

ACFI NEWSLETTER

FEBRUARY 2025

Agriculture is fiscally neglected in the Budget

Schemes and programmes are starved of resources, and the real issues that confront the farmers and the sector remain sidelined

A Budget is the response of a government to the challenges in the economy. The effort in the Economic Survey 2024-25 was to spin a positive narrative on the state of Indian agriculture. It claimed that Indian agriculture remained remarkably resilient owing to a rise in productivity, an expansion of crop diversification, and an increase in farmers' income. These claims were either suspect or highly exaggerated.

To begin with, there is no significant jump in crop productivity. A simple analysis based on index numbers shows that growth rates of yield between 2014-15 and 2022-23 were marginally lower in food grain crops and non-food grain crops than between 2004-05 and 2013-14. Second, there is no major evidence of crop diversification in India, other than marginal shifts in a few States in favour of pulses. If at all diversification is real, it took place outside the crop sector in the spheres of livestock and fisheries. But the share of households involved in the livestock and fisheries sectors is dwarfed by the corresponding share of households in the crop sector. Third, while the government continues

to claim a rise in farmers' income, data show the opposite – there is either a stagnation or fall in farmers' real incomes in recent years.

The "resilience" of Indian agriculture, a la the Economic Survey, was not policy-induced but owing to a set of fortuitous factors, including the hardening of international prices and favourable weather conditions in the post-Covid years. At the same time, the more deep-seated problems, as evidenced by low productivity, slow growth of prices, shrinkage of profitability, falling real incomes and rural real wages, have continued to create conditions that militate against any growth stimulus emerging from agriculture.

Reduced allocations

From the commentaries prior to the Budget, one expected that the government would reverse its past fiscal neglect of agriculture, which was in large part seen as a penal action for the farmers' agitations after 2020. The rude shock that the rural electorate delivered to the BJP in June 2024 was also cited as a motivation for course correction. But the Budget belies these optimistic expectations. The fiscal neglect of agriculture continues.



A farmer with his beetroot crop on the outskirts of Amritsar, Punjab. ANI

Let us begin with agricultural research, which must be the centre of investment for efforts to raise crop yields alongside the development of climate resilience. The overall increase in spending on agricultural research and education between 2023-24 and 2025-26 is just ₹21 crore. Compare this with the pseudoscientific National Mission on Natural Farming, for which allocation was ₹30 crore in 2023-24 but is ₹616 crore for 2025-26. This is not just a reflection of inverted priorities, but also a shocking embrace of irrationality.

If we consider crop husbandry, which is an umbrella category for expenditures on schemes and institutions in agriculture, the allocation has fallen by ₹5,195 crore between 2023-24 and 2025-26. There has also been a drastic reduction in allocation by ₹3,622 crore for the Pradhan Mantri Fasal Bima Yojana, from which many States have withdrawn due to design failures, between 2024-25 and 2025-26. The allocations for most other central sector schemes are also either stagnant or have fallen.

Much was said in the Budget

speech on the new crop-based missions, but the allocations for these are paltry. The allocation for the Cotton Technology Mission is ₹500 crore, the Mission for Pulses is ₹1,000 crore, the Mission for Vegetables and Fruits is ₹500 crore, and the National Mission on Hybrid Seeds is ₹100 crore. A new Makhana Board, with an allocation of ₹100 crore, has been announced for Bihar. But the already existing commodity boards are cash strapped. For example, between 2024-25 and 2025-26, allocation for the Coffee Board has remained unchanged, the Rubber Board's allocation has risen by just ₹40 crore, and allocation for the Spices Board has risen by just ₹24 crore. Allocation for the Coconut Development Board has been cut from ₹39 crore in 2023-24 to ₹35 crore in 2025-26.

Fiscally ignored sectors

Despite the claims in the Economic Survey on diversification into livestock and fisheries, these sectors also remain fiscally ignored. The total expenditure on fisheries would rise by just ₹87 crore between 2024-25 and 2025-26. Between 2024-25 and 2025-26, the expenditure on animal husbandry is

set to fall by ₹407 crore while that on dairy is set to rise by just ₹321 crore. Considered together, the overall expenditure on all budget items in animal husbandry and dairy are to rise by a paltry ₹319 crore between 2024-25 and 2025-26. The Budget portrays these sectors as growth engines, but fiscally squeezes them.

A new scheme called Prime Minister Dhan-Dhaanya Krishi Yojana has been announced. This aims to target 100 districts with low productivity, moderate crop intensity, and below-average credit parameters – much in the model of the Aspirational Districts Programme. But agriculture is a State subject. While the Budget speech mentioned "partnership with States" in the description of this Yojana, it remains to be seen if its governance would be designed to be centralised, of a one-size-fits-all variety, and one that ends up fiscally burdening the States.

While the Budget speech mentioned agriculture several times, these were hardly matched by financial allocations. The schemes and programmes are starved of resources, and the real issues that confront the farmers and the sector remain sidelined.

Natural farming: India's path to sustainable agriculture and food security

Sustainable agricultural practices like Zero Budget Natural Farming are gaining traction as food shortages stare us in the face

Ending hunger, ensuring food security and promoting sustainable agriculture are the main objectives of Sustainable Development Goals (SDGs). Agriculture plays a role in achieving all 17 SDGs directly or indirectly by supporting economic, social and environmental progress. Sustainable agriculture focuses on meeting the needs of a growing population while protecting the environment, fostering social equity and ensuring economic viability. By 2050, under current agricultural trends, 60 per cent of India's population – over 10 per cent of the global population – may face severe food shortages. Addressing the crisis requires increased production, but high input costs and price volatility are pushing farmers into



PARAG ACHARYA

debt. Natural farming offers a cost effective alternative aiming to reduce dependency on chemical inputs while promoting sustainable practices. Zero Budget Natural Farming (ZBNF) is a grassroots initiative aimed at enhancing farm viability by minimising costs. Over one million hectares in India are currently under natural farming. Natural farming represents an Indianised

approach to sustainable agriculture, integrating local ecological principles and indigenous knowledge, in contrast to the European-origin organic farming practices. India is making significant strides in promoting natural farming, with leading states including Andhra Pradesh (1 lakh hectares), Madhya Pradesh (0.99 lakh hectares) and Chhattisgarh (0.85 lakh hectares).

