be promoting flood resistant varieties of rice- Swarna sub and Samba Masuri sub- which can withstand 10 to 15 days of flooding without affecting their yield. They will be raised in 270 hectares of demonstration farms.

Farmers in State faced with an unusual challenge

Ryots apprehensive about payment for produce

NOT A GOOD CLIME	
1 Procurement by govt. agencies through PPCs is viewed as an ideal opportunity for farmers to get assured MSP	“ The government had announced an MSP of Rs. 1,310 a quintal of paddy last year, but it was sold for Rs. 1,360. This year, the government announced an MSP of Rs. 1,360 a quintal, but farmers sold paddy for Rs. 970 to Rs. 1,000 a quintal for various reasons M.V.S. NAGIREDDY SAID, YSRC Farmers’ Wing chief
2 Govt. had purchased 10.6 lakh tonnes of paddy through PPCs in eight districts of the State till January 15	
3 A reason for farmers bypassing PPCs is the fear of paddy being either rejected or declared cheaper on the basis of quality	
4 Moisture, colour and impurities are often cited as reasons for rejection	
5 Commission agents accept the produce without much fuss, but at a lower price	

Farmers in the State are in a fix after the government set in motion the procurement of paddy.

Procurement by government agencies through paddy procurement centres (PPC) is viewed as an ideal opportunity for farmers to secure the assured minimum support price for their produce. But, farmers fear the money will not be directly paid to them, as it is likely to be credited to their accounts, and it will, in turn, be accounted for servicing their debts. Apprehensions on securing the MSP for their produce continue to haunt the farming community notwithstanding the government's loan waiver scheme.

Meanwhile, the government said 10.6 lakh tonnes of paddy had been purchased through PPCs in eight districts till January 15. This is nearly 15 per cent of the estimated kharif (2014-15) yield of 75 lakh tonnes. Though the government is keen that farmers sell their produce at PPCs, there are several reasons for farmers not to go for them. YSRC Farmers' Wing chairman M.V.S. Nagireddy said the agricultural credit system was never more disturbed than it was now. This is mainly because of the faulty loan waiver scheme. While tenant farmers could never afford the luxury of selling their produce at PPC, this time several regular farmers, who were forced to take loans from commission agents and private money-lenders, face the obligation of selling the grain to those who extended credit to them.

Another reason for farmers bypassing PCCs is the fear of paddy being either rejected or declared cheaper on the basis of quality. Moisture, colour and impurities are often cited as reasons for rejection, and farmers are often burdened with double the transport costs. The commission agents, however, accept the produce without much fuss, but, of course, at a lower price.

“The government had announced an MSP of Rs. 1,310 a quintal of paddy last year, but it was sold for Rs. 1,360. This year, the government announced an MSP of Rs. 1,360 a quintal, but farmers sold paddy for Rs. 970 to Rs. 1,000 a quintal for various reasons,” Mr. Nagireddy said. The reduction of levy quota from millers to 25 per cent by the Centre has also reduced the buoyancy in the open market.

Cold wave hits paddy

The crop will recover once winter season is over, say agriculture officials

The severe cold wave that hit the district for the two months had adversely impacted the production of paddy. The officials claim that it may continue for one more week, but confident that the situation would recover once the summer seeps in.

The district had recorded about 8.5 degrees Celsius temperature some days during the season impacting on the growth of nurseries and paddy.

Due to the severe cold the farmers were asked to see that there was no water logging in nurseries during night and cover them with some shade, if possible.

The district was already suffering drought-like conditions and 40 out of 46 mandals in the district have registered low rain-fall and there was a demand from the farming community to declare entire district as drought-hit in view of the uneven rainfall.

Keeping the tough conditions faced during kharif season, the agriculture officers from the beginning have advised the farmers not to go for commercial crops during rabi and opt for dry crops. Though power is being supplied for six hours currently, the groundwater levels had fallen drastically and it was stated that one has to dig for about 500 feet to get water in the bore-well.

While nursery activity was taken up in about 8,000 hectares, it was estimated that paddy cultivation may be come up in 20,000 hectares. Farmers were opting more for maize and sunflower this season.

It was estimated that maize cultivation will be taken up in 20,000 hectares from the already existing 10,000 hectares and the cultivation of sunflower will go up to another 10,000 hectares.

Medak logged a temperature of about 8.5 degrees Celsius for a few days in the season, affecting the growth of nurseries and paddy

16.98 lakh fish seedlings released

Minister for Agriculture, Fisheries, Sericulture and Animal Husbandry Pocharam Srinivas Reddy released 16.98 lakh fish seedlings into the reservoir at Sri Ram Sagar Project, Pochampad in Nizamabad district on Friday.

