THE HINDU

Tiny wasps to protect Indonesian crop

A cage for releasing parasitic wasps are set at a cassava field in Bogor, West Java, Indonesia.

They are the size of a pinhead and don't even pack a sting, but these tiny wasps are cold-blooded killers nonetheless. They work as nature's SWAT team, neutralising a pest that threatens to destroy one of the developing world's most important staple foods — cassava.

The wasps are being released in Indonesia, the latest country threatened by the mealybug. It's a chalky white insect shaped like a pill that's been making its way across Southeast Asia's fields for the past six years.

But unlike in Thailand, where infestations reached some 250,000 hectares (618,000 acres) of crops grown mostly as part of the country's huge export business, cassava in Indonesia is a vital food

source second only to rice. That makes the mealybug a serious threat to food security in Indonesia, which already has one of the region's highest child malnutrition rates.

The parasitic wasps, or *Anagyrus lopezi*, need the mealybug to survive. Females lay their eggs inside the insect and as the larvae grow, they eat the bug from the inside out, slowly killing it until there's nothing left but its mummified shell.

Scientists put 2,000 wasps into a holding cage at an affected field in Bogor, on the outskirts of Indonesia's capital, Jakarta. They will be monitored to see how well they handle local conditions as they multiply to an expected 300,000 over the next month before being released into the wild to start their relentless killing spree.

It's unclear how much damage mealybugs have already caused to Indonesia's crops, but infestations have been reported on the main cassava-growing island of Java and in parts of Sumatra, said Kris Wyckhuys, an entomologist at the Colombia-based International Center for Tropical Agriculture, which is helping to coordinate the release.

Indonesia is one of the world's top producers of cassava, planting around 1 million hectares (2.5 million acres) a year, half of which is eaten as a staple food across the sprawling archipelago of 240 million people.

Source of carbohydrates

The long, finger thin roots of the shrub-like plant are a major source of carbohydrates and provide an array of nutrients. Like the potato, cassava is a versatile starch that's an essential part of daily meals across much of the developing world. In Indonesia it is boiled, fried, made into noodles, crackers and even cakes.

Are we wired to ignore climate change?

Be remindedStrong visible protest and increased media coverage create wider engagement.Photo: Reuters

UN Climate Summit held this week discussed dangerous climatic disruption. It's a disruption that may in fact lead to the collapse of many of the world's main agricultural regions. But since it's only dull old global warming, a subject swaths of the public seem to find less interesting than watching paint dry, the politicians don't have to worry too much about being held to account.

It's in the far future?

This raises a larger question about our own psychology: why do most people understand that climate change is a major threat yet, when asked to name the greatest dangers to civilisation, still seem unable to bring it to mind? The primary reason is that our innate sense of social competition has made us acutely alert to any threat posed by external enemies. Climate change is a perfect and undetectable crime everyone contributes to but for which no one has a motive.

There is no outsider to blame. We are just living our lives: driving to school, cooling our homes, putting food on the table.

Even worse, climate change appears to contain a royal flush of other qualities that are notoriously hard for our brains to engage with: it requires immediate personal sacrifices now to avoid uncertain collective losses far in the future. Climate change really were uncertain, impossibly expensive to combat and located in the far future. It can easily seem so, if that's how you are determined to frame it. However, many economists, such as Nicholas Stern and Hank Paulson, George W Bush's former treasury secretary, see it differently. So do the 310,000 protesters who jammed 30 blocks of Manhattan shouting with heartfelt conviction that climate change is real, happening now and entirely actionable. For them the real obstacle is the oil and gas industry and the political influence.

Gaps and blind spots

And herein lies the real challenge. Climate change can be anything you want it to be. It can be here or there, in the present or the future, certain and uncertain. It seems that we see climate change as a threat only once it is poured into the mould of our familiar stories, with their heroes and villains.

For the general public there are gaps and blind spots. Most people have never discussed climate change with anyone outside their immediate family. A third cannot recall having talked about it with anyone at all. And, counter-intuitively, climate-related trauma seems to make people even more reserved. So if we are to really mobilise action on climate change it is vital that we recognise that it exists in two forms: the scientific facts, and the far more potent social facts of constructed narratives or deliberate silence. It is the latter that provide the basis on which we accept, deny or ignore the issue, reinforced by our innate need to conform to the norm within our social group.

Seen in this light, the situation is far from hopeless. Like the cycles that govern global energy and carbon systems, public attitudes are subject to positive feedback effects that can amplify small changes

and result in rapid shifts. Strong visible protest and increased media coverage can break the climate silence and create wider engagement.

Above all, though, we need to recognise that the narrative we choose will shape what happens from now on. We may continue to fall back on our need for an enemy. But the very best story would be one of common purpose, based around our shared humanity.— © Guardian Newspapers Limited, 2014

Is there any step you or your family take consciously in your everyday life to reduce global warming? How would you encourage your friends to follow suit. Share with us at school@thehindu.co.in with the subject line: Global warming. Include your name, class, school and place details.

Blossoms of creativity

Rooted to the soil(Clockwise from top) Sweet and sour ambazhams on the same plant; an Ixora coccinea (thettipoovu) tree that has been wedge grafted with different colours; a rose bush with grafted branches; (below) Sudhish Kumar and Sachin Narayana Pillai are two of the vegetative propogation enthusiasts in TechnoparkPhotos: Sudhish Kumar

Rooted to the soil(Clockwise from top) Sweet and sour ambazhams on the same plant; an Ixora coccinea (thettipoovu) tree that has been wedge grafted with different colours; a rose bush with grafted branches; (below) Sudhish Kumar and Sachin Narayana Pillai are two of the vegetative propogation enthusiasts in TechnoparkPhotos: Sudhish Kumar

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There are a growing number of techies who practise the art of vegetative propagation

Wander around techie Sudhish Kumar's extensive home garden and you're bound to come across a *nadan* rose bush that flowers in orange, pure white, red and rose. In his colleague Sachin Narayana Pillai's garden too at his native place you'll see another rose bush blooming in multiple hues. The duo, it seems, are just two among the growing numbers of agriculture, horticulture and farming enthusiasts in Technopark who have gone a step ahead and practise vegetative reproduction (or 'vegetative cloning', as they like to call it).