Other notable contributors are Kerala (0.84 lakh hectares), Odisha (0.21 lakh hectares), Himachal Pradesh (0.12 lakh hectares), Jharkhand (0.03 lakh hectares) and Jammu & Kashmir (0.02 lakh hectares). ZBNF and the Andhra Pradesh Community-Based Natural Farming (APCBNF) models are the most widely used

approaches. A NITI Aayog report highlights the potential to double the share of chemical-free farming to 15 per cent immediately and expand it to 30 per cent by 2030, with no adverse impact on food security. The National Institute of Agricultural Extension Management (MANAGE), Hyderabad, serves as the central agency for promoting natural farming. Natural farming reduces cultivation costs by 60-70 per cent by eliminating chemical fertilisers and pesticides. To promote natural farming, the Central Government introduced the Bharatiya Prakritik Krishi Paddhati (BPKP) scheme in 2020-21 under the Paramparagat Krishi Vikas Yojana (PKVY). By 2023, the scheme covered 6.1 lakh



hectares with a budget of Rs 49.8 crore. Additionally, a five-kilometre natural farming corridor along the Ganges River was launched to cover 960,000 hectares. The National Mission on Natural Farming aims to form 15,000 clusters in Gram Panchayats, involving 1 crore farmers and covering 750,000 hectares. Natural farming optimises the

use of resources such as soil, labour and equipment, leading to enhanced crop productivity. It eliminates the dependency on chemical fertilisers, herbicides and pesticides. This approach fosters rapid development of soil microbiota and improves soil aeration through the use of natural inputs. Sikkim achieved its 100 per cent organic status in 2016

through the "Sikkim Organic Mission," which began in 2003. With minimal chemical fertilizer use (5.8 kg/ha) and traditional practices already in place for crops like cardamom, the government phased out fertiliser subsidies, promoted water conservation and trained farmers in practices like vermicomposting and non-pesticide pest management. ICAR is currently studying Zero Budget Natural Farming (ZBNF) practices in states like Uttar Pradesh, Punjab and Uttarakhand to assess productivity and soil health impacts.

India's unique agro-ecological diversity and rich traditional knowledge systems position the country as a potential leader in the global transition to sustainable agriculture

practices. However, careful planning, robust infrastructure and targeted training are essential to avoid the pitfalls observed in other nations like Sri Lanka. By integrating modern technologies with natural farming methods, India can further optimise resources, ensure resilience against climate change and bolster long term food security for its growing population. In essence, natural farming is not just a return to traditional practices but a forward-looking approach that harmonises ecological balance with agricultural productivity, fostering a sustainable future for generations to come.

(The writer is Scientist in Odisha University of Agriculture & Technology; views are personal)

India weighs tariff cuts on cars, chemicals, as Trump duties loom

New Delhi looking to close a trade deal with the US by the fall

BLOOMBERG

Government officials are exploring ways to lower tariffs on a wide range of imports, including cars and chemicals, in a bid to evade US President Donald Trump's threatened reciprocal levies, according to people familiar with the matter.

Officials in New Delhi are discussing reducing duties for automobiles, some agricultural products, chemicals, critical pharmaceuticals, as well as certain medical devices and electronics, the people said, asking not to be identified as the plans aren't finalised.

The proposals would go much further than previous tariff reductions already unveiled by Prime Minister Narendra Modi's administration in recent weeks, like on high-



end motorcycles and bourbon whiskey — goods exported by the US to India, but while politically important for Trump, aren't sold in large volumes in the South Asian nation.

The Ministry of Commerce and Industry didn't immediately respond to a request for further information.

New Delhi is hoping such efforts will help India close a trade deal with the US by the fall, a goal set by both countries at the Modi-Trump summit earlier this month in Washington. While officials don't expect that deal to be finalized by April — when Trump's planned reciprocal

levies may begin — they're hopeful progress toward an agreement may shield India from those duties.

The officials are examining the country's existing tariff regime from multiple angles. Among the options under consideration is whether to reduce overall average tariffs or take a more sector-by-sector approach, the people said. Separately, the Ministry of Commerce and Industry set up a team that's taking feedback from other ministries and stakeholders on the potential impact any reciprocal tariffs might have, some of the people said. Some sectors

aren't expected to see any tariff reductions, including dairy products, they said.

The efforts underscore the lengths New Delhi is going to preserve access to its largest trading partner and accommodate US demands for a more equal playing field in trade. India charges among the highest tariffs in the world, making it particularly vulnerable to Trump's vow to charge like-for-like duties on its exports.

Weapon purchases

The US has already said it wants to sell more energy and weapons to India — products that are largely supplied to India by Russia. Other products Washington also hopes to add to the list include industrial goods, automobiles and agricultural products, according to people familiar with the matter. The government is preparing a list of products that it buys from other countries but not the US, and is evaluating whether it can buy more such products from America, people familiar with the matter said.

WILL DISCUSS WITH MODI HOW TO TAKE STRATEGIC TIES TO NEXT LEVEL: URSULA VON DER LEYEN

India & EU Discuss Ways to Clinch FTA; HiTech, Climate Also in Focus

Appreciate her thoughts on reenergising India's engagement with Europe: Jaishankar

Dipanjan Roy Chaudhury

New Delhi: European Commission President Ursula von der Leyen and external affairs minister S Jaishankar on Thursday focused on ways to firm up the long-awaited free trade agreement (FTA) and boost cooperation in a slew of areas, including high technology and climate change.

It is understood that the two sides discussed how to achieve "concrete" forward movement in Friday's meeting in a number of critical areas, including trade, high-tech, clean ener-



gy and people-to-people ties. "Pleased to call on @EU Commission President @vonderleyen today in Delhi. Appreciate her thoughts on reenergising India's engagement with Europe. The wide ranging participation of Indian ministers and EU College of Commissioners during this

visit stands testimony to the importance we place on deeper India-EU ties," Jaishankar wrote on X.

