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THE HINDU

Control of Tikka disease in groundnut

The groundnut leaf spots (early leaf spot and late leaf spot) commonly called as “Tikka” disease cause nearly complete defoliation and yield loss up to 50 per cent or more depending upon disease severity.

The leaf spot disease epidemics are affected by weather parameters such as hot and wet conditions. Under field conditions, initial symptoms of late leaf spot were noticed at 45-50 days after sowing of groundnut crop.

The most prominent symptoms appeared on the foliage in the beginning and later lesions on stem also developed.

Brown lesions

The characteristic brown coloured lesions first appeared on the lower leaves which were usually smaller and almost circular. Early and late leaf spots in peanut can be differentiated on bases of colour of spot and yellow halo.

In case of early leaf spot colour is reddish brown while in case of late leaf spot it is dark brown. Yellow halo is conspicuous and spreading in early leaf spot but dull and limited to margins of spot in late leaf spot.

Management

— Leaf spot infected diseased plant materials should be properly destroyed.

— Growing resistant genotypes and do seed treatment with a talc-based powder formulation of *Pseudomonas fluorescens* reduced the severity of late leaf spot.

— Spraying of *Trichoderma viride* (5 per cent) and *Verticillium lecanii* (5 per cent) can reduce the disease severity.

— Neem leaf extract (5 per cent), Mehandi (2 per cent), neem oil (1per cent), neem kernel extract (3 per cent), can effectively contain the disease.

— Two sprays of Hexaconazole (0.2 per cent), Carbendazim (0.1 per cent) + Mancozeb (0.2 per cent) Tebuconazole (0.15 per cent) and Difenconazole (0.1 per cent) reduced leaf spot disease.

— Bavistin at 0.1 per cent, followed by 2 per cent neem leaf extract + 1.0 per cent K₂O significantly reduced the severity of leaf spot disease.

(Dr. Utpal Dey ,Department of Plant Pathology, Vasantrya Naik Marathwada Krishi Vidyapeeth, Parbhani, Maharashtra. D. N. Dhutraj is Associate Dean & Principal, College of Agriculture, Badnapur, VNMKV, Parbhani, Maharashtra, email: utpaldey86@gmail.com)

Novel way to produce safer drinking water

Making drinking water a lot safer by killing an overwhelming number of bacteria and most viruses is now possible. A novel research to this end was carried out by a team led by Prof. T. Pradeep, Department of Chemistry, Indian Institute of Technology (IIT), Madras.

In May 2013, the same team was able to achieve only 100 times reduction in bacterial load and negligible reduction in viral load through sustained release of 50 parts per billion (ppb) of silver ions in drinking water.

But in the latest study, the team was able to achieve 1,00,000 times reduction in bacterial load and 1,000 times reduction in viral load by synergistically combining silver with carbonate ions. The drastic improvement in antimicrobial performance was achieved despite the team using only 25 ppb of silver ions, half the amount used in the earlier work.

“A novel way has been found to save 1,300 tonnes of silver annually, which would have been unrecoverable otherwise, amounting to a saving of Rs.4,600 crores,” Prof. Pradeep told this Correspondent.

The amount of carbonate and silver used was well below the permissible level in drinking water. Tap water was used for the experiments. The results of the study were published a couple of days ago in Nature Group’s journal *Scientific Reports*.

“A fundamental result that came out of our earlier study was that the antibacterial activity of silver can be tuned by simple methods,” Prof. Pradeep said. “Everybody was studying silver in isolation but we looked at synergistically combining silver with some other ions.” Explaining what prompted him to combine silver with another ion, he said: “It was intuition (based on chemistry). When you say there is an effect of an ion on an organism, what it means is that the ion has to get into the body of an organism. The penetration has to go through several steps. Each one is a chemical binding process. Therefore, silver can be tuned by ions or molecules.”

The search for ions that can be combined with silver without causing toxicity to humans eventually led to carbonates.

“It’s a very common ion in water. It is also cheap and easily deployable. So we stayed with carbonate,” Prof. Pradeep said.

The team had earlier found that silver was able to destroy the integrity of the cell membrane and also damage the DNA. In the case of carbonates, several peripheral membrane-bound proteins get removed. “We found that the peripheral proteins of the organisms were cleaned up after treatment with carbonates,” he said.

As a result, more silver ions were able to penetrate the exposed cell surfaces of bacteria and virus much more effectively and quickly. Hence, a large quantity of pathogenic microorganisms was destroyed.

Antibacterial and antiviral effects were tested on *E. coli* and *Staphylococcus aureus* and MS2 bacteriophage (virus). Both bacteria and virus were destroyed within 15 minutes of contact time.

Carbonates and silver were released into water at the same time but their contact areas with water were controlled by playing around with their sizes. “By controlling the size of the particles, one can effectively control the concentration of ions in water,” he said.

Since carbonate gets dissolved more quickly than silver, carbonate particles were sand-sized while silver was nanosize. “We want more dissolved carbonates than silver in water as carbonates have to first remove the peripheral proteins of a cell,” he said. The

amount of dissolved ions in water is 25 parts per billion (ppb) of silver and 20 parts per million (ppm) of carbonate.

Prof. Pradeep is confident that there is scope for more improvement. "You can still make it better by controlling the activity of silver by synergizing with other ions," he said.

Assured, monthly income alone can retain youth in agriculture



The entire family of the farmer is involved in farming work. Photo: M.J. Prabu

In spite of all its importance, agriculture still lacks the glamour of a full-time job for young people to take the plunge. The main reason many traditional farmers and several youngsters attribute to this is that it is not remunerative or reliable.

"If traditional farmers themselves say this then how does a youngster get attracted into this line which is mainly seen as an image of an old man looking at the sky for rains? It is only possible if we are able to assure a monthly income of at least Rs. 50,000 from a hectare. Only if we can assure this income can there be any meaning for all these talks on attracting and encouraging youngsters to get into this line," says Mr. S.S. Rajsekar, Managing Trustee, National Agro Foundation (NAF), Chennai.

Not lose touch

Remuneration or return on investment is very important, but at the same time young people must not lose touch with tradition. In the

rush of learning they should not forget the importance of ploughing — which provides food.

Mr. Bhaskar Reddy, a progressive farmer from Kizhmaruvathur village in Kancheepuram district, is a standing example as to how farming can be financially rewarding and at the same time he has taken care to see his two educated daughters have not lost touch with their family activity.

Besides studying, his daughters help him with the everyday activities on his five-acre farm.

As the region is predominantly a paddy and sugarcane growing belt like several others, Mr. Reddy was also growing the same. But the crops proved not so remunerative and he decided to sell his lands and move to Chennai.

“Many of our relatives and friends had sold their lands and moved to cities. But something within me held me back. A decision I am very glad of today, as my land is worth much more than what it was some years back,” says a smiling Mr. Reddy.

Better times

His fortunes turned for the better after he approached the National Agro Foundation for help and guidance.

He sought their expert advice on how to switch over to short term cash crops and was advised to take up vegetable farming of such crops as brinjal, watermelon and muskmelon.

NAF also provided him technical assistance on cultivation practices from seed to harvest.

When majority of farmers who are engaged in farming are finding it difficult to engage agricultural labour, Mr. Reddy and his family started working on their farm. By involving his family members, he saves about Rs. 1 lakh annually.

Modern technologies

Modern technologies like drip irrigation, soil plastic mulching, fertigation, annual soil fertility test are all being implemented. Judicious blending of organic and biological ways of pest control is being carried out in his farm.

Today Mr. Reddy is able to earn Rs. 1 lakh in 3-4 months from his brinjal crops.

Once the brinjals were harvested he cultivated watermelon in the fields and in three months time was able to earn nearly Rs. 3.5 lakhs as net profit for the a year by growing watermelons.

He also started a nursery to supply vegetable seedlings to other farmers for different crops from which he earns Rs.1.5 lakh additionally

“After completing my studies I prefer helping my father in his field and do not intend seeking a job in some company. Today, an engineering graduate earns between Rs.15,000 to Rs.20,000 a month whereas I am able to earn much more working in my own field,” says one of his daughters.

“From a failure farmer I have been able to come out as a successful person only because I learned and implemented new technologies in my fields. Farmers should always concentrate on growing vegetables apart from regular paddy crops since it fetches better returns in a short time,” he says.

Felicitated

The farmer was recently felicitated by the Chairman of the NABARD for his contribution towards sustainable agriculture

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Exposing Delhi's air pollution, from the back of an autorickshaw

American scientist Joshua Apte travels in an autorickshaw to present alarming findings for anyone who spends time on or near the roads in this city of 25 million.

The autorickshaw lurched through New Delhi's commuter-clogged streets with an American scientist and several air pollution monitors in the back seat. Car horns blared. A scrappy scooter

buzzed by belching black smoke from its tailpipe. One of the monitors spiked.

Joshua Apte has alarming findings for anyone who spends time on or near the roads in this city of 25 million. The numbers are far worse than the ones that have already led the World Health Organisation to rank New Delhi as the world's most polluted city.

Average pollution levels, depending on the pollutant, were 50 per cent to eight times higher on the road than urban background readings, including official ambient air pollution measures, according to research by Mr. Apte and his partners at the University of California, Berkeley, and the Indian Institute of Technology Delhi.

“And you have to keep in mind that the concentrations at urban background sites, where these official monitors are, are already very high,” he said. The measures “are actually some of the highest levels in air pollution made inside vehicles anywhere in the world”.

The point is particularly important for New Delhi residents, about half of whom live within 300 metres of a major road. New Delhi, like most cities, places their air monitors far from primary pollution sources like highways or industrial plants so that no single source can affect ambient readings, which are meant to represent an average pollution exposure from all sources.

“Official air quality monitors tend to be located away from roads, on top of buildings, and that's not where most people spend most of their time,” Mr. Apte said as *The Associated Press* joined him on a pollution-monitoring ride-along. “In fact, most people spend a lot of time in traffic in India. Sometimes one, two, three hours a day.”