In case you forgot those old biology lessons, vegetative reproduction is plant propagation without seeds, wherein parts of plants such as a stem, root or a leaf cutting can be artificially rooted to a new growing medium, which will often produce a new plant with the same characteristics as the mother plant.

“It’s really an art; only it’s an art practised with plants. It’s a slow art, which takes months, if not years, to cultivate to perfection and which requires a lot of patience. And therein lies its beauty. With vegetative cloning, a larger, fuller plant can actually be produced faster, skipping its juvenile stages. For instance, if a mango tree takes seven years to mature from a seed, with vegetative cloning a new tree can be grown in half the amount of time or less and, more importantly, it will be genetically same as the parent plant. It is also the only way to propagate some species,” explains Sudhish, who along with Sachin, has been somewhat spearheading the grassroots movement on campus.

A while ago, the duo even went all the way to the Karshika Gaveshana Kendram at Sadanandapuram near Kottarakara to attend a workshop on the basic principles of vegetative reproduction. Then, recently, the duo conducted an awareness workshop on the subject in Technopark, for which over 60 farming enthusiasts turned up. “Once you understand the concepts behind vegetative cloning – grafting, budding, layering and so on – and you get the knowhow, it’s a matter of experimentation really. There are lots of tutorials and guides on the subject available online,” says Sachin.

Most of these enthusiasts seem to start their experiments on roses and hibiscus plants. It’s because they are easily accessible and have lots of varieties. Plus they can be grown comparatively quickly, and because they bloom well and moreover, look good when they bloom.

IT support professional Chanchal Jayan, another vegetative reproduction enthusiast, who does extensive farming on the terrace of his home in Eenchakkal says: “I have been experimenting on roses and hibiscus plants, particularly hibiscuses of the dense-petal variety. Now, I am trying to graft two varieties of cherry together.” Similarly, the others too have started taking on more complicated experiments. Sachin is now trying his hand at vinyl grafting of varieties of mango and jackfruit, while Sudhish is growing several varieties of citrus –

lime, lemon, orange, musambi, pomelo, wild orange a.k.a. Ganapathi naranga – on a lemon tree. “One of my most successful experiments was grafting a sweet ambazham – using a branch that a friend gifted me – with my *nadan* ambazham tree, which is more sour. The sweet one fruited after four months and now it gives fruit all time. The yields are best when the growth rates of the different plants are similar. I am also keen on grafting plants that are endemic to Kerala,” says Sudhish.

It’s really an art; only it’s an art practised with plants

Made in India, by small enterprises

The Prime Minister’s call for making India a manufacturing hub and creating jobsshould boost small and medium enterprises as well

IMPEDIMENT:Issues related to credit continue to be a concern for MSMEs. Picture shows Medari community women displaying bamboo products in Khammam, Telangana.—Photo: G.N. Rao

Prime Minister Narendra Modi’s ‘Make in India’ campaign is creating waves both in India and abroad. Given the government’s intention to boost domestic manufacturing and create new jobs, its proposal to

introduce a new policy for Micro, Small and Medium Enterprises (MSMEs) deserves a closer look. While Mr. Modi's invitation to international companies to make investments has been receiving a lot of attention, the government's close interaction with industry associations from different regions and sectors within India to discuss specific problems inhibiting domestic enterprises deserves equal consideration.

India's MSME sector has recorded more than 10 per cent growth in recent years despite the economic slowdown. MSMEs contribute nearly eight per cent to the national GDP, employing over eight crore people in nearly four crore enterprises and accounting for 45 per cent of manufactured output and 40 per cent of exports from India. Thus, the focus of the government on MSMEs at this juncture is justified given their potential for providing growth and employment.

Significant initiatives

In view of the significance of the sector, the government had announced a number of measures in its first budget. Some of the significant initiatives were setting up of Rs.10,000 crore of venture capital fund and establishing a nationwide, district-level incubation and accelerator programme for encouraging entrepreneurship. Other important budgetary announcements included establishing a network of Technology Centres; revising the definition of MSMEs for providing higher capital ceiling, friendly legal bankruptcy framework to enable easy exit, a programme to facilitate forward and backward linkages with multiple value chain of manufacturing and service delivery to be put in place, and launching the Skill India movement for youth with an emphasis on employability and entrepreneurship. A committee was also proposed to examine the financial architecture with a view to removing bottlenecks and creating new rules and structures for the sector. The government recently inaugurated a holistic, innovative and low-cost National Small Industries Corporation's online e-

commerce shopping portal for buying and selling of products produced by MSMEs.

MSMEs are mainly classified as manufacturing and service enterprises. There is a specific stipulated limit on investment in plant and machinery for each of the respective micro, small and medium segments in manufacturing with a maximum limit of Rs.10 crore, and for equipment in service enterprises with a maximum limit of Rs.5 crore. MSMEs with 94 per cent of units unregistered are highly diverse in terms of their size and the level of technology employed. The production in the sector ranges from output of grass-root village industries and auto components, to microprocessors, electronic components and electro-medical devices.

Since 1948, successive governments have been making intense efforts to encourage MSMEs but the sector continues to be under stress. The office of Development Commissioner for MSMEs was set up in 1954 and a dedicated Ministry for MSMEs in 1999. The Small Industries Development Bank of India (SIDBI), established in 1990, is the principal financial institution for promotion, financing and development of the MSMEs in addition to commercial banks, State financial corporations, and State industrial development corporations. Despite such efforts, some of the key problems faced by MSMEs continue to be related to availability of technology, infrastructure and managerial competence, and limitations posed by labour laws, taxation policy, market uncertainty, imperfect competition and the skill level of the workforce.