"In an era of conflicts and intense competition, you need trusted friends. For Europe, India is such a friend and a strategic ally. I'll discuss with @narendramodi how to take

our strategic partnership to the next level," she said in a post on X.

The two sides at Friday's meeting hoped to firm up a new strategic agenda at a time Europe is looking at de-risking its relations with China. A joint statement is expected to be released following Modi and Von der Leyen talks.

The two leaders are expected to deliberate on the FTA as we need to produce a mutually-beneficial deal at the earliest, an official said. On the issue of the EU looking at pressing India to bring down tariffs on cars, wine and agricultural products, the official said New Delhi too has certain expectations from the bloc.

Meanwhile, Russia has reacted to reports of Von der Leyen urging the PM to support anti-Russian sanctions. Foreign ministry spokesperson Maria Zakharova said, "It is a disgrace to go around to countries they look down on, and ask them to support this madness."

Reduce use of pesticides to promote agricultural exports: Union Minister

The soil fertility should be raised and focus should be on high-yielding high plant density crops, says Shobha Karandlaje

The Hindu Bureau
BENGALURU

Union Minister of State for Micro Small and Medium Enterprises (MSMEs), Labour and Employment Shobha Karandlaje urged farmers and agricultural innovators to reduce the usage of pesticides in food crops to have better exports and become the 'food basket' of the world, on Thursday while speaking at the inauguration of the National Horticulture Fair - 2025.

The annual fair has been organised on the campus of ICAR - the Indian Institute of Horticultural Research (IIHR) in Hesaraghatta.

The Minister said that while India achieved food security with the help of the green revolution, it has the potential to become the food basket of the world by 2047.

"We produce 265 million metric tonnes of fruits and vegetables and 340 million metric tonnes of



Union Minister of State Shobha Karandlaje at the National Horticulture Fair 2025 at Hessarghatta in Bengaluru on Thursday. SPECIAL ARRANGMENT

food grains. These quantities are not required by the people of our country. While fresh consumption is on one side, there is food processing and exports on the other. When we export our crops, other countries check for pesticide residues. If it is more, then they do not accept our crops," Ms. Karandlaje said.

"Thus, we have to also look at quality along with

quantity, and the responsibility lies with agricultural universities, Krishi Vijnan Kendras (KVK), and government departments to educate farmers to reduce the use of pesticides while growing food crops. The fertility of soil should be increased, and the processing of food should be prioritised. The focus should be on high-yielding high plant density crops," she further said.

She also pointed out the growing demand for ready-to-cook and ready-to-eat products and emphasised how the agriculture sector and MSMEs can work together to achieve good levels of supply.

250 stalls

NITI Aayog Member Ramesh Chand called for a second green revolution through horticulture. He further claimed that horti-

culture farmers had already doubled their income in the past decade, as the growth of horticulture is more than 7% in the country whereas agriculture growth is less than 4%.

Around 250 stalls were set up in NHF-2025 by stakeholders from various universities and KVKs from across the country. IIHR's flagship brand's Arka varieties, banana varieties and vegetable seeds were in much demand.

"I have been coming to this fair for years, and the improvement year-on-year has been great. They used to have only two to three Arka varieties before, but now, Arka products take up half of the stalls. It is the best place for farmers to get information. However, this time, the stalls that are here did not match up what we expected based on their advertisements," said Yogananda, a farmer from Sagara in Shivamogga district.

The three-day mela will conclude on March 1.

India must push for provisions in proposed FTA to address EU's carbon tax: GTRI

The EU has decided to impose Carbon Border Adjustment Mechanism, or carbon tax, which will come into effect from January 1, 2026

NEW DELHI: India should push for inclusion of protective provisions in its proposed FTA with the European Union to safeguard its interests against the EU's carbon tax, think tank GTRI said on Thursday.

The EU has decided to impose Carbon Border Adjustment Mechanism (CBAM), or carbon tax, which will come into effect from January 1, 2026. It would mainly impact seven carbon-intensive sectors,

including steel, cement, fertiliser, aluminium and hydrocarbon products.

The Global Trade Research Initiative (GTRI) said that if protective language is not included in the agreement, post FTA, EU goods will enter India duty-free, while Indian steel and aluminium could face high carbon charges under CBAM when exported to the EU. "Since CBAM imposes tariffs based on production methods, it violates

WTO (World Trade Organisation) rules. India must push for protective language in the FTA to address this issue," GTRI Founder Ajay Srivastava said.

The suggestions came at a time when European Commission President Ursula von der Leyen, accompanied by the EU College of Commissioners or senior political leaders of the bloc, began a high-profile two-day visit to India on Thursday. The issue is expected to fig-



ure in the meetings between the two sides. So far nine rounds of talks have been completed between India and the European Union (EU) on the proposed agreement. The 10th

round of talks are scheduled from March 10 to 14.

In June 2022, India and the EU resumed the negotiations after a gap of over eight years. It was stalled in 2013 due to differences over several issues.

In December last year, the commerce and industry ministry said that the proposed trade agreement negotiations need political directions to reach a commercially meaningful deal while understanding each oth-

er's sensitivities. In the pact, the EU is looking at duty cuts on products such as automobiles, wines and whiskey.

Indian goods' exports to the EU, such as ready-made garments, pharmaceuticals, steel, petroleum products, and electrical machinery, will become more competitive, if the pact gets concluded successfully.

India's bilateral trade in goods with the EU was \$137.41 billion in 2023-24, making it the

largest trading partner of India for goods.

In addition, the bilateral trade in services, in 2023, between India and the EU was estimated at \$51.45 billion.

The agreement is aimed at further boosting bilateral trade and investments between the two regions. The two sides are negotiating a free trade agreement, an investment protection agreement and an agreement on geographical indications. **PH**

EU signals no relief for India on CBAM, deforestation rule

SHREYA NANDI

New Delhi, 26 February

The European Union (EU) has signalled that relaxations for India on account of its (EU's) carbon-border levy and deforestation regulation are unlikely even as India's concern over the two is likely to come up for discussion during the upcoming meeting of Prime Minister Narendra Modi with European Commission President Ursula von der Leyen.

The European Commission is the executive arm of the EU.