Outdoor air pollution kills millions worldwide every year, according to WHO, including more than 627,000 in India. One of the biggest culprits in India is vehicular traffic — car ownership in the country of 1.2 billion grew from 20 million in 1991 to 140 million in 2011, and is expected to reach 400 million by 2030.

Prime Minister Narendra Modi has taken steps to cut down the popularity of cars running on diesel, one of the dirtiest burning fuels, by pegging its cost to world market prices and scrapping a discount that had encouraged diesel consumption.

But experts say that, unless India raises fuel standards to international norms, pollution levels that are already often deemed unhealthy or hazardous will escalate. Unchecked, today's vehicle trends in India could lead to a three-fold increase in levels of PM 2.5 by 2030 the tiny particulate matter believed to cause the most damage to human health according to a study this month by The Energy and Resources Institute in New Delhi, University of California, San Diego and the California Air Resources Board.

Still, few Indian cities have air quality monitors. New Delhi officially has 11, though experts say the readings can be erratic and the reporting opaque. The city reports several key pollutants and this month launched an air quality index, boiling down the ambient readings to a single daily number indicating whether the air is healthy, poor, harmful or hazardous.

Mr. Apte, who in January starts as an assistant professor of environmental engineering at the University of Texas, Austin, said that such indices, while perhaps easier for citizens to digest, represent vague urban background readings and can't help residents understand exactly what risks they face.

What ordinary people really want to know are answers to questions like, "should I be taking a walk outside in this neighbourhood right now?" ...'Is it safe for my child to be playing cricket on the field here?'" he said.

Mr. Apte's goal was to highlight the huge differences between the urban background readings and ground-level pollution along roads. His approach to gathering his data involved twice-daily rush-hour drives from the city centre to a southeast suburb.

For comparison, he also took readings from inside regular cars with the windows rolled up, and from a rooftop monitor that stood for ambient air quality readings or what the government might record and report to the public.

Levels of black carbon, a good indicator of diesel exhaust and poorly-tuned vehicle performance, were more than three times higher than the ambient readings. The average level of ultrafine particles, especially tiny forms of PM 2.5, was more than eight times higher so high that Apte's equipment broke when he initially tried to measure it. Ultrafine particles have been studied less than other forms of pollution but are believed to be particularly hazardous.

Environmental consultant Ajay Ojha, who works on air quality in Pune, said it will take more work to show policy makers the risks of air pollution and how to address them.

"The problem is nobody owns air pollution. Nobody is individually responsible. So unless the public is demanding action, officials have no reason to even bring it up," he said. "...More understanding is needed before people will start to get upset."

Policymakers disagree about which sources of pollution are the most worrying, with car traffic, industries and power plants, trash burning and small businesses like brick kilns all vying for attention.

To Mr. Apte, that simply means there are lots of ways to start clearing the air.

"The good news about air pollution in Delhi is that there's a lot of really low-hanging fruit in terms of sectors that we can choose to target," he said.

Protecting biodiversity

About 3 per cent of India's land area is deemed as protected area in the form of Project Tiger reserves or as sanctuaries for other flagship species such as the grizzled squirrel, the Nilgiri tahr and the lion tailed macaque (["Protecting biodiversity with rigour,"](#) Nov.25).

While the habitat within these confines is well-protected, poaching remains a concern. Buffer forests contiguous to protected areas are under pressure. NGOs and the forest department need to tap into corporate social responsibility funds to develop a healthy conservation economy around maintaining and restoring the health of buffer forests. Buffer forests also serve as vital migratory corridors, ensuring that inbreeding is limited. India also has vast stretches of forests in prime condition that do not come under the definition of a wildlife reserve. These include large swathes of forests around the Western and Eastern Ghats, the Vindhyas, Uttarakhand, Sikkim and Arunachal Pradesh. These forests occupy a land mass much larger than protected areas and need to be protected at all costs. Protecting our biodiversity is 'not just a nice thing to do', but an imperative.

Thanjavur officials gear up to meet farm inputs demand

Monitoring Official asks cooperatives to be ready with adequate stocks of inputs

All cooperative institutions dealing with agricultural inputs must keep adequate stocks to meet the demands of farmers in Thanjavur district, Information Secretary and Monitoring Officer M. Rajaram told officials here on Wednesday.

Speaking during the inspection of facilities and institutions, Mr. Rajaram said that in the midst of the thick of action in the delta district, farmers would be requiring several inputs. The Primary Agricultural Cooperative Societies that vend inputs to their members must plan the requirement in advance and stock adequately to ensure availability of material in quick time, he said.

Officials must assess the requirements in coordination with various departments, including Agriculture, Public Works, Cooperation, and Revenue, Mr. Rajaram said. As for the private fertilizer retail outlets, Mr. Rajaram said any malpractice would attract stringent legal action.

The senior official called upon the district officers to create awareness about various State government schemes under implementation in the district among the masses so that benefits reached them expeditiously.

Inspecting the mechanised agricultural operations at a paddy field in Thennamanadu village in Orathanadu region, Mr. Rajaram said farm mechanisation was gaining acceptance because of shortage of farm hands. He inspected the renovation work at the Semburan tank in Pattukkottai being undertaken at a cost of Rs. 2.4 lakh.

The official inspected PACS at Soorappallam, the Forest Department nursery at Seruvaviduthi, and a private fertilizer retail outlet at Pappanadu.

After the field visit, Mr. Rajaram reviewed the progress of welfare and development schemes being implemented in the district with the officials from various departments.

District Collector N. Subbaiyan, Joint Director of Agriculture J. Sekar, and Joint Registrar of Cooperative Societies S. Subramanian were present.

Loan, subsidy for setting up poultry units

: Government loans and subsidy have so far been provided to 140 poultry units in the backward areas of Perambalur district under the development of poultry clusters by the Animal Husbandry Department.

Announcing this at a meeting of bankers and government staff, P.Madusudan Reddy, Sub-Collector, said that a sum of Rs. 8.25 lakh is required for establishing a poultry unit of 5,000 chicken. Of this, the government's subsidy component is Rs.2,06,250, and that of National Bank for Agriculture and Rural Development is Rs. 4,12,500. These subsidies are given only after the poultry units are set up. The Sub-Collector gave away loans to five farmers for establishing poultry farms. Indian Overseas Bank loan to the tune of Rs.17,84,000 was distributed to P.Marudamuthu and P.Alagesan of Veepur, M.Angamuthu, M.Veeraputhiran of Ranjankudi, and Sekar of Annamangalam.

Chandrasekaran, Assistant General Manager, Thanjavur Region, Raja Rukkumanthagan, Chief Manager, P.Aruldasan, Lead District Manager, Indian Overseas Bank, participated.

Use fertilizers to the minimum, farmers told

Excessive use will spoil soil's health and make it infertile: expert
Farmers should scale down application of chemical-based fertilizers and pesticides and instead use organic manure and natural wastes to rejuvenate the soil, said agriculture officials here on Wednesday.

At a seminar on advanced techniques in paddy cultivation, they said that with a view to helping the farmers, a Daincha seed farm, a green manure producing crop, had been raised on 40 hectares to produce 20 tonnes of seeds for distribution to paddy farmers.

Joint Director of Agriculture P. Sampath Kumar said fertilizers were necessary for crops. But plants as well as the land would not respond to excess application of fertilizers. The excess fertilizer would spoil the soil's health and make it infertile. Soil testing alone would determine the quantum of fertilizer required for a land. A change in the colour of the leaf was not a symptom of shortage of fertilizer. It could be deficiency of micro-nutrients.

Tamil Nadu was second largest user of pesticides and fertilizers. On Kodaikanal hills, farmers used to give eight to 10 sprays for beans crop. Such an act would poison vegetables and affect the health of the people ultimately, he pointed out.

The government had set up the Daincha seed farm so that farmers could raise their crops in 30 days and do in-situ ploughing before raising paddy. Such a measure would meet nitrogen needs and reduce urea use, he added.

FACT Senior Zonal Manager P. Subramanian said they had had sold 2,500 tonnes of fertilizers in October. Fertilizers formed the major input costs for farmers. Minimising its use would bring down the production cost, he added.

Solar option entails attractive subsidy for farmers

Instead of waiting endlessly for power connection, K. Thirumoorthy, a progressive farmer of A. Perumapalayam, has embraced the solar option entailing attractive subsidy to irrigate his 4.5 acre field where he raises vembu trees.

With only 20 per cent contribution, plus tax, amounting to a little over Rs. 95,000 for the nearly Rs. 4 lakh project, Thirumoorthy is able to heave a huge sigh of relief. Under the guidance of the Agricultural Engineering Department, Thirumoorthy has availed himself of 50 per cent subsidy provided under National Agriculture Development Programme, and 30 per cent routed through Ministry of New and Renewable Energy.

The five HP solar Photovoltaic pumping system is able to wet the growing trees in the entire length and breadth of the 4.5 acres through drip irrigation. And, for installing the drip-irrigation system, Thirumoorthy had already benefited from substantial subsidy benefit under another government scheme.

The pump was functioning with nearly 52 per cent efficiency, Agriculture Department officials explained to District Collector S. Prabakaran during an inspection on Wednesday. The Agriculture, Agriculture Engineering, and Horticulture Departments are mid-way through installing 168 solar pumps - 69 in Erode Division and 99 in Gobi Division - across the district.

“Initially, the sanction was made only for 50 solar pump sets. The numbers were increased in view of the demand,” said M. Selvaraj, Joint Director of Agriculture.

The panels generate enough energy to power the pump for 8 to 12 hours every day, he said.

According to the farmer, solar energy is the best and ultimate option for farms categorised as non-service areas that are out of bounds of conventional energy transmitted through Tamil Nadu Generation and Distribution Corporation.