The problems faced by MSMEs need to be considered in a disaggregated manner for successful policy implementation as they produce very diverse products, use different inputs and operate in distinct environments. In general, there is need for tax provisions and laws that are not only labour-friendly but also entrepreneur-friendly. More importantly, there is need for skill formation and continuous upgrade both for labour and entrepreneurs. While the government

has to strengthen the existing skilling efforts for labour, there is an urgent need for managerial skill development for entrepreneurs running MSMEs — an area that is considerably neglected. These programmes for entrepreneurs could be offered in a structured way in Industrial Training Institutes and management schools to include modules on management, labour laws, accounting, financial markets, procurement and marketing skills. Further, the government could consider dedicated television and radio programmes, similar to agriculture, to help educate entrepreneurs running small businesses.

Consumer tastes have been evolving as greater integration with global markets takes pace. In order to keep pace with changing tastes, large corporate firms have made substantial investment in extensive research and developing suitable product ranges. However, due to shortage of office space and financial resources, many micro and small enterprises are unable to invest in R&D and develop new products, and perish as a result.

Therefore, government support in undertaking research to help develop new products that are being produced by MSMEs could be very helpful, similar to what agriculture universities do. Similarly, to encourage products manufactured by MSMEs, India could illustratively showcase and promote their products such as phulkari of Punjab, bamboo works of Assam and West Bengal, and cotton weaving of Tamil Nadu via galleries and museums.

Credit crunch

Issues related to credit, like adequacy, timely availability, cost and mortgages continue to be a concern for MSMEs. Consequently, 93 per cent of units in the MSME sector are dependent on self-finance. Profit margins are extremely thin due to stiff competition and the small size of firms. The government drive for financial inclusion could benefit MSMEs. The government could consider dedicating specialised financial schemes for addressing difficulties in assessing

and providing credit for the MSMEs, as also providing line of credit to firms which are under financial stress. Given the grand financial inclusion initiative, maximum employment and growth with minimum difficulty to the entrepreneur will augur well for the country.

(Charan Singh is RBI Chair Professor of Economics, IIM Bangalore.)

To encourage MSMEs, India could showcase and promote products such as phulkari, bamboo works, and cotton weaving via galleries and museums

TNAU to promote water-saving methods among Thandalam farmers

The Tamil Nadu Agriculture University (TNAU), Coimbatore, will promote modern technology among farmers of Thandalam, near Arakkonam, to make agriculture profitable through a Memorandum of Understanding it signed three months ago with Thandalam Yogashema Trust.

B.J. Pandian, Director of the Water Technology Centre, TNAU, who visited the village on Thursday to interact with farmers and Trust members, told *The Hindu* that the university would promote water-saving technology such as the System of Rice Intensification (SRI) and micro-irrigation among the farmers to help them conserve water and maximise yield and profits, given the drought conditions prevailing in the village.

When Thandalam village panchayat president R.S. Prabhakar said the farmers were hesitant to use modern technology as they were sceptical of its viability, Dr. Pandian assured him that the farmers would be taken on an exposure visit to fields in Kancheepuram district where SRI and drip irrigation were successfully implemented. He assured the farmers of free seeds and weeding implements

required for the SRI. The TNAU would post a couple of senior research fellows in the village for three months to monitor the implementation of the modern water-saving technology and train the farmers in resolving problems, especially technical ones.

Radha Parthasarathy, managing trustee of the Thandalam Yogashema Trust, said the MoU signed between the trust and the TNAU on June 4, 2014 committed them to collaboration with the following objectives: To promote technology-based agriculture at the grassroots to enhance rural income and sustainable livelihood; conduct research and development for science and technology relevant to agriculture and allied sectors: organise professional activities such as conferences and workshops; conduct continuing education programmes and vocational and certificate courses; and work for joint research and projects and capacity-building interventions.

Other activities being implemented in the village through the Annapoorani Public Charitable Trust is to train members of the women's self-help group, formed by it, in production of 'vadams', condiment powders and 'panchakavyam' and preparation of vermi-compost and paper bags.

The Department of Bio Energy, TNAU, installed a tunnel drier at the trust office for solar drying of 'vadams' and drying of chillies for the preparation of condiments in an environmentally clean condition, and protecting them from birds, a problem in open drying, said M. Pandian, Professor and Head, TNAU Research Station, Virinjipuram, Vellore.

Rain helps improve water level in dams

Heavy rain in the last three days has helped improve water level in major dams in Salem, and Coimbatore.

The flow of water into Stanley Reservoir in Salem increased from 6,852 cusecs on Wednesday to 19,131 cusecs on Thursday.

Public Works Department officials told *The Hindu* that the water level stood at 88.60ft against the full reservoir level (FRL) of 120ft.

The inflow of water was 6,852 cusecs while the water released for irrigation was 18,900 cusecs.

Officials said that rainfall recorded in the Mettur areas in the last three days was respectively 45.6mm, 55mm, and 60mm.

Water was released for irrigation on August 10 when the level stood at 109.11ft. Since release of water from Karnataka dams has stopped, and an average of 20,000 cusecs was released for irrigation everyday, the storage level dropped to 88.60 feet.

In Salem city and its suburbs heavy rain continued on Thursday too. About a dozen goats belonging to Govindan of Vellalakundam Therkukadu village, near Vazhappadi, were killed in the lightning on

Wednesday. In a similar incident, seven goats were charred to death in Pattipadivelur village, near Yercaud.

Krishnagiri received 38mm rainfall in the last 24 hours that ended at 8 this morning, followed by Shoolagiri, 18mm.

Various parts of **Dharmapuri** district too experienced rain for the third consecutive day.

In **Coimbatore** , rainfall received in the city in September has already crossed the average monthly rainfall recorded during previous years.