The EU says that "some" of India's concerns on the carbon-border adjustment mechanism (CBAM) are "illegitimate", but it is ready to address them, a senior trade-bloc official said.

"We are committed to addressing (India's) concerns with parties around the world where they might be affected ... We're keen to share our experiences and our operations of the CBAM with the Indian side. There might be some illegitimate concerns that we will certainly be ready to address," the official cited above said.

On the deforestation regulation the official said: "We will be addressing those concerns (on deforestation regulation), and we can reassure our Indian friends and operators in the market that we look forward to receiving their high-standard products, of course, in full compliance with our deforestation regulation."

Von der Leyen will be in New Delhi during February 27-28, and will be accompanied by EU commissioners of 21 countries — the first such visit to India.

According to the EU, the CBAM is a carbon tax on imported goods. The EU is

RISE IN CONCERNS

■ A senior EU official said that 'some' of India's concerns on CBAM are 'illegitimate'

■ However, they are ready to address the issues

■ Through this, EU wants to encourage cleaner industrial production in non-EU countries

■ European Commission President Ursula von der Leyen will be in New Delhi during February 27-28

■ CBAM is currently in a transition phase and will fully kick in from January 1, 2026



seeking to use the levy — currently in a transitional phase and scheduled to kick in on January 1, 2026 — to encourage cleaner industrial production in non-EU countries.

The European Union Deforestation Regulation requires firms to ensure that the product exported to the trade bloc is grown on land not deforested after December 31, 2020. It will come into effect on December 30, 2025, for large and medium companies, and on June 30, 2026, for micro and small enterprises.

Several countries including India and China have criticised the CBAM, calling it a trade barrier in the guise of reducing carbon emission.

India has also been taking up concerns on these issues on a bilateral basis for over a year and has emphasised the need for a "transition period" before adhering to these regulations. India also thinks its gains will be limited because these regulations will eventually become a non-trade bar-

rier at a time when both sides are trying to sign a trade agreement.

Ajay Srivastava, former member of the Indian Trade Service and founder, Global Trade Research Initiative, said once the CBAM and the Free-Trade Agreement (FTA) kicked in, EU goods would enter India duty-free, while Indian steel and aluminium could face high carbon charges there.

"Since the CBAM imposes tariffs based on production methods, it violates rules of the World Trade Organization (WTO). India must push for protective language in the FTA to address this issue. EU officials have a tough task placating India's concerns because there are no exemptions for any country, including FTA partners, on the CBAM," Srivastava said.

The EU official, however, emphasised that the CBAM was a "fair measure" to stop "carbon leakage", and was compatible with WTO norms.

Should we eat our greens?

Panel to visit B'lore, conduct surveys to ascertain if vegetables grown in and around city are contaminated



Garima Prasher

garima.prasher@timesofindia.com

TWEETS @BangaloreMIRROR

A Joint Committee constituted by the Central Pollution Control Board (CPCB) will soon be visiting Bengaluru to carry out field surveys to ascertain if vegetables grown in and around the city are contaminated with heavy metals and pesticides.

The committee, comprising members from Karnataka State Pollution Control Board (KSPCB), Food Safety and Standards Authority of India (FSSAI), ICAR Indian Institute of Soil Science (IISS)-Bhopal, and the University of Agricultural Sciences (UAS) in Bengaluru, is expected to conduct surveys in Chikkaballapura, Kolar, Nelamangala, and Ramanagara where vegetables for Bengaluru are grown using both freshwater and treated/untreated sewage.

Specific vegetable fields for surveys have already been identified in these areas and geo-mapped for sampling. The samples collected by the Joint Committee will be tested for heavy metals and pesticide residues in FSSAI-approved laboratories in Bengaluru.

The survey is being conducted in response to an instruction given by the National Green Tribunal (NGT) after a study conducted by the Environment

CONTINUED ON PAGE 11 >>

■ 'No greater time to engage economically with India than now': Albanese New Oz roadmap to boost Indian trade ties

SRIDHAR
KUMARASWAMI
NEW DELHI, FEB. 26

Trade is the renewed mantra for engaging India globally. After the US, the UK and the European Union (EU) scaling up efforts for free trade pacts with New Delhi, Australia on Wednesday launched "a new roadmap for Australia's economic engagement with India".

The roadmap "identifies four superhighways of growth" — clean energy, education and skills, agribusiness, and tourism — where both nations have natural strengths

and a competitive edge.

Acknowledging that India's economy is on track to be the world's third-largest by 2030, Australian PM Anthony Albanese described India as a "giant that continues to grow in stature".

"India is an essential partner as we diversify our trade links to boost prosperity for all Australians. This roadmap is critical to helping us fully realise our potential with India, which will be a boon to Australia's economy, our businesses and jobs, and our prosperity... There is no greater time to engage

India is an essential partner as we diversify our trade links to boost prosperity for all Australians. This roadmap is critical to helping us fully realise our potential with India.

— Anthony Albanese
Australian PM

economically with India than now. It's the most populous country in the world," Mr Albanese said. The roadmap aims to

maximise Australia's trade opportunities, benefit businesses and consumers, secure supply chains, and create jobs. The roadmap also identifies nearly 50 specific opportunities to focus and accelerate bilateral engagement across fields such as defence industries, sports, culture, space, and technology.

This development comes three years after the free trade Economic Cooperation and Trade Agreement between the two nations came into force with the objective to "eliminate or reduce tariffs on goods of either

country entering the other, making them cheaper and therefore much more competitively priced". The Australian PM revealed that his country had already saved AUD300 million on goods imported from India.

He also said the pact had "saved Australian businesses hundreds of millions of dollars and is on track to save exporters around \$2 billion in tariffs by the end of the year".