Agriculture department officials explained that the farmers' share of investment was quite nominal, considering the several thousands of rupees they would otherwise have to spend on operating oil engines and diesel pump sets. Most of all, they make the most of natural energy and safeguard the farms from pollution.

Avian influenza: Culling on in 3 Kerala districts

Special teams wearing protective aprons and masks began a massive culling operation in three districts on Wednesday as part of control and containment measures to prevent the spread of avian influenza virus in Kerala.

As many as 1,800 birds, most of them ducks, were culled in Kottayam district after the day-long operation by six teams, each led by a veterinary doctor. The 15 teams deployed in Alappuzha and one team in Pathanamthitta were continuing their work late into the night, according to V. Brahmanandan, Director, Animal Husbandry Department.

The birds are killed by twisting the neck to cause cervical dislocation and the carcasses burnt using wood and kerosene. At some places, the culling teams met with resistance from farmers incensed over the loss of the birds which constitute their livelihood. A quarantine officer from the Union Department of Animal Husbandry, Dairying and Fisheries (DADF) is scheduled to arrive here on Thursday to oversee the control measures adopted by the State.

The officer is expected to visit the affected areas after holding discussions with State department officials here.

Two scientists from the department who are already in the State visited the panchayats in Kottayam and Alappuzha where mass mortality of ducks occurred over the last few days.

Meanwhile, the death of ducks in some parts of Ernakulam district on Wednesday sparked fresh fears about the spread of the virus.

Dr. Brahmanandan said samples of the dead birds had been sent for analysis. He said bio-security measures had been tightened at poultry farms.

Kepeco imposes curbs

The Kerala State Poultry Development Corporation (Kepeco) has strengthened bio-safety measures at its farms at Kudappanakunnu in Thiruvananthapuram, Kottiyam in Kollam, and Mala in Thrissur district. Kepeco Managing Director Noushad Ali told *The Hindu* that all employees and visitors to the farms would be thoroughly screened before entry. The regulations would be applicable to the Corporation's integrated farms also.

Krishik Samaj wants horticulture college to be set up in Kalaburagi

The Kalaburagi unit of the Krishik Samaj has demanded that the State government establish a horticulture college in Kalaburagi district to provide new avenues for increasing area under horticulture cultivation.

President of the samaj Siddaramappa Patil Dangapur told presspersons here on Wednesday that despite the efforts and a favourable climate and available land for cultivating horticulture crop, just over 23,400 hectares have been utilised in the district.

Mr. Dangapur said that the current crop insurance scheme was not beneficial to the farmers and the State Cabinet, meeting in Kalaburagi on Friday, should take a decision to urge the Union government to replace the existing insurance scheme with a scientifically-prepared insurance scheme.

It should benefit the farmers and compensated those who had lost their crop due to various reasons. He said that a mechanism should also come in force to ensure immediate compensation to farmers who lost their crop due to natural calamities.

Mr. Dangapur wanted the government to fix Rs. 6,500 per quintal as the procurement price of red gram taking into account the increasing cost of cultivation and labour cost.

Mr. Dangapur said that the existing Agriculture Research Station of the the University of Agricultural Sciences, Raichur should be upgraded as a centre for excellence in research and development activities of the pulses.

'Current crop insurance scheme should be replaced'

A fair to boost organic farming

Aimed at boosting organic farming, Green Veg, a city-based collective of farming enthusiasts, is organising an agricultural fair at the Jubilee Hall in the city from December 3 to 6.

Organised in collaboration with different government departments, the four-day fair will also form part of the organisation's observance of International Year of Family Farming. "Along with the fair, we have also envisaged a series of programmes to attract

youngsters to organic farming and farm-related activities,” said V. Sidhique, secretary of the collective.

The fair with the theme ‘Preserve the old, but know the new’ will have separate sections for agricultural produce and planting materials. Organic Farming, Honey Fest and Dairy Fest will be some of the sub-sections of the fair. Besides a wide variety of value-added agricultural products, the fair will showcase new technologies and tools to be used for converting farming as a profitable enterprise in the changing labour scenario, Mr. Sidhique said.

According to him, stalls will also be allowed for those who plan to display their unique products with geographical indication (GI) tag. The fair with different farm seminars and interaction programmes planned as part of it will also be a venue for aspiring farmers and potential investors to come together and understand the possibilities of the field.

As part of the fair, an award for the best backyard vegetable garden in the city has been instituted by the organisers. A variety of competitions related to the field of farming including in folk wisdom, Njattupattu, Koithupattu, painting and quiz for school students have also been arranged.

For details about the fair and registration, call 9947991428.

Four-day fair begins on December 3

Seeds farms inspected

C. Ezhilarasu, Assistant Director of Seed Certification, inspected the government state seed farms set up at Pudurpalayam near Pullampadi to fulfil the demands of foundation seed for the entire seed multiplication programme in this district.

During this samba season, a total of seven paddy varieties including CO (R) 50, improved White Ponni, Samba Mahsuri, CO 43, ASD 19, ADT 39 and ADT (R) 49 have been cultivated on 45 acres at this farm. M. Suresh Kumar, Seed Certification Officer, assessed the standard of seeds and its quality.

They advised R. Shobana, Agricultural Officer (Farm Management) to ensure quality in seed production.

KCR seeks support for poultry industry

Budgetary allocation to the poultry industry increased to Rs.220 crore



EAT HEALTHY:Poultry workers dressed as chicks and hens lend a dash of colour at the 8th edition of the Poultry India show-2014 that opened in Hyderabad on Wednesday.- PHOTO: NAGARA GOPAL

Poultry India 2014, the eighth annual edition of an event that serves as a forum for stakeholders to discuss opportunities and challenges, got under way with Telangana Chief Minister K. Chandrasekhar Rao urging the Centre to take measures to support the industry.

Inaugurating the three-day programme at the Hitex exhibition complex here on Wednesday, Mr. Rao asked the Centre to take steps against permitting the import of chicken legs. India, on the contrary, he said, could export chicken legs if need be.

Any move to allow import will have a crippling effect on the industry, he said, pointing out that Telangana was the leader in the poultry industry in terms of production. Assuring his government's support to the poultry industry and highlighting the advantages of coming to the State, the Chief Minister invited investments.

The State government, he said, has increased budgetary allocation to the poultry industry from Rs.90 crore last year to Rs.220 crore. "We are also giving power subsidy to the sector," he added. Telangana has also agreed to consider exempting poultry

equipment from VAT. “We have given the sector the status of agriculture. We appeal to the Centre to extend a similar gesture,” Mr. Rao said. Hard-selling the State as “most suitable” for the poultry industry, the Chief Minister said under the ICDS scheme, the State government had enhanced procurement from 3 crore eggs a year to 5 crore. It was also considering a suggestion to increase the weekly supply of eggs to government hostels.

KAU develops new model of coconut tree climbing machine



A modified version of the coconut tree climbing machine developed by the research wing of Agricultural Research Station of the Kerala Agricultural University.– Photo: By Special Arrangement

The Research and Development wing of the Agricultural Research Station (ARS) of the Kerala Agricultural University (KAU) has developed a coconut tree climbing machine on which the user can sit and operate.

Tiller for coconut fields

The station has also developed a tiller for coconut fields. “Having developed and popularised machinery for complete mechanisation of paddy farming in various types of fields, including Pokkali, the KAU now focuses on coconut farming and homestead farming for which a mechanisation package was hitherto unavailable,” said KAU Vice Chancellor P. Rajendran.

He said that the initiatives should boost coconut farming in the State.

Cheaper machine

ARS head U. Jaikumaran said that the new climbing machine was an improvement on the earlier version of Kera Suraksha Coconut Climber made of stainless steel. It is lighter and cheaper.

“The new machine is fastened to the palm using flexible steel rope. In the previous version, a curved stainless rod was used. The fastening can be adjusted, even while operating the machine, according to the girth of the palm. The machine costs Rs. 3,000. The earlier model cost Rs. 8,500. We plan to test it through 14 Model Agro Service Centres in 14 districts,” he added.

The tiller can create basins in coconut fields. A basin of 1.8 m radius can be created around the tree in 10 minutes with two/ three rotations. It consumes 1.5 litres of diesel per hour.

Remote control

The ARS is also working on developing a remote control for the tiller.

Training programme on livestock, poultry management



The programme was held in a farm at Seithunganallur in Tuticorin district.

A five-day State-level training programme on 'Advances in livestock and poultry management towards sustainable income generation' was conducted by Veterinary College and Research Institute (VC and RI) here recently.

The programme was conducted in co-ordination with Agricultural Technology Management Agency (ATMA), Tirunelveli, at the Department of Veterinary and Animal Husbandry Extension Education, VC and RI, Tirunelveli, in which 10 progressive farmers from Alangulam union participated.

Faculty members from various departments of the VC & RI provided training to the farmers in scientific techniques in rearing cattle, sheep, goats and poultry to enhance profit of these enterprises. The participants were taken to a farm at Seithunganallur in Tuticorin district for a training in integrated farming practices. The beneficiaries visited cattle, goat, desi fowl and turkey units and also fodder units, where leading varieties like Co4, desmanthus and CoFS 29 are grown.

S. Prathaban, Dean, VC and RI, who presided over the valediction, elaborated on the importance of livestock in agriculture in augmenting farmers' revenue.

C. Chandrasekaran, Joint Director of Agriculture, Tirunelveli, stressed the importance of integrated farming system and explained the salient features of ATMA scheme. Training inputs and books on farming were distributed to the beneficiaries.

C. Manivanan, Professor and Head, Department of Veterinary and Animal Husbandry Extension Education, VC and RI, and S. Senthilkumar, Assistant Professor in department, addressed the farmers.

Workshop on organic policy

The Kerala Agricultural University and the State Horticulture Mission will hold a workshop on 'Implementation of organic policy in Kasaragod' here on Thursday. It will examine salient features of the policy, agro-ecological characteristics of Kasaragod district, initiatives by various agencies, intervention by public sector organisations and concerns of stakeholders.