Speaking on the occasion, Mr. Reddy said the TRS government was committed to the welfare of the fishermen families in the State and therefore efforts were on to promote fisheries.

Of green wonders



Nature's Charm Tathi Lakshmi Kumar explaining about her bonsai plants; Flower decorations; Anisha Tandon busy arranging her Ikebana stall at VUDA Park Photos: K.R. Deepak

At the Flower Show at VUDA Park, participants talk about their passion for nature

It is like a mini green township at Tathi Lakshmi Kumar's terrace garden - a world of pygmy trees with full grown fruits and flowers dotting the branches. This is the fascinating world of bonsai, carefully nourished and cultivated by Lakshmi over a span of a decade. Bringing a slice of her green zone at the ongoing Flower Show at VUDA Park, Lakshmi wants to pass on a message. "Nature has a calming effect and can do wonders to heal the mind and spirit. For me, my garden is my soul," she says. Lakshmi, who is a member of the

Visakha Bonsai Welfare Society, has nurtured more than 100 varieties of bonsai plants at her terrace garden. “My plants are a constant reminder of the indomitable spirit and continuity of life even in the face of nature’s fury. During the cyclone, many pots were shattered. But most of the bonsai plants survived the massive destruction due to its strong root system,” says Lakshmi.

With the shrinking urban spaces, cultivation of terrace gardens and bonsai culture has propagated fast across the city. Now there are 160 active members of the society.

While many cultivate gardens as a hobby and a love for nature, N.V. Siva Ramakrishna has turned his passion into a lucrative enterprise through organic farming. Ramakrishna, who is also participating in the Flower Show, started organic farming in the year 2001 on a piece of 10 acres land at Anandapuram. Today, his enterprise ‘Ananya Agrotech’ brims with green glamour with over 300 species of medicinal plants, 60 varieties of bonsai plants and a nursery of rare flowering plants. “I hail from a farmer’s family and have grown up amidst nature. This is my passion that I have nurtured ever since I was a child,” says Ramakrishna. Also a gardening consultant, Ramakrishna says that the city has seen a growing preference for the concept of vertical garden because of space constraints in urban households. In the Flower Show, he is showcasing the art of vertical gardening. “You can have your own tiny piece of green at the balcony and cultivate plants like chillies, tomatoes and leafy vegetables,” says Ramakrishna.

For Anisha Tandon, being close to nature is more of a spiritual process than anything else. Anisha, who has been practicing Ikebana - the traditional Japanese art of flower arrangement - from the past 13 years, is highlighting the importance of nature’s abundance and its power to transform the mind through her floral arrangements at the Flower Show. A member of the Hyderabad chapter of Ohara School of Ikebana, Anisha says Ikebana is a lot more than just floral arrangement. While normal flower decoration focuses on symmetry, Ikebana is based on asymmetrical structures under the philosophy that no two things in nature are alike. “The art does not limit you to your own garden. Even a dry leaf can be used to do an arrangement. We

are, in fact, using a few dry pieces of wood from the Hudhud cyclone destruction to make an arrangement,” says Anisha. Over the years, Ikebana has become a part of her personality. “The art has made me patient. You start seeking perfection and begin to appreciate small ways of life,” says Anisha, who is a third masters in Ikebana. Having participated in flower shows and exhibitions in Delhi and Tokyo, this is her exhibition at Vizag, which the Ikebana team has dedicated to the resilient spirit of the city after cyclone Hudhud.

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Kebab recipes: Mutton Galawati, Kakori Kebabs

We simply love kebabs. We serve kebabs for appetizers when hosting guests over. We don't think twice before calling in for kebabs from the local market as a quick snack.

Such is our love for kebabs. Then how is it that we shy away from making kebabs at home? A lot of us believe that cooking kebabs is very tedious as chances of going wrong with the proportions abound. But the truth is rustling up this delectable Mughlai dish is not as cumbersome as previously believed, for it only requires a bit of patience, some flair and a heart for serving good food.

Corporate executive chef of Sun-n-Sand Hotels, Gautam Mehrish, shares with us two basic but finger-licking kebab recipes that are ideal to get you started on Mughlai cooking. Remember, balance and proportion are most critical to churn out a dish that'll delight your guests.