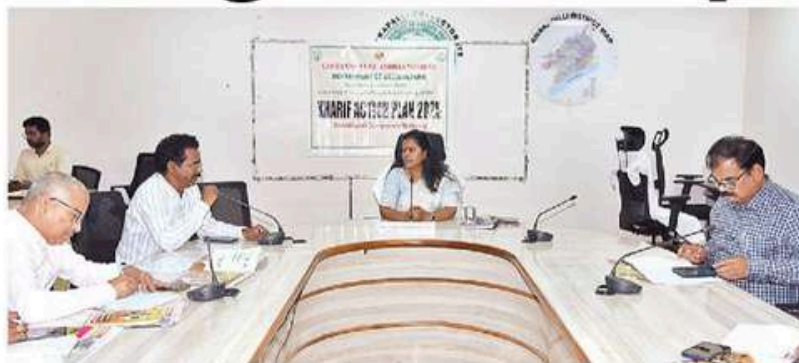
Both sides have been working towards a new mutually beneficial free trade Comprehensive Economic Cooperation Agreement.

Each village to adopt organic farming in Anakapalli

- Collector Vijaya Krishnan says that resources required to do natural farming should be identified in villages
- Rythu Seva Kendras should be made available to promote natural farming
- District officials should plan for the strengthening of natural farming in the next two months, she says

VASU POTNURU
ANAKAPALLI

DISTRICT collector Vijaya Krishnan directed the officials to adopt organic farming in each village in every mandal to follow organic farming in Anakapalli



District collector Vijaya Krishnan speaking at the meeting held in Anakapalli on Tuesday

Holding a meeting with the farmers' empowerment, agriculture, and rural development departments here on Tuesday, the district collector said that district officials should plan for the strengthening of natural farming in the next two months.

She stated that resources required to do natural

farming should be identified in villages. Information on cow-related products 'panchagavya' required for natural farming could be sought from the Department of Animal Husbandry, she added.

Following three meetings at village level and mandal level, Vijaya Krishnan stressed that one village

in each mandal should implement 100 per cent of natural farming.

Prior to commencing farming, all the staff should visit the field and encourage farmers to switch to cost effective natural farming and get their doubts cleared, the collector instructed.

Rythu Seva Kendras

should be made available to promote natural farming and provide required material to implement it, the district collector stressed.

Further, Vijaya Krishnan instructed the officials concerned to submit a detailed report about the natural farming initiative within 15 days.

In other villages of the mandal, chemical fertilisers consumption and sales should be minimised so that farmers get drawn towards natural farming, the district collector said.

Concerned departments will coordinate with one another to make the programme a success.

District Agriculture Officer B. Mohan Rao and Farmers' Empowerment Organisation District Project Manager CH Lachanna and mandal agriculture officials were present.

Strategy on fertilisers

How can India cut urea, DAP, MOP consumption? The shortage of DAP has given a boost to the sales of APS, a complex fertiliser that has become India's third largest-selling plant nutrient product after urea and DAP



HARISH DAMODARAN

CAPPING OR reducing the consumption of urea, di-ammonium phosphate (DAP) and muriate of potash (MOP) has become a strategic imperative of sorts for India.

The reason: all these fertilisers are imported, whether directly or as inputs for domestic manufacturing.

MOP is wholly imported from countries such as Canada, Russia, Jordan, Israel, Turkmenistan and Belarus, as India has no mineable potash reserves.

In urea, India's production meets over 85% of its consumption demand, but the plants mostly run on liquefied natural gas (LNG) imported from Qatar, the US, UAE, or Angola.

DAP is imported in the form of finished fertiliser (mainly from Saudi Arabia, China, Morocco, Russia and Jordan) as well as raw material (rock phosphate from Jordan, Morocco, Togo, Egypt and Algeria; sulphur from UAE, Qatar and Oman) and intermediate chemicals (phosphoric acid from Jordan, Morocco, Senegal and Tunisia; ammonia from Saudi, Qatar, Oman, and Indonesia).

Besides import dependence — made worse by the depreciation of the rupee — a second reason for limiting urea, DAP and MOP usage is that they are "high-analysis" fertilisers: urea and MOP contain 46% nitrogen (N) and 60% potash (P) respectively. DAP has 46% phosphorus (P) plus 18% N.

Most crops don't require fertilisers with such a high percentage of individual nutrients. They need balanced fertilisation — products with nutrients in the right quantities and ratios for effective absorption through the plant roots and leaves. These include not only N, P and K, but also secondary nutrients (sulphur, calcium and magnesium) and micronutrients (zinc, iron, copper, boron, manganese and molybdenum).

Weaning away farmers from high-analysis fertilisers also translates into more effi-

| | UREA | DAP | 20:20:0:13* | SSP | MOP | NPKS* |
|----------------|--------|--------|-------------|-------|-------|--------|
| 2013-14 | 306 | 73.57 | 33.37 | 38.79 | 22.8 | 72.64 |
| 2014-15 | 306.1 | 76.26 | 38.02 | 39.89 | 28.53 | 82.78 |
| 2015-16 | 306.35 | 91.07 | 37.82 | 42.53 | 24.67 | 88.21 |
| 2016-17 | 296.14 | 89.64 | 37.14 | 37.57 | 28.63 | 84.14 |
| 2017-18 | 298.94 | 92.94 | 35.47 | 34.39 | 31.58 | 85.96 |
| 2018-19 | 314.18 | 92.11 | 36.9 | 35.79 | 29.57 | 90.28 |
| 2019-20 | 336.95 | 101 | 42.25 | 44.03 | 27.87 | 98.57 |
| 2020-21 | 350.43 | 119.11 | 51.63 | 44.89 | 34.25 | 118.11 |
| 2021-22 | 341.8 | 92.72 | 50.7 | 56.81 | 24.56 | 114.79 |
| 2022-23 | 357.25 | 104.18 | 50.42 | 50.17 | 16.32 | 100.74 |
| 2023-24 | 357.8 | 108.12 | 53.94 | 45.44 | 16.45 | 110.73 |
| Apr-Jan '23-24 | 317.5 | 101.47 | 49.1 | 42.37 | 13.96 | 100.12 |
| Apr-Jan '24-25 | 345.73 | 87.13 | 65 | 45.12 | 18.76 | 128.38 |

Figures in lakh tonnes; *Includes 20:20:0:13; @Includes 20:20:0:0
Source: The Fertiliser Association of India

cient use of imported material and scarce foreign exchange.

Effective DAP replacement

A good example is 20:20:0:13 or ammonium phosphate sulphate (APS). A complex fertiliser with 20% N, 20% P, 0% K and 13% sulphur (S), it has emerged as an effective substitute for DAP, despite having less than half of the latter's P content.