Prisoners harvest groundnut crop

The variety called TG 37-A was developed by BARC

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

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

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

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

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

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

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

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

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

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

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

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

Adverse weather stunts growth: study

Peruvian children born around El Nino in 1997-98 grew less than normal

Children in Peru on the front line of a severe cyclical warming of the Pacific Ocean in 1997-98 suffered stunted growth, showing how extreme weather can cause lasting damage to health, a study said on Tuesday.

The study of 2,095 children born between 1991 and 2001 in villages around Tumbes in northern Peru found that those born during or just after the El Nino weather system, which caused floods, damaged crops and triggered illnesses such as malaria and diarrhoea, grew less than normal.

"The El Nino had a big effect by reducing food availability," William Checkley, one of the authors at Johns Hopkins University in the United States, told Reuters. Children aged under three, a crucial period for growth, were hardest hit.

Overall, children in areas apparently hardest hit by floods were 4 cm (1.6 inches) shorter than normal by the age of 10, he said.

Stunting has been linked with decreased mental and physical capacity in later life.

"If adverse weather events affect a significant portion of young children of a country, then they have the potential to adversely affect the future of a community as a whole," said the study by scientists in the United States, Peru and Britain, published in the journal *Climate Change Responses*.

A U.N. report this month said downpours linked with El Nino events, which typically happen every three to seven years and can disrupt weather worldwide, may intensify because of climate change. Reuters

Cane growers welcome decision to make drip irrigation mandatory



There are nearly 10 lakh sugarcane farmers in the State and about 12 lakh acres of land is under sugarcane cultivation.— photo: M.a. SRIRAM

Sugarcane cultivators in the region have welcomed the government's move to make drip irrigation mandatory for the crop but are wary of the proposed tri-partite business model involving the government, farmers and sugar factories or private agencies.

The government proposes to make drip irrigation mandatory for water-intensive crops like sugarcane in a bid to conserve both water and power. However, it is the “business model’ that has raised suspicions.

Kurubur Shanthakumar, president, Sugarcane Cultivators association, told *The Hindu* that the farmers should not be bound by any of these agreements with either the government or the sugar mills and should be free to install the drip irrigation facility from an entrepreneur of their choice.

“Let the government subsidise the installation cost to farmers on producing the receipt or deal directly with the farmers,” said Mr. Shanthakumar.

While the government’s objective is laudable, many farmers who switched over to drip irrigation last year have not received the subsidy promised to them, said the association. It claimed that more than Rs. 300 crore was pending to the farmers.

The association reiterated its demand that farmers be free to install the system without the government entering into an agreement with a third party.

The association said there were nearly 10 lakh sugarcane farmers in the State and about 12 lakh acres of land was under sugarcane cultivation.

The yield per acre is around 35 tonnes to 40 tonnes in the State, which cultivated 4.4 crore tonnes of sugarcane in the previous year. The introduction of drip irrigation is expected to enhance production significantly, which can increase farmers’ income.

Dry belt gets watershed management projects

Rs.13.14-crore project for Usilampatti, T. Kallupatti blocks

Integrated Watershed Management Project

- For **Usilampatti** and **T. Kallupatti** blocks.
- **Funded by** Union Ministry of Rural Development.
- **Madurai district has watersheds** in Usilampatti, Sedapatti, Vadipatti, Melur, Alanganallur and Kottampatti.
- **New projects** to cover **5,720** hectares in T. Kallupatti block and **5,240** ha in Usilampatti block.
- **To be implemented** over a period of five years.

There is good news for farmers in and around Usilampatti and T. Kallupatti blocks in the district.

Two integrated watershed management projects (IWMP) are coming up in the two blocks, which are considered arid regions, covering 10,900 hectares.

The Union Ministry of Rural Development has earmarked Rs. 13.14 crore for the project, which would be carried out over a period of five years, starting from 2014.

Already, the district has seven watersheds under the IWMP in Usilampatti, Sedapatti, Kottampatti, Melur, Alanganallur and Vadipatti.

During a recent review, Central government officials were satisfied with the functioning of these IWMPs and Madurai district bagged two more projects, said IWMP Project Manager S. Kanagaraj.

Explaining the implementation of the project, he said that in the first year a team would conduct interactive meetings with villagers. Termed as participatory rural approval, awareness campaigns would be held in those villages. "For the last 30 days, we have been conducting familiarisation camps in Modagam in T. Kallupatti block," he added.

In the next phase, a detailed project report would be prepared and self-help-groups formed simultaneously. After this, the process of identification of persons with land, landless labourers and those having livestock would be taken up. "The objective of the IWMP is to increase water-holding capacity in dry belts, which helps in increasing ground water potential," said Project Officer Jayasingh Gnanadurai.

The team would look into land reclamation and look for plantation, which would increase the crop prospects. Interested farmers would be given support extensively and the Union government offered a subsidy of over 50 per cent, Assistant Engineer T. Baskaran said.

Speaking about the utilisation of funds, Extension Officer T. Valarmathi said that for landless labourers, implements would be given while local artisans would get support from revolving fund.

Wherever feasible, the team would form federations of self-help groups and each unit would get up to Rs. 2 lakh with which it can set up livestock or dairy farm. Even entrepreneurial training would be imparted for aspirants.

Collector L. Subramanian, who is the chairman of the IWMP, said that the ultimate objective of the project was to increase the water-holding capacity.

Leaf blight disease hits paddy growth



Agriculture scientists looking at the paddy affected by bacterial leaf blight at a farm near Pudukottai on Wednesday.

The incidence of bacterial leaf blight has been a major attack on paddy fields in parts of the district following a fall in temperature, higher level in relative humidity and formation of mist.

The problem is noticed in various fields in Tiruvarangulam, Karambakudi, Annavasal, Tirumayam, Aranthangi and Pudukottai and Manamelkudi blocks where about 55,000 hectares has been covered during the current 'samba' season.

Luckily, it is in the initial phase and can be controlled through early intervention, says R.P. Gnanamalar, Professor and Head, Krishi Vigyan Kendra, which has taken up a study on the paddy affected by the leaf blight.

Explaining the symptoms of disease, she said that it first discoloured the leaf. Small, water-soaked spots on the border appear at the tip of the leaf only to spread downwards and middle part of the leaf, leaving a small green patch at its centre. Infection in the seedling leads to its death within a couple of weeks after transplanting the nursery.

The yellowing of young leaves is another symptom. Fall in temperature, high level in relative humidity and mist caused the disease.

Remedial measures

S. Mathiazhagan, Assistant Professor of Plant Pathology, said that the seedlings should be carefully handled while transplanting them. Weeds should be fully cleared as they act as a breeding ground for the bacteria. Apart from fields, weeds on the bunds should be cleared. Excess nitrogen or poor supply of potassium and phosphorous was another factor for the incidence of the disease.

He said that spraying of about 40 kg of filtered cow dung extract an acre would go a long way in controlling diseases.

Spraying of a mix of streptomycin sulphate, tetracycline copper oxychloride (500 grams an acre) would effectively control the problem. Farmers in need of any assistance could contact him by dialling 9944520544

Chicken farmers in the soup as flu scare waters down price

: Bad news travels fast. And poultry traders know it better.

Poultry meat price fell between 10 and 20 per cent in the Ernakulam market on Wednesday as news of bird flu in some districts spread. Farmers have blamed what they called an “overreaction” to the developments by the public.

A trader in Kochi said bird meat was selling for just over Rs. 80 a kg in the retail market and that the wholesalers had not lowered bird price. But farmers fear that the situation might get grimmer with media coverage of culling of ducks in Alappuzha and Kottayam districts.

A poultry farmer here said Ernakulam had one of the largest concentrations of broiler birds among districts in Kerala and received about 25 lakh one-day-old chics per week. The district is also home to about two crore broiler birds.

Perumbavoor, Moovattupuzha, Piravom, Ayavana, Koovappady etc in the district have big concentration of poultry farms. The dominant system in the State is that big poultry business houses outside the State provide chics and feed to farmers. The farmers

are paid between Rs. five and six a kg of meat when the companies buy back the birds, said a farmer here.

It has developed well so that big meat birds are no longer imported into the State in large quantities and Kerala now produces between 60 and 70 per cent of its poultry meat requirement.

The State receives around one crore chics per week, said Kerala Poultry Development Corporation sources on Wednesday. Internal production of chics range between 10 and 15 lakh per month, they said. Per capita consumption of poultry meat in Kerala is 10.8 kg per year. Kerala also imports about a crore of eggs per day and local production is in the range of 30 and 40 lakh per day.

Sericulture awaits big boost in Chittoor

Administration to offer facilities to farmers under one roof

BETTER DAYS ARE HERE

- District Collector has sought a report from the sericulture wing on the feasibility of waiving property tax for rearing sheds
- The combined efforts of farmers and officials are expected to transform a stagnant rural economy into an industrial one
- Palamaner area contributes around **800** metric tonnes of silk annually, and govt. is considering strengthening units there
- The rural silk industry still depends on Karnataka for the final output, resulting in huge expenditure at the domestic front

HOW PALAMANER GETS A BOOST?

- More subsidies on buildings and rearing sheds
- Involving youth in sericulture
- Conducting awareness campaigns for entrepreneurs

A malbari plantation near V. Kota in Chittoor district.

Sericulture in Chittoor district is expected to get a boost, with the district administration deciding to provide all facilities to farmers under one roof.

District Collector Siddarth Jain has directed the sericulture wing to submit a report by December 15 on the feasibility of either the full waiver of property tax or bringing it down to the maximum level for silkworm rearing sheds in the district, with Madanapalle, Palamaner and Kuppam forming the core belt.

Need for collective efforts

The collective efforts of farmers and officials are expected to transform a stagnant rural economy into a dynamic and buoyant industrial economy.