Mutton Galawati Kebab

Ingredients:

Mutton boneless (leg) 1 kg

Mutton fat (A) 50gms

Papaya paste 100gms

Hung yoghurt 50gms
Ginger, garlic (paste) 25gms
Onion (sliced & fried and crushed) 100gms
Salt to taste
Yellow chilli powder 5gms
Roasted gram flour 200gms

Garam masala (B) (Roast all ingredients and make powder)

Black pepper corn 50gms
Green cardamom 50gms
Black cardamom 25gms
Clove 25gms
Mace 5pcs
Nutmeg 1pc
Jeera 50gms
Saunf 50gms
Patthar phool 25gms
Cinnamon 25gms
Bay leave 5pcs
Kebab chini 10gms

Add 10gms of powder masala to the mix

Live charcoal (for smoking) 1pc
A dash of pure ghee (to be put on top of burning charcoal)
Pure ghee (for shallow frying) 100gms

(C)

Saffron (soak and make paste using pestle) ½ gm
Rose water 2 tablespoon
Kewada water 2 tablespoon

Method:

- Mince mutton boneless and fat together to fine consistency
- Add (A) mix well and keep for half an hour
- Add 10gms of powder mix (B)
- Add saffron, rose water, Kewada water

- Place the Galawati mix in a deep vessel, keep a live coal in the centre
- Put a bit of pure ghee and cover. Keep till all smoke is over
- On a hot heavy flat tawa or on a heavy bottom non-stick pan at home make round flat tikkis of the mix and pan grill both sides till it becomes brown in colour done from inside
- Serve with green chutney, fine sliced onion and lemon wedges
- You can even have it with paranthas

Kakori Kebab

Ingredients:

Mince meat (from leg without any white ligaments) 1kg

Raw papaya (paste) 100gms

Salt to taste

Kidney fat 100gms

Kakori masala (A) (Roast and make powder)

Green cardamom 10 pcs

Black cardamom seeds ½ teaspoon

Clove 5 nos.

Nutmeg 1 pinch

Mace 1 small blade

Shahi jeera ½ teaspoon

Rose petal 1 teaspoon

Kebab chini 10pcs

White pepper ½ teaspoon

Kashmiri mirch 1tablespoon

Yellow chilli ½ teaspoon

Roasted gram powder 100gms

Kakori masala (B) (Make paste)

Desiccated coconut 50gms

Khuskhus 10gms

Khoya 50gms

Onion (to be sliced and fried) 100gms

Cashew nut 25gms

Fresh cream 100gms

Saffron 1 gm
Rose water 2 tablespoon
Kewda water 2 tablespoon

Method:

- Mince meat and fat thrice to very fine consistency
- Add papaya paste, salt, and powder masala (A). Mix well with both hands.
- Add masala paste (B) along with rose water, Kewda water and saffron
- Mix thoroughly and keep for half an hour
- Clean and wipe skewers. Take a portion of mince mixture and stick it to the skewers evenly in round shape like a Seekh Kebab
- Roast on charcoal grill. Remove carefully from the skewers.
- Serve with green chutney

Recipe: Ginger lemon juice



Recipe: Ginger lemon juice (Thinkstock photos/Getty Images)

It is a cool way to deal with the rising mercury

Ingredients:

One lemon, one ginger piece, two tbsp sugar, salt to taste.

Method:

Mix lemon juice, salt and sugar in a glass. Crush ginger well and add to it, and add some chilled water. Stir well and garnish with lemon slice.

Stay healthy with these drinks

The thought of taking time for a healthy breakfast rarely breaks the stride of the jet-setting business traveler. Why not opt for a few healthy drinks that are loaded with nutritional benefits instead.

Balance Smoothie

Ingredients

70 g Banana, 250 ml Orange juice, 5 ea Baby spinach leaves, 1 tsp Cocoa powder, 125 ml Soya Milk, 2 tbs (20 g) Ground Almonds

Method

Blend the banana, baby spinach, almond and cocoa powder with the Soya milk. Then add the orange juice and blend until completely smooth. Serve chilled.

The nutritionist's comments

Banana is rich in the important electrolyte potassium. A diet rich in potassium seems to have a blood pressure lowering effect. Banana is also rich in the water soluble fiber pectin's and acts soothing on the gastro intestinal tract. Pectin's have a cholesterol lowering effect too.

Nutritional information

Energy 1520 kJ, Protein 12 g, Fat 11 g, Carbohydrates 53 g, Fibers 4 g

Health Smoothie

Ingredients

60 g Banana, 100 ml Fresh squeezed orange juice, 120 g Strawberries, 6 Mint leafs, 125 ml Soya milk, 2 tbs (20 g) Ground Almonds

Method

Blend the banana, strawberries and mint leafs with the soya milk. Add the orange juice and almond and blend until completely smooth. Serve chilled.

The nutritionist's comments

Apart from the great sweet taste of summer, strawberries offer support for optimal health due to the phytonutrient that gives the vibrant red color in the skin of the berry. Strawberries tend to give us protection against inflammation and heart disease.