DAP is manufactured by importing merchant-grade phosphoric acid with 52-54% P content and reacting it with ammonia (the source of N). The end product has 18% N and 46% P.

But companies can instead import rock phosphate with 28-36% P and react it with sulphuric acid. The resultant "weak" phosphoric acid, with only 27-29% P, is further reacted with ammonia and sulphuric acid to produce 20:20:0:13.

Alternatively, they can import normal "strong" phosphoric acid, while using less of it for simultaneously reacting with sulphuric acid (the source of S) and ammonia to make APS.

"The idea is to not waste expensive phos-

phoric acid. Making one tonne of DAP requires about 460 kg of phosphoric acid and 220 kg of ammonia. Here, you use only 220-230 kg of phosphoric acid, 220 kg of ammonia and 1,200 kg of sulphuric acid to get one tonne of 20:20:0:13," G Ravi Prasad, a fertiliser industry veteran, said.

Drivers of substitution

APS, according to Prasad, is good for oilseeds, pulses, maize, cotton, onion, chilli and other "sulphur-hungry" crops. Even the P and K nutrient requirement of potato can be effectively met through 10:26:26:0 or 12:32:16:0 complex fertilisers. "We should reserve DAP use only for wheat, rice and sugarcane," he said.

Sales of 20:20:0:13 recorded a 32.4% jump from 4.9 million tonnes (mt) in April-January 2024-25 to 6.5 mt in April-January 2023-24, while dipping by 14.1% for DAP (see table). The current fiscal (April-March) could end with all-time-high APS sales of 7 mt and DAP at 9 mt, the lowest since 2016-17.

APS has become India's third largest-consumed fertiliser after urea and DAP. It has overtaken single super phosphate (SSP), pre-

viously the most popular alternative to DAP. SSP, which contains 16% P and 11% S, is manufactured by reacting rock phosphate directly with sulphuric acid.

"APS was traditionally consumed in the South (60% share) and West (Maharashtra, Madhya Pradesh and Gujarat). But in the last 4-5 years, its acceptability has increased in the East and even North, and across crops. It is a stable product with P in water-soluble form, besides having N (not present in SSP) and S (absent in DAP)," said N Suresh Krishnan, chairman of the Fertiliser Association of India.

A key driver has been the short supply of DAP and the government not providing enough subsidy to cover import/production costs.

The Centre has informally fixed a maximum retail price (MRP) of Rs 27,000 per tonne for DAP. That, along with a subsidy of Rs 21,911 and a special concession of Rs 3,500, takes the gross realisation to Rs 52,411 per tonne. As against this, the ruling landed price of imported DAP alone is around \$636 or Rs 55,150 per tonne.

Adding customs duty, port handling, bagging, interest, dealer margin and other expenses pushes up the total cost to over Rs 65,000 per tonne, making imports unviable. These have fallen, from 5.1 mt in April-January 2023-24 to 4.3 mt in April-January 2024-25.

On the other hand, the MRP of APS is just Rs 1,000 lower at Rs 26,000 per tonne. And by selling twice the number of bags from the same quantity of phosphoric acid, companies are making some money — not losing, as they are with DAP now.

The road ahead

This fiscal (2024-25) will likely see sales of NPKS complex fertilisers touch 14 mt, almost double the 7.3 mt of 2013-14. Much of it is courtesy of 20:20:0:13, which is steadily replacing DAP.

A similar marketing push is necessary for 10:26:26:0, 12:32:16:0, 15:15:15:0 and 14:35:14:0, so as to minimise direct application of MOP and selling only after incorporating into these complexes.

The ultimate goal must be to cap, if not reduce, consumption of all high-analysis fertilisers. And that includes urea.

Study had highlighted presence of metals, pesticides in veggies

CONTINUED FROM PAGE 1

Management Policy Research Institute (EMPRI) highlighted the issue. EMPRI's study which was published in 2023 analyzed 400 samples of 10 vegetables and found nickel, lead, cadmium, and iron levels higher than prescribed limits by the Food and Agriculture Organization (FAO).

Under the survey, expected to take place in the last week of February, different vegetable samples will be collected randomly from local markets in and around Bengaluru following the protocols of FSSAI.

The committee will also con-

duct soil profiling up to 90 cm to 1 m depth on all identified fields. Soil samples and water samples (groundwater, surface water, treated sewage water) will also be analyzed for heavy metals and pesticide residues.

Based on the analysis results, a report of the Joint Committee will be prepared by comparing the results with relevant standards and findings will then be presented before the NGT southern zone within the next four months after receipt of analysis results from the laboratories.

Toxic nature

The decision to conduct a field study was taken after the

first meeting of the Joint Committee that was held on 23 January 2025.

Notably, the Joint Committee was formulated by CPCB in October 2024 to study the presence of toxic compounds and heavy metals in Bengaluru's vegetables.

This was after a suo-motu case was taken up by the principal bench of NGT based on news items highlighting the findings of the study conducted by EMPRI.

The study highlighted that vegetables cultivated with wastewater had presence of heavy metals. The concentration of Iron and Cadmium in coriander and

spinach, and Nickel in vegetables exceeded the permissible limits set by FAO.

"CPCB is directed to ascertain the correct ground situation and also duly examine the report of EMPRI and submit the factual status as also factual action taken report before the Southern Zone Bench of the Tribunal.

Let the samples of vegetables be collected and analyzed for the individual heavy metals and pesticides parameters in the Central Laboratory of CPCB, Delhi as per standard methods and let their report be furnished," NGT principal bench had issued the directions.

C-CAMP transfers novel bio-based agri solutions to PI industries

BENGALURU, DHNS

The Centre for Cellular and Molecular Platforms (C-CAMP) in Bengaluru has transferred two novel bio-active, non-chemical agricultural solutions — AphidControl and XanthoControl — to the agri-sciences company, PI Industries.

The announcement was made at an event in New Delhi at the office of the Principal Scientific Adviser (PSA) to the Government of India, in the presence of Prof AK Sood, PSA to the Government of India, and Kris Gopalakrishnan, Managing Trustee of Pratiksha Trust.