Officials brought to the notice of the Collector that municipalities were imposing property tax on rearing sheds up to Rs. 5,000 a unit, which farmers have opposed. The Palamaner area contributes more than 800 metric tonnes of silk annually, thanks to the presence of over a hundred rearing sheds.

Similarly, Kuppam and Madanapalle zones, too, make substantial contributions to silk production. In spite of steps taken by the government to bolster silk production, the rural industry still depends on Karnataka for the final output, resulting in huge expenditure at the domestic front.

Reeling units

Considering the fact that 70 per cent of malbari plantation in the State is spread across Rayalaseema, with Chittoor contributing a significant share, the district administration aims at strengthening the existing reeling units at Palamaner, with more subsidies on buildings and rearing sheds, involving youth in the industry, apart from conducting periodical awareness campaigns for the benefit of entrepreneurs

Sufficient water supply for rabi appears bleak

Farmers getting sufficient water supply during Rabi season appears to be bleak as there is a considerable deficit in the supply. Irrigation Minister Devineni Umamaheswara Rao said there was a deficit of 54 tmcft against the total requirement of 197 tmcft in both Telangana and AP. The water available at present at Nagarjunasagar project was 122 tmcft and 3.42 tmcft at Srisailem. The shortfall could be seen from the fact that Krishna district alone would require 42 tmcft for the season. However, the government

was taking measures to address the farmers' issues. A cabinet committee would be formed and district level teams of irrigation officials would be constituted. The teams would approach farmers to get first hand information about the requirement. "Based on the farmers' feedback, necessary measures will be initiated," he said. Later, during the District Review meeting, he said many irrigation lands were encroached. He instructed authorities to initiate stringent action against those involved in such activities.



Dessert of the day: How to make the perfect Malai Kulfi



Malai Kulfi (Source: nishamadhulika.com)

It's very difficult to say no to this sweet and creamy delight, even in winters. The mouth-watering Malai Kulfi can be easily prepared at home.

Malai Kulfi

Ingredients

- 1 Ltr Full cream milk
- 1/2 cup (80-90 grams) powdered sugar
- 8-10 Cashew nuts
- 4 Green Cardamom
- 10-12 Pistachios

Method

- * Take milk in a utensil and boil.



Take milk in a utensil and boil. (Source: nishamadhulika.com)

- * Cut cashews in small pieces and pistachios in thin pieces. Peel and make coarse powder of green cardamom.
- * Stir milk after every 1-2 minute and cook until it gets thick and half in quantity. Now add chopped cashews and pistachios in milk. Allow the milk to thicken. Also add powdered sugar and cardamom powder in the milk and mix. Boil milk for another 1-2 minute.
- * Take off milk from flame and allow it to cool.



When milk comes to room temperature, store it in a air tight container and place it in deep freezer for 6-8 hours. (Source: nishamadhulika.com)

* When milk comes to room temperature, store it in a air tight container and place it in deep freezer for 6-8 hours.

* When kulfi gets set, take it out from freezer, cut into pieces and serve immediately within 10 minutes.



When kulfi gets set, take it out from freezer, cut into pieces and serve immediately within 10 minutes. (Source: nishamadhulika.com)

INDIAN CITIES

INTERNATIONAL CITIES

Chennai - INDIA

Today's Weather



Partly Cloudy

Rain: 0

Humidity: 70

Wind: normal

Tomorrow's Forecast

Thursday, Nov 27



Max 29° | Min 23° Cloudy

Sunrise: 06:13

Sunset: 05:39

Barometer: 1011

Friday, Nov 28

Max 30° | Min 24°

Extended Forecast for a week

Saturday
Nov 29



29° | 24°
Cloudy

Sunday
Nov 30



33° | 27°
Cloudy

Monday
Dec 1



34° | 27°
Partly Cloudy

Tuesday
Dec 2



34° | 27°
Partly Cloudy

Wednesday
Dec 3

34° | 27°
Partly Cloudy

6 common health concerns that men ignore

With women known to suffer serious health issues these days, men's health concerns have taken a backseat. However, this year's International Men's Day brings the spotlight back on the health of this gender. Among the many health issues plaguing them, here are the six most common ones that men should not ignore.

Chest pain: Most men associate chest pain with a heart attack, but there are several other health conditions that share this symptom. A lung condition such as pneumonia, a pulmonary embolism, or asthma are also associated with constant chest pain. "With increasing stress levels and unhealthy food habits, gastrointestinal health condition such as acid reflux or stomach ulcer are common among men. These conditions cause severe chest pain and should not be ignored," says Dr. Hemant Mittal, consultant psychiatrist, counsellor and motivational speaker.

Breathlessness: Falling short of breath is a common complaint among men, and it indicates serious health concerns related to cardiovascular system. It might also indicate lung diseases, such as lung cancer, chronic obstructive pulmonary disease (COPD), chronic bronchitis, emphysema, asthma, or pulmonary hypertension. In fact, breathlessness is also sign of anemia, which is common in men these days.

Fatigue: Men experience extreme tiredness and an ongoing lack of energy on a regular basis. In some cases it goes even further to include lack of motivation, negativity and lack of sleep. "Fatigue can also be a symptom of a more serious physical or psychological health condition. Cancer, congestive heart failure, diabetes, arthritis, infections, and kidney or liver disease are a few serious ailments that are linked to fatigue, which should not be ignored. It

can also indicate the malfunctioning of the thyroid gland," says Dr. Pravin Dehana, general physician.

Depression: Statistics indicate that men are more prone to depression, the reason being men undergo a lot of stress — from a lot of expectations to fulfill for family and society. This leads to restlessness, stress and depression as they are not vocal about their problems. "Depression results from over activity of the brain trying to get neurochemicals (like serotonin, norepinephrine, dopamine) to function from all over the body. The brain then goes to a shutdown mode. While, in depression, the brain stops a lot of activity to preserve these chemicals, which leads to anger and suicidal thoughts," says Dr. Hemant Mittal.

Memory loss: It's not as simple as forgetting where you kept the cheque book or those important papers. Forgetfulness is more common in men than women. "Forgetfulness can be caused by age to some extent. However, it can also indicate several other serious issues like Alzheimer's disease, brain tumours, brain damage or inflammation, etc. Vitamin deficiencies also cause memory loss, which is not is not a good sign," adds Dr. Mittal.

Urinary crisis: Just like women, men also undergo genital issues which are largely ignored. Bloody urine or trouble in urinating among men is of serious concern, as it can be due to kidney and liver disorders. Bloody urine can be a symptom for prostate cancer and kidney stone, inflammation of bladder. "If ignored, this can lead to further complications among them. Enlarged prostate or prostate cancer is very common among men, but men tend to ignore the early signs, which aggravate the problem," says Dr. Anand Biswas, DNB Urology.

What is the theme of international Men's Day 2014? Celebrated in over 80 countries across the globe, International Men's Day (Nov 19) honours the contribution men make to the society — as sons, brothers, husbands and fathers. Although the prime focus of the day being celebrated this year includes men's health, gender equality and highlighting positive male role models.

Trans fats bad for brain too

Trans fats are bad not only for your waistline but also for your brain, shows a study.

Every gram of dietary trans fatty acids consumed in a day was linked with 0.76 fewer words recalled, which means 11 fewer words recalled with the highest trans fat intake compared to those who consumed least trans fats.

"Trans fats were most strongly linked to worse memory, in young and middle-aged men, during their working and career-building years," said Beatrice A. Golomb, professor of medicine at University of California, San Diego (UCSD).

For the study, presented at the American Heart Association (AHA) 2014 Scientific Sessions recently, researchers analysed the cross-sectional relation between trans fat intake and word memory test in 1018 adults, who had no previous history of coronary artery disease.

"From a health standpoint, trans fat consumption has been linked to higher body weight, more aggression and heart disease," said Golomb.

Foods have different effects on oxidative stress and cell energy and the trans fats do contribute to oxidative stress, a process that damages cells, researchers found.

Your sugar and your kidneys – What's the connection?

Diabetes can damage the kidneys and cause them to fail. Failing kidneys lose their ability to filter out waste products, resulting in kidney disease.

How Does Diabetes Cause Kidney Disease?

When our bodies digest the protein we eat, the process creates waste products. In the kidneys, millions of tiny blood vessels (capillaries) with even tinier holes in them act as filters. As blood flows through the blood vessels, small molecules such as waste products squeeze through the holes. These waste products become part of the urine. Useful substances, such as protein and red blood cells, are too big to pass through the holes in the filter and stay in the blood.

Diabetes can damage this system. High levels of blood sugar make the kidneys filter too much blood. All this extra work is hard on the filters. After many years, they start to leak and useful protein is lost in the urine. Having small amounts of protein in the urine is called microalbuminuria.

When kidney disease is diagnosed early, several treatments may keep kidney disease from getting worse. Having larger amounts of protein in the urine is called macroalbuminuria. When kidney disease is caught later during macroalbuminuria, end-stage renal disease, or ESRD, usually follows.

In time, the stress of overwork causes the kidneys to lose their filtering ability. Waste products then start to build up in the blood. Finally, the kidneys fail. This failure, ESRD, is very serious. A person with ESRD needs to have a kidney transplant or to have the blood filtered by machine (dialysis).

All people with diabetes have a risk of developing diabetic kidney disease. There are certain risk factors that increase the risk of developing this condition. These are:

A poor control of your blood sugar (glucose) levels.

The length of time you have had diabetes.

The more overweight you become.

Having high blood pressure- The higher your blood pressure, the greater your risk.

The better a person keeps diabetes and blood pressure under control, the lower the chance of getting kidney disease. Hence, it is vital to see a doctor regularly. The doctor can check blood pressure, urine (for protein), blood (for waste products), and organs for other complications of diabetes.

Your sugar and your eyes: Understand the complications

High blood sugar increases the risk of eye problems from diabetes. In fact, diabetes is the leading cause of blindness in adults age 20 to 74.