Nutritional information

Energy 1290 kJ, Protein 11 g, Fat 12g, Carbohydrates 39 g, Fibers 5 g

Good energy juice

Ingredients

400 g Beetroot, 40 g Baby Spinach, 500 g Carrots, 100 g Apple red, 1 Tsp Chopped dill

Method

Cut the beetroot, baby spinach, apple and carrots and extract juice with a extractor. Add the chopped dill. Mix until juice is smooth. Add a table spoon of crushed ice and stir before serving.

The nutritionist's comments

This juice is rich in healthy vegetables and helps you balance the blood sugar and gives you great energy and helps enhance your mood. Spinach helps detoxify hormones and beetroot supports digestion, which is important for absorbing nutrients.

Nutritional information

Energy 2141 kJ, Protein 8,5, Fat 4, Carbohydrates 115, Fibers 23

THE HINDU BusinessLine

Bio-diesel firm plans 5 green corridors in Maharashtra

The chain of biodiesel equipped fuel stations will be located every 50 km on either side of the Mumbai-Pune-Satara-Kolhapur stretch

Pune, January 23:

Pune-based manufacturer and distributor of bio-fuels My Eco Energy (MEE) plans to set up green corridors along four national highways in Maharashtra, and will establish nearly 500 bio-fuel retailing outlets over the next two-odd years for that purpose.

The chain of biodiesel – branded Indizel – equipped fuel stations will be located every 50 km on either side of the Mumbai-Pune-Satara-Kolhapur stretch of NH-4, Pune-Sholapur and Mumbai-Palghar-Gujarat stretches on NH-9, Mumbai-Ratnagiri section of NH 17 and Mumbai- Nashik-Dhule segment of NH 3.

MEE already has one bio-diesel station at Lonikand, while a second one at Khalapur on the Pune-Mumbai highway was inaugurated on Friday. Bio-diesel is cheaper than diesel currently by around Rs. 2 a litre.

“We plan to expand the network of bio-diesel retailers and distributors to 500 fuel stations across Maharashtra, which will be a mix of full-fledged stations and smaller kiosks with 25,000 litre tanks. We will also set up 2,000-3,000 smaller 100 litre tank outlets,” Santosh Verma, Director, MEE, said. Setting up of the network will entail an investment of Rs. 250 crore. Made from a feedstock of used vegetable oils, and manufactured through third party licences in Andhra Pradesh, West Bengal and UP, the company has a current capacity of 25 lakh litres per day.

Business Standard

Odisha's Potato Mission to cost Rs 267 crore

Expenditure finance committee to appraise the scheme

BS Reporter | Bhubaneswar

[Potato Mission](#) to be implemented by the [Odisha](#) government from 2015-16 to make the state self-sufficient in tuber production, is estimated to cost Rs

267.05

crore.

The scheme, to be continued till 2023-24, would be appraised by the state's expenditure finance committee. It has been proposed to earmark Rs 67.45 crore for the scheme in the State Budget for 2015-16.

The Mission seeks to ramp up tuber output in the state to 1.12 million tonne by 2017-18 up from 0.2 million tonne presently. It was decided to be implemented after the report of the potato task force was approved at a high-level meeting last month. The Mission is being taken up since Odisha faces an acute shortage of potatoes and depends on neighbouring West Bengal to meet the demand. The task force was constituted under the chairmanship of Rajesh Verma, principal secretary (agriculture & food production) to suggest a roadmap to make the state self sufficient in tuber production.

Area under potato cultivation has been envisaged to be raised to 60,000 hectare (ha) by 2017-18 from the existing 15,000 ha.

The task force has recommended establishment of 112 new cold storages by March 31, 2018 of which 82 would be sanctioned under the State Plan. The task force has also recommended providing subsidy of 50 per cent on electricity tariff for six years for the existing cold storages and the ones to come up by March 31, 2018 for storing potatoes and seed potatoes. Each cold store would have the capacity of 5,000 tonne.

The directorate of horticulture would be the nodal agency for the Mission. The programme would be monitored by the state level steering committee headed by the chief secretary and consisting of secretaries of the departments of agriculture, cooperation, water resources, food supplies & consumer welfare, energy and SC & ST development. The directorate level monitoring and implementation committee would look after the production, establishment of cold storages and rational distribution.

At the field level, the programme would be implemented through the field staff of the directorate of horticulture. Since there is an acute staff shortage at the directorate of horticulture, the task force has recommended the establishment of project management unit (PMU) with five technical and three supporting staff for a period of three years starting 2015-16 for monitoring the overall programme.

It may be noted that Odisha's daily requirement of potato is about 2,500-3,000 tonne, most of which is sourced from West Bengal. The state faced an acute potato crisis in the monsoon months of July and August after West Bengal imposed some undeclared curbs on potato supplies.