The transfer is part of the 'Transforming Deep Science Discoveries into Impactful Innovations for India' initiative under C-CAMP's Discovery to Innovation Accelerator (DIA) programme, which is supported by the Office of the PSA and Pratiksha Trust. The initiative aims to translate cutting-edge research into industry-ready solutions for real-world applications.

With pests and diseases con-



The announcement was made at an event in New Delhi at the office of the Principal Scientific Adviser (PSA) to the Government of India. SPECIAL ARRANGEMENT

XanthoControl: A biocontrol agent against bacterial blight

XanthoControl is a microbial metabolite-based biocontrol agent designed to combat *Xanthomonas*, the bacterial pathogen responsible for bacterial blight in over 40 crops, including tomatoes and

pomegranates.

By providing a safer alternative to synthetic pesticides, it addresses concerns about antimicrobial resistance and environmental sustainability.

AphidControl: A sustainable botanical insecticide

AphidControl is a plant extract-based botanical insecticide that effectively targets aphids, a major agricultural pest.

Unlike conventional chemical pesticides, this organic solution provides an eco-friendly approach to crop protection while minimising environmental impact. It has shown superior efficacy compared to existing biopesticides, offering a stronger and more sustainable defence against aphids.

dia, these bio-based solutions represent a critical step toward sustainable agriculture.

This milestone was achieved through the collaborative efforts of CSIR-IHBT, CSIR-CIMAP, IBSD, DBT, and PI Industries.

tributing to an estimated 10- 35% of annual crop losses in In-

Working on measures to restrict distress crop sale: Agriculture minister

PTI ■ NEW DELHI

Union Agriculture Minister Shivraj Singh Chouhan on Saturday said the government is working out measures to ensure that farmers do not have to sell their produce, especially fruits and vegetables, at throwaway prices. Speaking after inaugurating the 'Pusa Krishi Vigyan Mela 2025 -- being held in the national capital from February 22-24 -- he emphasised the need to take new seeds varieties and farm technologies from labs to agriculture filed at the

earliest. Chouhan said the government is holding discussions with farmers directly as well as through their organisations to understand the problems and then making schemes to address the issues. "Jahan-Jahan takleefin dekh rahe hain, hum yojana bana rahe hain (wherever we are seeing problems, we are making schemes to address those)", the minister said, listing out steps taken by the government in the last few years to protect the interest of farmers.

Chouhan said the government has removed exports restrictions on rice and onions while raising import duties on edible oils. He said the Centre has taken steps to help tomato farmers in view of price crash and will take measures for red chilli farmers of Andhra Pradesh as well. "I want to assure our farming community, we will take all important decisions that are required for the welfare of farmers. Do not worry," he said, while asserting that the government is committed to this.

"There are some issues which are under consideration. Prices are low at farm gate level and consumers are paying high rates. Who takes the profit in middle? Profit margins should reduce. The difference between the farm gate price and consumer price for fruits and vegetables should come down," he said. The minister added, "We are working out (a way) to ensure that farmers do not have to sell their produce at throwaway prices." Lauding efforts of scientists at Indian Council of Agricultural Research

(ICAR) for its efforts in making India self-sufficient in foodgrains production, Chouhan said there is a need to take new seed varieties and technology to the field quickly so that farmers can benefit. "Availability of good varieties of seeds is important. Farmers require it. ICAR is developing them... We need to ensure these seeds reach farmers quickly," he said. The minister also asked the ICAR to handle 'Modern Agriculture Chaupal' programme where scientists will tell farmers about recent

technological breakthrough, besides solving their problems. The programme will be telecast across India. Chouhan said he does not sit in Krishi Bhawan in Delhi and rather go to fields to understand farmers' problems. He asked officers in his ministry and ICAR scientists to do the same. The minister reiterated that the government is focusing on increasing farm production through yield improvements, reducing cost of production and ensuring that farmers get the right price for their produce.

'Mass-produced sugar came from chemicals, corruption — and environmental destruction'

David Singerman teaches history and American studies at the University of Virginia. Speaking to Srijana Mitra Das at Times Evoke, he outlines the long ark of sugar — and why this is so bitter-sweet:

What is the core of your research?

■ My work looks at the role science and technology have played in the modern global sugar industry. I am interested in how these relate to our ideas of what sugar is and how it should be valued. I've been researching the ways we started thinking of sugar as a chemical substance. It comes from plants like sugarcane and sugar beet — yet, the chemical substance of sugar, sucrose, is the molecule we think of as 'pure sugar'. This carbohydrate is extracted from diverse plants but the idea of molecules, chemicals, etc., is relatively modern — before the mid-19th century, when people thought of sugar, which has a history over 8,000 years, they imagined where it came from, how it tasted, how it felt crushed between their fingers, its medicinal properties, etc. Somehow, we moved from that world — where sugar was a very rich, deep, localised thing — to today where sugar is a bulk commodity, exactly the same everywhere, valued solely on its content of a chemical.

How did sugar go from being an elite luxury to a mass product?

■ In historical terms, sugar is as cheap today as it's ever been — its price has consistently fallen over the last 500 years. Yet, further centuries ago, sugar extracted from sugarcane was expensive — it wasn't considered a food staple like now but a condiment or medicine, something used in small quantities. It was a status symbol — if you could afford confections, that was a demonstration of your wealth.



BITTER: Sugar grew with unfree labour



BEYOND SYRUP: One of the most lucrative industries on Earth, sugar also causes huge deforestation, water loss and planet-heating greenhouse gas emissions

The force that made sugar such a widely available item was its price being so high — that encouraged ruthless and entrepreneurial Europeans to figure out ways to make it more cheaply. One of their innovations was the plantation system which used enslaved labour. This appeared mostly in the Caribbean, Brazil and parts of North America like Louisiana — but it started in the medieval Mediterranean, spreading first to the small Atlantic islands like Madeira, colonised by the Portuguese, and then to the New World colonies.