High blood sugar in diabetes causes the lens of the eye to swell, which changes your ability to see. To correct this kind of eye problem, you need to get your blood sugar back into the target range. It may take as long as three months after your blood sugar

is well controlled for your vision to fully get back to normal.

Blurred vision can also be a symptom of a more serious eye problem with diabetes.

Diabetes can affect your eye in a number of ways:

The most serious eye condition associated with diabetes involves the network of blood vessels supplying the retina. This condition is called diabetic retinopathy, if not treated in time proliferative retinopathy may lead to blindness.

The changes in blood sugar levels resulting from diabetes can affect the lens inside your eye, especially when diabetes is uncontrolled. This can result in blurring of vision which comes and goes over the day, depending on your blood sugar levels.

A longer-term effect of diabetes is that the lens of your eye can go cloudy, this is called a cataract.

Not everyone who has diabetes develops an eye complication. Of those that do, many people have a very mild form of retinopathy which may never progress to a sight-threatening condition.

You can reduce your risk of developing eye problems, importantly retinopathy, or help to stop it from getting worse by:

Controlling your blood sugar levels

Tightly controlling your blood pressure

Controlling your cholesterol levels

Keeping fit, maintaining a healthy weight and giving up smoking

Regular retinal screening, at least once a year, is a must for all diabetic patients.

Early detection and treatment prevents sight loss.

Most of the eye complications in diabetes can be treated, but it is vital that they are diagnosed early. They can only be detected by a

detailed examination of your eye carried out at a specialist eye centre. As you may not have any symptoms related to eyes, an annual retinal screening is essential. Research shows that if eye problems are identified early, through retinal screening, and treated appropriately, blindness can be prevented in 90 per cent of those at risk.

Stop sitting for long hours, it's not healthy

Do you spend long hours at work just seated at your desk and then go home and park yourself on the sofa?

Watch out! Sitting has been regarded akin to something as harmful as smoking and having hardly any physical activity is said to be a health hazard. It can lead to painful neck and back aches, decreased insulin sensitivity and increase the risk of stroke and heart attack.

What the study said: As per reports, a study revealed that lessening the sitting hours could help people in protecting the aging of DNA and even possibly extend their lifespan. It was found that reducing sedentary activity appeared to lengthen telomeres, which sit on the end of chromosomes, the DNA storage units in each cell and longevity and a healthy lifestyle have been linked to telomere length.

What can help: Lunch hour workouts are in big demand abroad where employees squeeze in some time in their lunch break to do light exercises. From office yoga, do doing half an hour on a cross trainer and balancing on an exercise ball, there's a lot you can do. If nothing else, take a walk around the block or try the Stairwell Climb, where ascend and descend the stairs a few times (if you have knee troubles, avoid this).

Consuming yoghurt daily could lower diabetes risk

Including yogurt in your daily diet could lower your risk of developing Type 2 diabetes, a study says.

Consumption of one 28g serving of yogurt per day is associated with an 18 percent lower risk of Type 2 diabetes, the findings showed.

"We found that higher intake of yogurt is associated with a reduced risk of Type 2 diabetes, whereas other dairy foods and consumption of total dairy did not show this association," said senior researcher of the study Frank Hu from the Harvard School of Public Health in the US.

The findings suggest that yogurt can be incorporated into a healthy dietary pattern, Hu added.

Type 2 diabetes is a chronic condition that occurs when the body does not produce enough insulin, or the body's cells develop resistance to insulin.

It has been shown that probiotic bacteria found in yoghurt improve fat profiles and antioxidant status in people with Type 2 diabetes and the researchers suggest this could have a risk-lowering effect in developing the condition.

The researchers pooled the results of three prospective cohort studies that followed the medical history and lifestyle habits of health professionals. The study involved a total of 289,900 participants.

Within the three cohorts, 15,156 cases of Type 2 diabetes were identified during the follow-up period.

When adjusting for chronic disease risk factors such as age and BMI (body mass index) as well as dietary factors, it was found that high consumption of yogurt was associated with a lower risk of developing Type 2 diabetes.

The findings were confirmed when the authors conducted a meta-analysis, incorporating their results and other published studies up to March 2013.

The study appeared in the journal *BMC Medicine*.

Why you must include spinach in your diet



Spinach has a number of health benefits and an excellent source of iron, vitamin A, C and K. So, you must include spinach in your diet

Winter is the best time to enjoy your share of spinach. And there are so many ways to add spinach in your diet. Apart from making spinach parathas, you can also add spinach while making dal and spinach rice also tastes delicious. You can also include spinach while cooking pasta, soups. You can also add spinach while cooking other vegetable dishes like potato, pumpkin or brinjal. Add spinach to your sandwich, wrap and enjoy your share of healthy food also. On a lazy winter evening, when you are not in a mood to

cook an elaborate meal, sautee spinach in olive oil with garlic and season with freshly ground black pepper. This freshly made dish of sauteed spinach goes well with cheese sandwich. Spinach can also be used to make excellent dips.

There are a number of reasons why you must include spinach in your diet. Spinach is an excellent source of iron. In addition to that, spinach is also rich in vitamin K, vitamin A, vitamin C and folic acid as well as a good source of manganese, magnesium and vitamin B2. Vitamin A is also necessary for the growth of all bodily tissues, including skin and hair. Spinach and other leafy greens high in vitamin C are necessary for the building and maintenance of collagen, which provides structure to skin and hair. So, if you want to have shining healthy skin and hair, then have your share of spinach.

Vitamin K is essential for maintaining strong bone health. Low intakes of vitamin K have been associated with a higher risk for bone fracture. So, make sure that you include spinach in your diet. Spinach is high in fiber which helps to prevent constipation and promote a healthy digestive tract.

9 foods you think are healthy

How true are their claims? 9 health foods that are, actually diet-sabotaging fare

So you picked up a packet of oat biscuits because the tertrapack claims it's 'fat free', 'zero-cholesterol' and 'no transfat'.

Well, watch out, because these sort of packaged foods contain other ingredients that may harm your health twice over. Have you ever wondered about the claims healthily cooked or natural variety that scream 'health food' from counters and menus may be making?

Advertising and misinformation surround what we eat, making every food appear healthy--even if the reverse is true. Here are nine diet-offenders hiding behind the facade of 'healthy' food.

Bran muffins

Treat these as a calorie cake, not a healthy coffee companion. A typical bran muffin has more than 400 calories and up to 15 grams of fat, with most of the calories coming from sugar, butter and refined flour. If you do crave one, make a low-fat version at home with whole-wheat flour and cane sugar.

Sushi

Sushi rolls can be deceiving because they're packed tightly and look small, but some are calorie bombs just waiting to explode up your waistline. A single roll can pack more than 500 calories. Avoid any roll that includes the following ingredients: tempura (which is another word for deep fried), cream cheese, shredded cheese, or spicy mayo sauce.

Dried fruits

While they are loaded with vitamins and minerals, dried fruits are also free calories on a platter. With more than 100 calories per ¼ cup serving, calories can add up quickly when you're eating dried fruit. So don't get too carried away while munching on dried dates or apricots. Stick to two-three to enjoy their health benefits. But if you truly want to steer clear of unnecessary calories, try fresh fruits instead. You'll be able to eat a satisfying serving for fewer calories and feel fuller with fluids.

Mutton cutlets

Many people think that ordering a mutton cutlet sandwiched between two buns is kinder to the waist than a beef burger. Don't be fooled. The average restaurant-style mutton burger, for instance, has more than 600 calories and 30 grams of fat - and

that's without the bun or toppings. Don't worry about the type of meat you choose with your burger. Instead, limit your portion, or go open-faced.

Margarine

In a battle between butter and its artificial competitor, the original wins. Although both have the same amount of calories, margarine has more transfat, which simultaneously raises your bad (LDL) cholesterol and lowers good (HDL) cholesterol. It's that one ingredient dietitians say you should avoid. To limit your risk of heart disease, stick to the real stuff. And choose whipped butter, which has a lower caloric density. Or better still, stick to home-made butter or ghee.

Reduced-fat peanut butter

When manufacturers take fat out of peanut butter, they replace it with sugars. As a result, reduced fat peanut butter has the same total calories as the original, but more than twice the amount of carbs. It's better to stick to the regular stuff.

You'll eat less, because the full fat version is far more filling.

Protein bars

Protein bars are vitamin and protein-infused candy bars and contain more than twice the amount of fat and carbohydrates a brownie would; not to mention chemicals and preservatives. So avoid. But if you must, then look for options that have less than 180 calories and 5 grams fat, and provide at least 5 grams of fibre.

Yoghurt

Natural yoghurt is a good source of calcium and vitamin D. But some packaged varieties have as much fat and sugar as a butter cookie. Stick to the good old dahi at home. Flavour it on your own with fruit and honey. From the counters, pick plain Greek yoghurt, which offers twice as much protein and half the amount of calories.

Fat-free salad dressing

If you're watching your blood pressure, steer clear of this stuff. In just two small tablespoons of fat-free Italian dressing, you take in up to 500mg of blood-pressure-raising sodium. That's a third of the total amount you should eat in an entire day. Instead, make your own low-salt dressing by combining balsamic vinegar, lemon juice, and flavour-packed seasoning like pepper, turmeric and mustard seeds.

Recipe: Instant jalebis



Syrup soaked fried spirals

Preparation time: 10 minutes

Cooking time: 40 minutes

Serves:4-5

Recipe ingredients:

1 cup flour

½ cup yoghurt

1 heaped teaspoon baking powder

A pinch orange food color

Clarified butter (desi ghee) or any hydrogenated fat (like Dalda or Rath) to deep fry

2 cups sugar

1 cup water

Recipe method:

Put the sugar and water to boil. Reduce the flame and simmer till you attain a one string consistency. (about 15 minutes). To check consistency, take a drop of slightly cooled syrup between index finger and thumb and press together. Lightly raise the finger. If the syrup pulls up as well to get a thread, the syrup is ready. Remove from fire.