Head of the Agro Climate Research Centre in the Tamil Nadu Agricultural University S. Paneerselvam told *The Hindu* that the average rainfall the city recorded in September in the last 30 years was 68mm. “Till Wednesday the city recorded 76mm rainfall. We can expect 30mm to 40mm more rain till the end of this month,” he said.

“The present showers are mistaken for the North East Monsoon — when the Coimbatore region gets better rains — which begins only during the third week of October,” he added.

Rs. 58.12 crore disbursed as crop loans to 10,063 farmers

Crop loan to the tune of Rs. 58.12 crore has been disbursed so far to 10,063 farmers through 53 Primary Agriculture Co-operative Credit Societies in this district.

Special camps were held for disbursing crop loans in the four panchayat unions in the district, and loans were disbursed based on the applications received at the camps.

Announcing this at the farmers' grievances day meeting, Darez Ahmed, Collector, said on Thursday that dredging of lakes, inlet canals, and strengthening of bunds have been taken up at a cost of Rs. 228.10 lakh.

Good response

Sale of small onions at Chettikulam onion market on Tuesdays has evoked good response.

Traders from other districts too take part in the auction. Because of the good response, old onions netted a price of Rs.16.50 a kg, and new onions Rs.20.50 a kg.

"A total of 274 bags of small onions (15,628 kg) were sold for Rs.1.97 lakh at the market," the Collector said.

A lake is being dug at a cost of Rs. 19 crore at Visvakudi village as per the Chief Minister's order.

Proposal has been sent to the government to get additional allocation of Rs. 14 crore for the project.

The Collector appealed to farmers to make use of the rain in the district and take up cultivation.

Farmers demanded increasing the target with respect to providing electrical connections to agriculture pumpsets.

They also demanded payment of crop insurance compensation for the year 2013-14.

They insisted on taking up dredging works in inlet canals.

Now, thornless brinjal

The Tamil Nadu Agricultural University, Vellore Research Centre at Virinjipuram, has developed a thornless variety of the thorny brinjal (‘mullu kathirikkai’), according to head of the centre M. Pandian.

Talking to *The Hindu* at Thandalam village near Arakkonam on Thursday, Professor Pandian said the centre took up research on the thornless variety about three years ago to address the problems of farmers who suffered injuries in their hands owing to thorns in the ‘mullu kathirikkai’ while harvesting it.

New variety would be tastier than the traditional variety and retain all its characteristics

Virinjipuram Research centre is trying to produce a new variety of green gram and black gram

‘Govt. responsible for urea crisis’

The Karnataka Rajya Raitha Sangha (KRRS) on Thursday came down heavily on the “insensitive and irresponsible” State government, particularly the Department of Agriculture, holding them responsible for the urea crisis in the district.

The farmers across the district had, for the last one month, been desperately running in vain from one fertiliser shop to other to get urea to save their dying crops, the KRRS said.

Addressing a press conference at Reporters’ Guild here, KRRS State president Chamarasa Malipatil criticised Minister of Agriculture for State Krishna Byre Gowda for his failure in ensuring proper urea supply to farmers.

“Despite the fact that farmers continued to be hit hard by the unavailability of urea, Krishna Byre Gowda irresponsibly claims that there is no scarcity of urea. The officials in his department said he had clearly instructed them to maintain buffer stock of urea by not releasing it to the market. What the use of so-called buffer stock if the stock is not available to farmers when they are in need of it?” he questioned.

He said the Agriculture Department’s decision to distribute 50 per cent of fertiliser through cooperative societies itself was erroneous as most of the societies had not renewed their licence to sell fertilisers. He criticised all the elected representatives of the district, cutting across party lines, for their “deliberate silence” when the farmers around them were in crisis.

Many farmers in the district have inevitably started using Complex fertilisers in place of urea in their desperate bid to save their standing crops. “The price of Complex is more than Rs. 1,000 per 50 kg as compared to urea which is priced at Rs. 300 per bag. Complex would also negatively impact the yield,” he observed.

Mr. Malipatil alleged that the survey for assessing the crop loss in the recent downpour had not taken off in many taluks. “Chief Minister Siddaramaiah and Krishna Byre Gowda, during their visit to Raichur after the recent floods, had assured that a joint survey would be conducted to assess the crop loss. The survey has not yet started survey in many flood-hit areas even a month after floods,” he said.

The compensation for the crop-loss caused by hailstorm in February had not given to many affected farmers, he said.

He said KRRS would stage a dharna outside the office of Deputy Commissioner in Raichur next Tuesday demanding the government to address the farm issues.

Farmers flay officials for tardy dredging work

Seek special package for executing integrated work

Farmers took the administrative machinery to task for tardy dredging work in many stretches of irrigation channels in Tiruvarur district resulting in water not reaching many tail-end areas of the district.

At the farmers' grievances day meet here on Thursday; irate farmers demanded that adequate water be provided to all areas.

Mannargudi region farmers were especially critical of the dredging works and stated that the works had not at all benefitted them.

Some farmers wanted the district administration to seek a special package to dredge all major irrigation channels in an integrated manner so that even tail-end areas got adequate water.

Viswanathan, a farmer of Tiruvarur, wanted the turn system to be done away with and called for providing water for irrigation in a bout for a particular time for each region so that all areas got adequate water for irrigation. The prolonged dry condition had scorched irrigation channels and the absorption rate should be factored in while supplying water, he said.

Representatives of farmers' organisations demanded the Centre abolish the provisions of Electricity Regulatory Authorities that abrogated the rights of the State governments in planning electricity tariffs. The Commission's mandate must be in sync with the respective State government's endeavours, they pointed out while criticising the plan to revise power tariff.

Another farmer, Rajadurai of the Congress Farmers Wing, claimed that MNREGS works were not being sanctioned and undertaken over the past three months and alleged that even wages due under the scheme have not been disbursed to beneficiaries in many cases. He

wanted the cooperative institutions to extend credit under the crop loan scheme to farmers who required them for cultivation purpose.