Mix well the baking powder into the flour. Add the yoghurt, food color and mix well. Add enough water to make a thick smooth batter.

Fill the batter in a piping bag or a cheese cloth in which a hole around 4mm diameter has been made.

Heat a 1" layer of fat or ghee in a shallow flat bottomed pan. The ghee should not be too hot.

Pipe the batter in circles and cross the circle to ensure that the spiral stays together. Pipe around 4-5 jalebis at a time. Allow the sizzle to die out a little and turn the jalebis when firm. Cook on a low flame till the bubbles die out. Fry to a light golden brown.

Remove the jalebis to a moderately warm syrup and allow the jalebis to soak the syrup(approx.. 3-4 minutes).

Serve hot.

Indian cooking with an olive twist

Be it the extra virgin olive oil or the pomace, Indian recipes cooked in olive oil make for an equally delectable treat.

Using olive oil for Indian recipes makes a dish equally tasty. Plus the benefits of olive oil as an elixir for good health renders a healthy appeal to a dish.

Olive oil can be used in all the recipes like various vegetable preparation, curries and also to make dosas. Even though the olive oil is expensive as compared to other oils available in the market, its health properties makes olive oil as a must have in your kitchen.

Almost every other dish like a palak paneer, tadke wali dal, rajma, jeera rice, dum aloo, coconut rice, dosa, masala dosa, puliyogare etc can be cooked in olive oil without compromising on the taste. In fact, olive oil with its rich texture enhances the taste of a particular dish.

If you want to start cooking with olive oil, try the oil first by using it once a week. Once your system starts liking the taste, you can make olive oil part of your daily cooking regimen.

Recipe: Chicken club sandwich



Here's how you can make a yummy chicken club sandwich at home.

Ingredients

- 1/2 tablespoons olive oil
- 1 chicken fillet
- Sea salt
- Freshly ground pepper
- 2 thick slices of bread
- 1/2 of an avocado, peeled and chopped
- 1 tablespoon mayonnaise
- 1 bunch rocket
- 2 rashers bacon, cooked
- 1/2 tomato, sliced
- Juice from 1/2 lemon
- Potato chips

Method

- Cook the chicken. Heat the oil in a frying pan over a high heat. Place the chicken in the pan, season with salt and pepper and cook for 3 minutes. Turnover and cook for a further 3 minutes.
- Slice the chicken breast. When the chicken breasts are cooked, remove from the pan and cut into 1cm slices. Leave to rest.
- Make the mayonnaise. Place the avocado, lemon juice, salt, pepper and mayonnaise into the food processor and process until smooth. Place in a bowl and keep on one side.
- Spread a spoonful of avocado mayonnaise on a slice of bread, top with a handful of rocket salad, then chicken, bacon and sliced tomato.
- Finish with another spoonful of the mayonnaise and place the remaining slice of bread on top. Cut the sandwich in half and serve garnished with salad and potato chips.

Recipe: Gulab jamun

Preparation time: 20 minutes

Cooking time: 30 minutes

Makes: 16

Recipe Ingredients:

1½ cup Milk fudge (khoya)

¼ cup grated cottage cheese

¼tsp Soda bicarbonate

3tbsp Refined flour (maida)

¼tsp Green cardamom powder

2 cups Sugar

2 cups Water

Clarified butter (ghee) or refined oil to fry

Recipe Method:

Grate khoya and mash cottage cheese . Mix the two along with soda bicarbonate, refined flour, green cardamom powder and

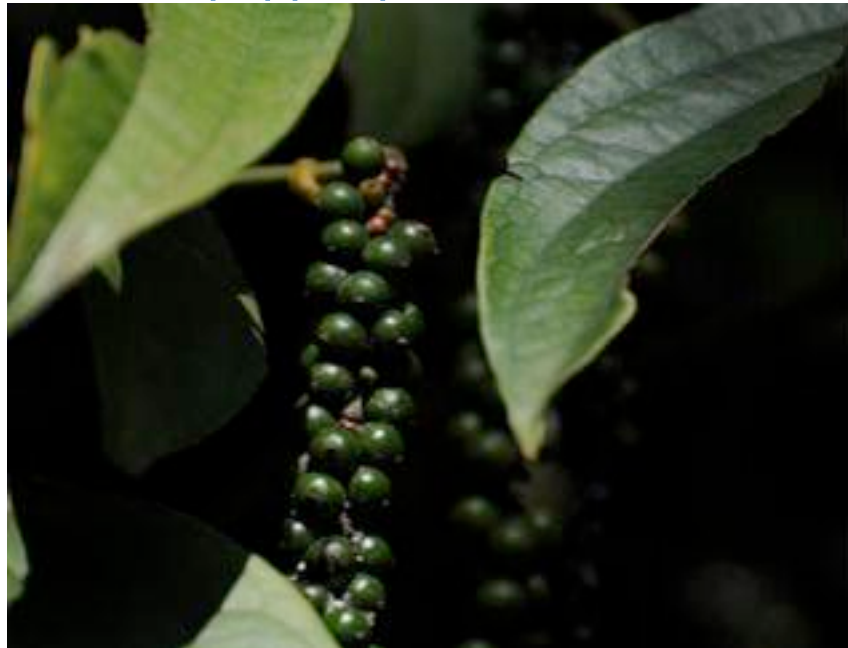
knead well together to make a soft dough. (If required, add a little water to make a soft dough). Divide into sixteen equal portions and shape into balls.

Prepare a sugar syrup with sugar and two cups of water. Clear the syrup by removing the scum, if any.

Heat ghee/oil in a pan. The oil should be enough to immerse the balls well. Add the balls and deep fry on low heat till golden brown in colour. Drain and set aside for 3-4 minutes. Soak in the hot sugar syrup for at least half an hour before serving.

THE HINDU BusinessLine

Mixed trend in pepper prices



Kochi, November 26: Pepper prices witnessed a mixed trend on Wednesday with the futures contracts on the regional commodity exchange moving up and the spot prices ruling steady on limited activities.

As the Karnataka sellers mainly from Sakleshpur and Chikamagaluru were offering pepper at Rs.690/kg delivered

anywhere in India without bill no demand is coming to the terminal market, market sources told *BusinessLine*. They said this phenomenon has slowed down upcountry demand also.

On the IPSTA platform, December and January contracts moved up by Rs. 1,000 and Rs. 800 a quintal respectively to Rs. 67,500 and Rs. 62,500. Spot prices remained unchanged at Rs. 69,800 (ungarbled) and Rs. 72,800 (garbled).

Export prices were steady at around \$11,400 a tonne.

Keventer Agro ropes in 500 farmers to plant new banana variety

Kolkata, November 26: Keventer Agro Ltd has linked up with 500 farmers in West Bengal for Grand Nine variety of tissue-cultured banana cultivation.

The link-up is the outcome of a CII-USAID [Confederation of Indian Industry-US Agency for International Development] project where farmers of five blocks of Nadia district were persuaded to cultivate the banana variety. Keventer, which has a fruits trading division, will buy the the entire production.

Sunil Kajaria, President – Strategy of Keventer, told *BusinessLine* that the company was ready to procure 5,000 tonnes of the banana variety in the next nine months at market rates. Under the project, 2,000 subsidised saplings of this pest- and disease-resistant variety will be handed over to farmers.

Kajaria said this variety results in around 40 per cent higher income for the farmers compared to the traditional Robusta. The project saw introduction of the variety – also known as G9 – in Nadia district of the State where jute cultivators were looking for a changeover for better farm earnings. The G9 banana variety has three consistent crop cycles in two years compared with once-a-year of the Robusta variety, common in the State. Though the current area of cultivation of the improved variety is just 100 hectares, it can go up to some 6,000 hectares over the next few seasons. Another 2,500 farmers are likely to take up farming of the G9 variety after seeing the fruits of the project.

The Rs. 600-crore Keventer has a 36 tonnes-a-day banana-ripening unit at Barasat North 24 District some 30 km north of the city. The unit caters to the demands of the State capital only. Keventer deals in both Robusta and G9 varieties.

The West Bengal Agriculture Department is trying to wean farmers away from high-yield production approach to a higher-income approach. Market-driven agriculture is leading the State gradually towards exports in a number of food crops.

US model sees wet weather for coastal TN, peninsula this week

Thiruvananthapuram, November 26: A rain-driving Madden-Julian Oscillation (MJO) has been active over the Indian Ocean during the past few days and has been generating some impact for the Bay of Bengal as well.

The seawaters here seem to have responded in kind, tossing up a low-pressure area closer to Sri Lanka than to south-east coastal Tamil Nadu over the peninsula.

Arabian Sea-bound

India Met Department projections suggest that the 'low' may graze past south Sri Lanka and emerge into the Arabian Sea where it redevelop as a stronger weather system.

It would cut a path to west-northwest, fanning moisture along the West Coast and triggering some rain over the region.

India Met has forecast a general increase in rainfall activity over South India from the weekend. Rain or thundershowers may break out over Konkan, Goa, Madhya Maharashtra, south Gujarat, Saurashtra, coastal Karnataka and Lakshadweep.

Meanwhile, indications are that the MJO wave could move into South China Sea and progressively into the west Pacific with implications for the both the water bodies.

Weather systems

The European Centre for Medium-Range Weather Forecasts sees a procession of weather systems of varying strength moving west from the west Pacific into the South China Sea.

These are mostly cyclonic circulations/low-pressure areas except in one case where it could grow into typhoon strength and target the Philippines.

But the European Centre does not see them impacting the Bay of Bengal expect for an odd low-pressure area likely to be generated to the southeast of south Andaman Sea.

The US Climate Prediction Centre sees scope of varying rainfall for Tamil Nadu and rest of adjoining peninsula during the week ending December 1.

Western disturbance

This will largely result as the prevailing 'low' in the southwest Bay erupts over Sri Lanka and adjoining southeast tip of Tamil Nadu.