A section of farmers thanked the State government for ordering implementation of the original crop insurance scheme instead of the modified crop insurance scheme, a demand they had been fighting for sometime now. Some farmers raised the issue of pollution caused by fresh water prawn cultivation and demanded that the waste water from these farms be not allowed to be let into rivers and waterways. District Revenue Officer P.Manimaran, Joint Director of Agriculture K.Mayilvahanan, and Senior Regional Manager, Tamil Nadu Civil Supplies Corporation, A. Alagirisamy, took part.

Agri theme park to come up at Ramoji Film City

The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and Ramoji Film City (RFC) will jointly establish an agriculture theme park. It would be established at RFC. A memorandum of agreement (MoA) for the establishment of the theme Park at Ramoji Film City was signed on Wednesday.

Fears on pineapple farming allayed

The Chief Minister's Office has sent a note to the Department of Agriculture recommending that the latter issue instructions to agriculture offices across the State to take steps to remove apprehensions about the use of pesticides included in the Package of Practices and the flower-inducing agent ethiphone in pineapple cultivation.

The note, issued last week, said a national meet on pineapple cultivation held at Kerala Agricultural University (KAU), Mannuthy, on

August 25 had come out with a set of recommendations to help pineapple famers who were facing resistance from the local people.

Recommendations

The meet recommended that fears about the use of ethiphone in pineapple orchards should be addressed immediately.

The note from the Chief Minister's Office said the meet, attended by officials from the university, Department of Agriculture, and pineapple farmers, had recommended that ethiphone was not a harmful hormone as made out in public.

A pineapple farmer said on Thursday that there were fears that ethiphone acted like animal hormones. However, that was not true. The hormone was in the Package of Practices approved by KAU and had been used widely.

'Need to reach out'

The note from the Chief Minister's Office said that there was nothing wrong with cultivating pineapple in rubber plantations during the first three years. However, the recommendations of the meet had to reach the people and the Department of Agriculture had been asked to take steps to this effect.

The pineapple farmer said once the agriculture offices in each panchayat and the local bodies became involved in the issue, it would be possible for the pineapple farmers to convince the local people about the practices on farms which were usually leased out for short periods.

ICRISAT to boost research efforts in Sub-Saharan Africa

The governing board of the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) on Thursday decided to boost its research in Sub-Saharan Africa (SSA) by investing $ 5 million towards upgrading research infrastructure and building scientific skills in the African continent. ICRISAT is committed to improving food security, making smallholder farming profitable through an Inclusive Market-Oriented Development (IMOD) approach, tackling malnutrition by focusing on more nutritious crops, and helping overcome environmental degradation in Sub-Saharan Africa.

This investment will be across Mali, Niger, Nigeria, Kenya, Zimbabwe, Malawi and Ethiopia, said ICRISAT Governing Board Chair Chandra Madramootoo. “Food security is a major challenge at both the national and the household levels in SSA where many countries are below subsistence levels for calorific and protein intake levels per capita on a world basis. There is an acute urgency to identify the best means of harnessing the required resources to further advance the productivity of smallholder agriculture in SSA for greater self-reliance and resilience, particularly in light of climate change, and for increased participation in the market economy,” Dr. Madramootoo said .

“On the positive side, GDP growth in many countries in SSA has been quite strong in recent years and there is a new generation of highly motivated and educated young Africans eager to meet the many developmental challenges of the continent,” said ICRISAT Director General William D Dar.

To invest $ 5 million towards upgrading research infrastructure and building scientific skills in African continent

‘TANUVAS mineral mixture’ popularised among dairy farmers

Veterinary College and Research Institute, Tirunelveli, and National Bank for Agriculture and Rural Development (NABARD) jointly organised a special camp at Mela Seval near here on Wednesday to popularise ‘TANUVAS mineral mixture’ among the dairy farmers.

Dean, Veterinary College and Research Institute, Tirunelveli, S. Prathaban, who presided over the function, distributed the TANUVAS - mineral mixture to 50 beneficiaries under the NABARD-funded scheme.

He highlighted the objective of establishment of Veterinary College and Research Institute at Tirunelveli and appealed to the farmers to fully utilise the services of the scientists of the college. Assistant General Manager, NABARD, Tirunelveli, K. Ramalingam, released the pamphlet on ‘Importance of TANUVAS mineral mixture in dairy cattle rearing’.

Professor and Head, Instructional Livestock Farm Complex, VC and RI, V. Thanaseelaan, Professor and Head, Department of Animal Nutrition, M. Chellapandian, Professor and Head, Department of Veterinary and Animal Husbandry Extension Education, C. Manivannan stressed the need for employing proven scientific methods in increasing dairy products.

Principal Investigator and Assistant Professor, Department of Veterinary and Animal Husbandry Extension Education, VC and RI, Tirunelveli, S. Senthilkumar and others participated.

1,000 hectares to come under horticulture this year

Collector R. Nanthagopal visits a farm where papaya being cultivated at a village in Kaveripakkam union, on Thursday.— Photo: C. Venkatachalapathy

The Horticulture Department, Vellore is aiming at bringing 1,000 hectares of land under its crops this year. Last year, it achieved a target of 850 hectares of cultivation area.

It is also looking ahead to take drip irrigation to all horticulture farmers in the coming years, officials said.

In Vellore district, fruits, vegetables, aromatic crops and flowers are being raised in around 31,000 hectare. In this, fruits are being cultivated in 22,000 hectare, while vegetable crops are raised in 4,000 hectares.

In the total area under cultivation in Vellore, horticulture crops constitute 18 per cent. The department is taking steps to increase this to 25 per cent by 2023.

On Thursday, Collector R. Nanthagopal visited several horticulture farms at Walajah and Kaveripakkam, including under the National Horticulture Mission, National Agriculture Development Programme and National Mission on Micro Irrigation schemes.

Pandal system

R. Jayasundar, Joint Director of Agriculture, Vellore said the Collector visited farms where farmers have adopted “pandal” system for creeper crops and cultivation of gherkins, hybrid papaya and tomatoes.

Officials said the 211.06-acre State Horticulture Farm at Navlock near Ranipet has been fetching a net profit of Rs. 35 lakh per year for the government.

Established in 1981, mango crop, guava layers, sapota, acid lemon and “jathi malli” are being raised here.

In the last three years, nearly nine lakh plants have been produced and distributed from the farm to farmers in five districts – Vellore, Tiruvannamalai, Tiruvallur, Kancheepuram and Krishnagiri, A. Arputham deputy director, Horticulture, Vellore said.

This year, it has been planned to produce 3.60 lakh plants and works towards this are underway.

Gherkin cultivation

Around 15 to 20 farmers across Vellore district have taken up cultivation of gherkins, a variety of cucumber, on 10 hectares of land.

Star hotels purchase gherkins to make salads and pickles. “Cultivating gherkins is popular in Andhra Pradesh. Farmers in Vellore rarely take up this cultivation,” he added.

Under National Horticulture Mission, mango crops have been

cultivated on lesser spacing under the “High Density Mango Production” scheme to increase production.

“Normally, there is 30 feet distance between plants and between rows. Under this scheme, the crops are planted 15 feet distance.

This way, we can increase the number of plants per hectare,” he explained.

Drip irrigation

The department has been advocating drip irrigation among farmers. “Horticulture crops are water loving plants. Vellore district has minimal availability of water. Hence, we should get maximum production with minimum use of water,” he added.

He said that the government was providing 75 per cent subsidy on drip irrigation of big farmers and 100 per cent subsidy for small and marginal farmers.

“As of now, 25 to 30 per cent horticulture farmers have adopted drip irrigation in the district. We aim to cover all the farmers in the coming years,” Mr. Arputham added.

Oil spills sink farmers’ hopes

A farmer looks at his field near Kamalapuram in Tiruvarur district affected by the recent oil spill.

The thick dark sheet of crude oil radiating gleams in various hues in the setting sun over the fields of Kamalapuram has not just damaged the samba paddy crop raised on the field but also dented hopes of affected farmers of raising another crop in the next few months.

Nine fields

In the latest of the continuing saga of fertile fields being affected by squeaky oil spills, leak from pipes laid under ground to convey crude oil and natural gas from fountains to processing centres, oil spills have affected nine fields causing consternation among farmers.

“Look at the damage the oil spill has inflicted on my just-sown paddy field. The paddy seeds sown directly are about to germinate within days and if I irrigate the field, the spill would spread to other areas and in one single wetting the whole portion would be rendered useless for days or even months,’’ rues V.Pattammal (60) of Kamalapuram.

Adjacent to her field, the land of S.Singaravelu and others has been affected by the oil spill that was caused when the Oil and Natural Gas Commission (ONGC) officials decided to purge the old pipeline conveying crude oil and gas from Moolangudi to Vellakudi, a distance of six km, with liquid nitrogen to clear any remnants in the tubes.

Weak spots along the pipeline burst spewing oil and gas to a height of more than four feet under pressure damaging fertile fields. The Kamalapuram-Vadugakudi belt is the worst hit in the belt, where the ONGC has been exploring crude oil and natural gas for more than two decades.

Compensation

Soon after the spill, the officials plugged the leak, assessed the damaged spots and promised the farmers that all steps would be taken to compensate the damage caused to the standing crops besides replacing distressed soil with fresh and fertile soil.

For their part, revenue officials along with those from the Tamil Nadu Pollution Control Board inspected the areas and assured the farmers of due assistance.

However, sections of farmers are sceptical of the promise claiming that the ONGC had not replaced the affected soil in many fields over the past three years though some immediate compensation was paid. “The compensation was just a pittance and could not measure up to even the cost I had incurred for raising the crops when the oil spills damaged by fields three years back,” said C.Ekambaram, a farmer of Vadugakudi.

Oil and gas spewing out of burst ONGC pipelines damage samba paddy

hindustantimes

weather

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Chennai - INDIA

Today's Weather

Clear

Rain: 0
Humidity: 79
Wind: normal

Tomorrow's Forecast

Friday, Sep 26

Max Min
32° | 26°
Partly Cloudy

Sunrise: 05:57
Sunset: 06:03
Barometer: 1009

Saturday, Sep 27

Max Min
31° | 26°

Extended Forecast for a week

Sunday	Monday	Tuesday	Wednesday	Thursday
Sep 28	**Sep 29**	**Sep 30**	**Oct 1**	**Oct 2**
34° | 26°	35° | 26°	34° | 26°	34° | 26°	34° | 26°
Cloudy	Cloudy	Partly Cloudy	Partly Cloudy	Partly Cloudy

THE TIMES OF INDIA

‘Add fruit juice to fizzy drinks, help farmers’

PM Narendra Modi wanted captains of the aerated products industry to consider adding 5% fruit juice to their drinks, which would go a long way in helping farmers get a good price for their produce.