In the North, dense fog hung over Jammu and Kashmir, Assam, Meghalaya and Tripura on Wednesday morning as a warm western disturbance called in over north-east Afghanistan and adjoining Pakistan.

Shallow fog rolled out also over Punjab, Uttarakhand, east Uttar Pradesh, and Bihar. The westerly is expected to cross the international border and enter north-west India in due course.

India Met expects this will cause night temperatures to perk up by a couple of notches as associated clouds prevent available solar radiation from escaping the ground.

But night temperatures will remain below normal by three to four deg Celsius below normal for another couple of days since it will take as many days for the westerly to extend its influence there.

Are Indian castor oil exporters selling the country short?

After a subdued period of trading well below Rs. 4,000 a quintal due to inventory overhang, castor seed prices have begun to look up in the last two months, thanks to the improved market outlook. But prices have largely remained bound in the range between Rs. 4,600 and Rs. 4,700.

Reports from producing centres suggest that castor seed growers may not exactly be delighted with the current prices, yet there is a sense of relief that prices are edging up. Clearly, seed availability

is tightening as evidenced by castor seed production trends and castor oil export over the last two years. From 22 lakh tonnes (lt) in 2011-12, seed production declined to 19.6 lt the following year and then to 16.9 lt in 2013-14.

At the same time, castor oil exports have maintained a robust pace. From 4 lt in 2011-12, shipments increased to 4.3 lt the following year and then to 4.7 lt in 2013-14. In the first six months of the current fiscal, castor oil exports totalled 2.4 lt.

The market fundamentals clearly point to tightness in availability which is reflected in somewhat higher prices beneficial to farmers. However, there are lobbies opposed to rising castor seed prices and they have already raised the alarm. For instance, processors of castor seed and exporters of castor oil want to source the raw material at the lowest possible prices. However, policymakers, commodity exchanges and the market regulator have to take a broader view of the market structure and dynamics.

To be sure, India is the world's dominant producer of castor seed and exporter of castor oil, enjoying as much as 80 per cent market share. The world market has seen prices as high as \$2,800 a tonne and as low as \$1,200 in recent years.

But high prices are the exception rather than the norm. High export prices that reflect the market fundamentals and India's dominant position in the world market invariably benefits castor seed growers. Indeed, India holds a near-monopoly position; and yet obtains export prices that hardly reflect this near-monopoly. Questions are now being raised about the prices at which export deals are signed. Are Indian exporters throwing away a valuable industrial oil at low prices that in turn denies seed growers remunerative prices?

According to the Agriculture Ministry's first estimate, the crop size is 19.6 lt compared with the target of 16.5 lt. However, trade reports suggest that the crop size could be lower because of bad weather conditions. In 2013-14, the government revised the castor seed production estimate from 18.6 lt to 16.9 lt. It is expected that this year too, the estimate will be lowered to reflect market realities.

Foreign innovators eye India's agro market

Firms find it more lucrative than other developing nations



Garnering interest Farmers through a hybrid seed stall at Agro-Tech 2014 in Chandigarh Akilesh Kumar

New Delhi, November 26: Alongside industry majors at CII's 11th Agro Tech summit, which ended on Tuesday, were a number of small foreign innovators keen to tap into the Indian market which they felt afforded opportunities far greater than other developing markets.

Quantum Mechanical Technology Inc (QMTI), a firm from a Canadian delegation, was looking for Indian partners and investors to bring a novel food processing technology to India.

Perfect fit

"We offer a green technology that uses electricity that makes food last longer without destroying microbial life. It improves the taste, keeps grains healthy and saves money. It's a perfect fit for India as it would prevent spoilage which is an issue here," said Michael Drabiuk, a QMTI representative.

Primarily tested on pulses, the technology could be adapted to process between 1 tonne to 20 tonnes a day. The equipment, which costs about \$150,000 (Rs. 93 lakh), can be manufactured cheaper in India.

“I’ve worked with the Chinese before and it wasn’t the best experience. I have a team in New Delhi since the last two years and I’ve had no reason for mistrust,” he added.

Russia-India relationship

LLC Natural Resources, a Russian group, began field trials of its own organic fertiliser branded ‘WEALTH’ around India three years ago. The team has worked closely with farmers in the South and plans to test its product on tea in Assam.

“The Russia-India relationship is special; our aim isn’t to just sell the product. We partner with farmers, mainly those working in organic cultivation,” said Elena Yatsenko, Director of International Development, Natural Resources. Sapropel, formed by the decomposition of organic matter, is the main component of the fertiliser. It regenerates soil health and stimulates crop quality and yield.

Yatsenko felt with Russia looking to import high-quality food after imposing a ban on Western imports this August, there was potential for WEALTH to provide Indian farmers with an alternative destination for their produce. Bob Behari runs EnviroWay (EW), a Canadian biotechnology company that uses ‘green chemistry’ to treat municipal and industrial waste water.

He felt the lack of importance given to water in India was worse than other developing countries because of the huge population at risk.

“We grow strains of microbes which are introduced into effluent treatment plants to clean wastewater. The energy required otherwise is cut by 50 per cent which makes up the users’ cost,” said Behari. EW has its Indian office in New Delhi and has tied up with several companies including PepsiCo.

Many synergies

Some credited the new BJP-led Government and felt synergies could finally be taken forward. “We in Canada have the technology and India has the people. Indian farmers are keen and I find a commitment to move forward now. The new government has provided a new direction and it could be a banner year for India,” said Bonnie de Moissac, a Canadian Government representative from Manitoba.

DECCAN Chronicle

Organic bakes and cakes



Namratha Vippala started baking out of passion. She would study during the day and bake till dusk. So when she started her company in 2009, the name Dusk Miller was an obvious choice. Today, five years later, what started as a passion is now a full-fledged business.

Namratha is currently one of Hyderabad's favourite bakers, whether for private parties or for corporate orders. Her products, which sell like hot cakes (pun intended), include chocolate rose cookies, vanilla cupcakes and lemon cakes. "Our products are organic and we also make our own butter. And that is one of the reasons why our bakes are well known in the city," she says.

Talking about how she started the company she says, "My friends loved what I baked when I was doing my engineering course. One day, they told me to start selling cupcakes at the college canteen and that's pretty much how it all started."

"We started doing corporate orders and that's how our clientele grew," she says. From parties to orders for the festive season, one needs to place an order at least a week in advance. Namratha and

her team of five ensure that the products are as fresh as possible. “We usually bake overnight so that when the orders are picked up, the products are fresh.” A box of 12 mini cupcakes or a regular box of six from Dusk Miller costs around Rs 300 and a box of 12 cookies cost Rs 200.

Give thanks: traditional recipes prepared during Thanksgiving



Roasted stuffed turkey

Ingredients

1 large turkey

25 gm salt

25 gm crushed pepper

25 gm white pepper powder

25 gm paprika flakes

25 gm chopped celery

1 tsp oregano

1 tsp rosemary

1 tsp thyme

50 ml vinegar

25 gm mustard paste

2 tbsp Worcestershire sauce, 100 ml olive oil

Stuffing

1500 gm chicken mince
250 gm chopped chicken sausage
25 gm chopped parsley
100 gm cheddar cheese
Salt to taste
1 tbsp white pepper powder, 25 ml olive oil
200 gm croton herbs

Braising

50 ml olive oil
1 tsp oregano
1 tsp rosemary

For the roast: A few celery sticks, leeks, a pod of garlic, onions (the vegetables need to weigh 300 gm)

Garnish: Broccoli, potato wedges, French beans carrot, cranberry

Method: Clean the turkey thoroughly and drain the water. Mix all the marinade ingredients together. Apply the marinade inside and outside the turkey. Put it in the freezer overnight.

Stuffing: Mix all the stuffing ingredients together thoroughly. After stuffing the turkey use a thick needle and thread to close the open ends of the turkey.

Roasting: Take a tray large enough to hold the stuffed turkey. Make a bed of diced carrot, onion, celery, leeks, whole garlic (one pod) crushed peppercorn and a few bay leaves. Place the stuffed turkey on this bed and cover with silver foil.

Cook in a pre-heated oven at 180-200°C for at least 2-3 hours. Every half hour use a brush and baste the turkey (using the braising ingredients). After it has become golden brown take it out of the oven and let it cool. Steam all the garnishing vegetables and place the turkey on a decorative tray and garnish with the steamed vegetables, the roasted vegetables and cranberry. You can also use the turkey drip from the tray in the oven as a sauce.

Pumpkin pie recipe

Ingredients (For the sweet pastry base)

150 gm icing sugar
300 gm butter
450 gm flour
Pumpkin custard mix
600 gm cooked pumpkin puree
480 gm cooking cream
6 eggs
125 gm sugar
10 gm cornstarch
35 gm honey
3 gm cinnamon powder
2 tsp vanilla extract
Whipped cream

Method: To make pumpkin purée from scratch, cut a medium-small sugar pumpkin in half. Scrape out the insides. Line a baking tray with foil. Place the pumpkin pieces on the lined baking sheet and bake at 180°C until a fork can easily pierce them. Remove from oven, let it cool, scoop out the pulp. You can also cut the pumpkin into sections and steam in a saucepan until soft.

Cream the icing sugar and butter to a smooth paste and slowly add the flour to the above paste till it can be moulded. Refrigerate the dough for 30 minutes. Roll the dough and layer it into the pie dish and set aside. Beat eggs and sugar and slowly add the cooking cream to this with the pumpkin puree. To this add the cornstarch, honey, cinnamon powder and vanilla extract one by one and mix well.

Pour the pumpkin custard mix into the sweet pastry pie mould and bake in a preheated oven at 200°C for 15 to 20 minutes. It is done when a knife inserted in the middle comes out clean. Cool the pumpkin pie on a wire rack and garnish with whipped cream and sprinkle cinnamon powder before serving it.