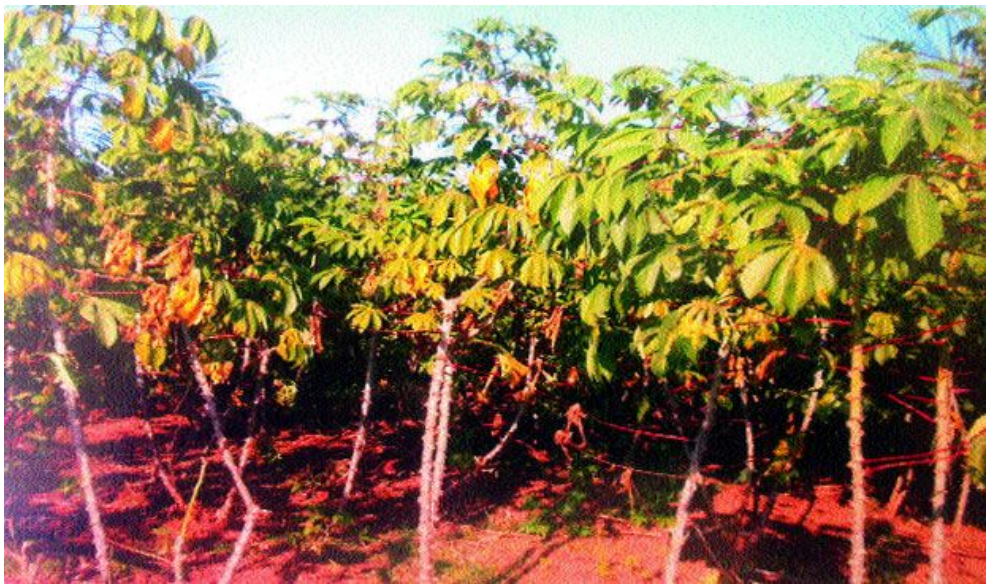
Inaugurating the 110-acre India Food Park at Vasanthanarsapura industrial belt here, Modi explained that food processing was nothing but simple value addition to the farmer's produce. "What is sattu (porridge made of ground pulses and cereals) that originates from Bihar? Nothing but simple food processing," Modi said.

Giving examples, the PM said juice can be prepared out of cashew fruit, the banana stalk which is uprooted and thrown can be converted into strong thread and tomatoes converted into ketchup.

"If this is done, farmers don't have to throw their produce on the streets when prices drop," he added. He recalled being given a bouquet at a function of tribals. Each flower in the bouquet had his portrait; the tribals said they had used laser technology to print the photographs.

DECCAN Chronicle

Farmers look to Chennai



Tapioca crop is cultivated on nearly 60,000 acres in East Godavari district and there are 20 sago mills running in Peddapuram, Samalkot and Jaggampet mandals. (Photo: DC)

Kakinada: Farmers cultivating tapioca crop are hoping that Chennai traders will fetch them a higher price than that in the local market. The tapioca farmers in East Godavari district are waiting for Chennai traders to enter the market to dispose of their crop or sell in the open market. But, they are not willing to sell it to sago millers, as prices offered by the millers are much less and not remunerative.

Last year, the traders from Chennai purchased the bulk of the crop at Rs 1,500 per bag of 225 kg (putti) in cash and carry method whereas the local sago millers were able to offer only Rs 1,000 or so per bag. Also they are unable to make one time payment and they are purchasing the crop on credit.

The farmers also go for alternative market methods like selling the dry pieces of tapioca for a better price.

“The farmers are showing interest in selling their crop to Chennai traders as they offer better prices than local millers’’ said Putta Somanna Chowdary, president of the Tapioca Farmers Association. He said that the farmers invest Rs 15,000 to Rs 20,000 per acre, but, they are unable to recover even the investment charges, if they sell the crop to local sago mills.

“We can’t offer more than Rs 1,000 like last year as the sago mills are not able to purchase at higher prices,” said, Mutyala Rajabbai, president of the Sago Food Processing Cluster Industries Welfare Association. He said that the sago mills are facing crisis.

The Association secretary N. Ramakrishna said that the Chennai traders can offer better prices than the state’s sago trade as Tamil Nadu government encourage them in Chennai. He said that the state government impose 5 per cent tax on sago products and Rs 7 per unit of current whereas the Tamil Nadu government collects only 1 per cent tax and Rs 2 per unit for current and also Tamil Nadu traders are in forefront in using modern technology. However, the association president M.Venkata Rao said that the Chennai traders may not come this year as the crop in Tamil Nadu is good at present. He said that for the last two years the farmers and trade in Tamil Nadu face adverse climatic conditions.

Meanwhile, Tapioca farmers and sago millers are demanding bringing back of Tapioca Research Institute to the district.

The institute used to function at Peddapuram until three years back as a part of Acharya NG Ranga Agricultural University. But, after setting up of Dr. YSR Horticulture University at Venkatramannagudem in West Godavari district, the Tapioca Research Institute was shifted to the Horticulture University premises.

“There is a need to bring back the research institute to Peddapuram Constituency where tapioca crop is being cultivated in huge extent and sago mills are established. At present the tapioca crop duration is eight months. There is a need to decrease the duration from 8 to 6 months. Bringing back the institute here will definitely aid this effort,” said the president Tapioca Farmers Association Putta Somanna Chowdary.

Monsoon delay brings fog to Krishna, Guntur districts

Officials of Metereological Department at the Gannavaram airport opined that the fog witnessed in September due to delayed monsoon. (Photo: DC archives)

Vijayawada: Unusual fog greeted people in both Krishna and Guntur districts on Thursday morning.

The fog continued till 7.15 am. However, flight schedules were not affected by it. Officials of metereological department at the Gannavaram airport opined that the fog witnessed in September due to delayed monsoon and disturbance to normal seasonal pattern.

The airport authorities said there was no disturbance to flight schedule at Gannavaram airport as the first flight lands at 9 am. IMD scientist K. Sitaram said that the fog occurred due to excess humidity in air which comes around 75 per cent. With the increase in humidity, it fails to break the inversion layer, which resulted in fog.

Business Standard

States asked to ensure seeds, fertilisers for rabi

The government has set a target to keep 43,000 tonnes of additional wheat seed available for the ensuing rabi season

Fertilisers

To compensate for kharif foodgrain output loss, the government has urged states to ensure higher seed and fertiliser availability in the coming rabi season.

It has also asked states to address the 3.37 million hectares of area left unsown due to delay and then deficient rainfall in the kharif season.

The ministry of agriculture's First Advanced Estimate for 2014-15 forecast kharif foodgrain output at 120.27 million tonnes, around 7.5 per cent lower than the record production at 129.24 mt in the same season last year.

The government has set a rice production target for the rabi season at 14 mt, as compared to 14.85 mt in the previous season, according to the Fourth Advanced Estimate. Wheat production is fixed at 94 mt, as against 95.51 mt the previous year.

"After a delayed start, the overall monsoon rainfall has remained 11 per cent deficient this season, resulting in a 3.5 per cent lower coverage area under kharif. The total area under kharif crops fell to 9.99 mn ha this season, compared with 10.37 mha earlier. States, therefore, should be ready with higher availability of seeds and fertiliser," said J S Sandhu, agriculture commissioner.

Erratic rainfall and dry spells in several parts of the country will also impact the production. That of most crops is expected to be lower than their record output of last year.

However, these are preliminary estimates and do not take into account the positive impact of rain this month. Also, from past experience, the first advance estimates reported by states are generally conservative and subsequently undergo upward revision.

RABI SEED STATISTICS

Figures for 2014–15 (in million tonnes)

Crop	Requirement	Availability	Ratio (%)#
Wheat	11.25	11.68	34.2
Jowar	0.11	0.11	25.7
Bengal gram	1.61	1.57	22.8
Urad & moong	0.13	0.16	44.8
Lentil	0.18	0.14	44.8
Seed*	0.26	0.27	64.1

* Repeseed & mustard seed; # seed replacement ratio
Source: Department of Agriculture & Cooperation, GOI

The timely withdrawal of the monsoon has left adequate moisture in the field, through which area can be comfortably expanded during the rabi sowing, said an agri analyst with a large rating firm.

Rice, soybean and a majority of pulses are primarily grown in the kharif season; a small quantity of these is also produced in the rabi season. Wheat, pulses and mustard are sown largely in rabi. Sandhu said fertiliser is another area needing attention. “Commodities with a higher seed replacement ratio require additional quantities of hybrid seed for sowing, while farmers sow conventional seeds from their carryover stocks,” an analyst said.

THE HINDU BusinessLine

Creating fuel from waste

Goodyear to use rice husk to create silica for their tyres

One of the world's largest tyre companies, Goodyear, announced an innovation that uses ash left over from the burning of rice husks to produce electricity as an environmentally friendly source of silica for its tires. Once destined for landfills, rice husk is now helping The Goodyear Tyre & Rubber Company produce fuel-efficient tyres.

At the brand's innovation centre in Akron, Ohio, silica derived from rice husk ash was tested for over two years and its impact on tyre performance to be equal to traditional sources. Negotiations with potential suppliers are in process to purchase rice husk ash silica for use in its tyres.

"The use of rice husk ash will provide Goodyear an alternative source of silica while helping reduce the amount of rice husk waste being landfilled," said Joseph Zekoski, Interim Chief Technical Officer. "This illustrates Goodyear's commitment to innovation and to the environment," he said in a press release from the company.

In their statement, the company added that according to the Food and Agricultural Organization of the United Nations, Each year, more than 700 million tons of rice is harvested worldwide and disposing of

the rice husks is an environmental challenge. As a result, husks often are burned to generate electricity and reduce the amount of waste shipped to landfills.

The company aims to utilise this husk to obtain silica which is mixed with rubber in tyre treads to increase the rubber's strength and help reduce rolling resistance, which improves fuel economy. Silica is also knows to have a positive impact on a tyre's traction on wet surfaces, the statement said.

'Kisan Mandi' to bring farmers and consumers closer

NEW DELHI

With one eye on weeding out the wholesale market middleman and the other on reducing information asymmetry between small farmers and consumers, the foundation stone for India's first 'Kisan Mandi' (KM) was laid here on Thursday. Taking advantage of an avenue opening up due to the on-going Delhi APMC Act amendment process, the market is likely to be fully operational within six months

The market, to be set up at Alipur on a 1.6 acre plot, will have small farmers selling only fruits and vegetables (F&V) to begin with. Principal consumers will include bulk buyers like organised retail chains, hotels and exporters. Infrastructure facilities scuh as transit cold storages and warehouses will be allotted to farmers producer organisations (FPOs) and grower associations who will have stalls at the market.

"We are making efforts to strengthen farmers and the Kisan Mandi is one such initiative in this direction," said Radha Mohan Singh, Union Agriculture Minister.

The FPOs, promoted by the Small Farmers' Agribusiness Consortium (SFAC), a body under the aegis of the Agriculture Ministry, will use the platform to sell directly, thereby eliminating commission agents. The model is expected to result in gains of up to 20-25 per cent for the producer while helping consumers save 15-20 per cent than what they shell out presently."If we manage to eliminate some of the existing seven or eight links to about two or three then costs will reduce, revenue will rise and benefits will accrue to both farmer and consumer," said Pravesh Sharma, Managing Director, SFAC.

Different market, transparent pricing: Sharma emphasized that Kisan Mandi was different from the regulated Fruits and Vegetables markets like the one in Azadpur. "Goods must be physically transported to those markets before auctioning and sale. In this model, we will only have a sample. There will be a collection centre close to the farm gate itself to ensure quality which SFAC will assure. After auctioning — online, telephonic or physical — the produce will be sent directly to the buyer's warehouse," Sharma said. The prevalent information asymmetry between buyer and seller is likely to be tackled as buyers could view the produce themselves and then quote a price which, if acceptable to the farmer, would result in a successful transaction. An online portal for the KM will be introduced to make prices available beforehand for trading. "There is complete transparency in price discovery and the farmer earns the power to decide a price in addition to not losing money as a commission. The portal, which is being developed, will have all the information buyers require such as the quantity and quality of produce at a particular FPO," Sharma explained. NCDEX is among the players competing to build the trade portal.The Capital region was chosen due to its importance as Asia's largest Fruits and Vegetabels market with produce entering its markets throughout the year, receiving 11,000-13,000 tonnes daily. During 2011-12, total annual F&V arrival was 45.04 lakh t and trade was worth between Rs. 6,000 crore and 7,000 crore.