Europeans learned how to make these plantations larger, more technological — and more brutal. As the plantation system became more effective and more inhumane, it also decimated natural environments. It takes a lot of fuel energy to boil sugarcane juice — that caused deforestation. Growing a single plant over time depleted what were once very fertile soils. This made the colonisers keep seeking new places to establish plantations, which kept expanding sugar production around the world.

Its problematic legacies have con-

tinued. Recent reports, for instance, find terrible labour conditions in sugarcane fields in India — 500 years of sugar in modern global capitalism show how making as much as we now demand means subjecting someone somewhere to a horrible working existence. Where this happens has moved around due to both environmental destruction and the rise of labour rights — but the sugar industry has been very good at finding the most exploitable people and often working them to death to produce cheap sugar. There is some awareness of such



OMNIPRESENT: Some OJ with your sugar?

exploitation — British abolitionists started the first large consumer boycott for humanitarian reasons, protesting sugar produced by slave labour. Recently, it's been found the office in New York which controls hundreds of millions of dollars in city employees' pension funds owns massive stock in addictive food substance industries. They have been trying to use that leverage to make companies correct inhumane labour practices.

You've also written about sugar-fuelled corruption in the US government during its 19th century Gilded Age — could you elaborate?

■ In the late 19th century, the American government made a lot of money from taxes on sugar — but these were assessed on purity and there weren't very good ways to measure this. The industry then offered new scientific techniques to the government, ostensibly to solve its tax problem. Earlier, people working in ports and custom houses doing such measurements were fairly easily bribed — the new techniques then shifted both expertise and corruption to sugar chemists who could also be bribed. This helped sugar companies make more money than their competitors, with chemists advising higher charges on rivals.

How did technology push sugar's spread?

■ Around the 16th century, the plantation system produced a crop which was quite distinctive — early recipe books discuss a dozen different kinds of sugar and buyers were aware of which kind they wanted, which plantation it came from in Jamaica, Haiti, etc. By the mid-19th century, modern industrial technologies allowed the production of more sugar with far greater consistency. By the 20th century, sugar factories were much larger, powered by steam or electricity, with iron and steel equipment and chemists and laboratories, producing hundreds of times of sugar. The product became far more standardised — sugar from India, South Africa, Cuba, the Philippines and Hawaii was quite interchangeable and commodities

futures markets allowing for speculation began to rise.

Alongside, so did our addiction — since 1750, our bodies have been conditioned to consume a huge amount of sugar. Consumption statistics in the United States show how towards the late 19th century, per capita sugar consumption was 80 pounds a year. As more sugar was produced, people bought it in more products, from jams and cookies to savoury sauces and processed bread. People had always liked sugar but we also became chemically hooked to it. Several illnesses are now connected to the over-consumption of sugar, diabetes being the most notorious. Children are special targets of the industry — a study shows the more sugar you eat in the first two to three years of your life, the more adverse effects this has later.

Interestingly sugar is also linked to temperament and behaviour. It's seen as a pacifying food — it can make people very happy for a bit, then lead to a crash. In 'Cuban Counterpoint', Fernando Ortiz, an anthropologist in the 1940s, juxtaposed tobacco and sugar — he emphasised tobacco was associated with rebellion and revolution while sugar was seen as soothing



ADDICTIVE: Sugar is seen as comforting

people into complacency. Importantly, the idea that sugar is bad for you is surprisingly recent. Even in the mid-20th century, sugar companies' promotional material featured doctors saying sugar energises you and it's healthy — it feels hallucinatory to read this now. There is evidence as well of how the sugar industry followed big tobacco's model in actively disguising its role in health problems, paying scientists to deny its impacts in causing obesity, heart disease, etc.

LET THEM EAT CAKE: Once a luxury, sugar sparked revolt

Widening trade deficit raises dumping concerns

SHREYA NANDI

New Delhi, 18 February

The widening merchandise trade deficit at \$23 billion in January from \$16.5 billion a year ago has raised concerns of dumping by trade partners. However, the trade deficit narrowed to \$230 billion during the first 10 months of the current financial year against \$241 billion in the same period a year ago, blunting these apprehensions.

According to a report released by Axis Capital on Tuesday, the January trade data indicates the possibility of dumping of goods into India.

"Non-oil/gold imports rose due

to chemicals, metals and machinery — possibly due to dumping," the report said.

Merchandise exports witnessed 2.4 per cent year-on-year (Y-o-Y) contraction at \$36.43 billion during January, while imports jumped by 10 per cent to over \$59.4 billion, according to the government data released on Monday.

Crude oil imports, which account for 22 per cent of India's total import basket, fell by 13.5 per cent to \$13.4 billion in January. Non-petroleum, non-gems and jewellery imports grew by a fifth to \$41.2 billion.

The higher value of imports was driven by items such as gold (40.8 per cent), electronic goods (17.8 per cent), non-ferrous metals (26 per cent), organic and inorganic chemicals (36.9 per cent), iron and steel (6.9 per cent), among other items.

Ajay Srivastava, former trade ministry official and founder of Delhi-based think tank Global Trade Research Initiative (GTRI) said while imports have grown, there is no clear sign of dumping in the available data.

"India's imports grew by 10.3 per cent Y-o-Y in January and 74

per cent during April-January. However, excluding gold and silver, the growth rate drops to 8.5 per cent and 5.4 per cent, respectively. This pace is reasonable, considering inflation and the depreciation of the Indian currency. Besides, import of items most vulnerable to dumping saw only marginal growth — chemicals rose by 6.9 per cent, while iron and steel declined 3.9 per cent during April-January," he said.

Federation of Indian Export Organisations (Fieo), the apex body for exporters, expressed concern over the significant rise in imports. It called for strategic measures to rationalise inbound shipments into the country.



Use of pesticide top in paddy; banana and spices come next

Sudha.Nambudiri
@timesofindia.com

Kochi: Most Keralites have a pesticide phobia, but that has not stopped farmers and cultivators in the state from using them. The highest pesticide use in the state in 2023-24 was for the paddy crop, followed by banana and spices, said a report in the Economic Review 2024.

According to the report, the total use of pesticides reported in 2023-24 was the highest in the last three years at 511.4 metric tonnes (MT). This included 236.2 MT of chemical pesticides and 275.2 MT of bio-pesticides.

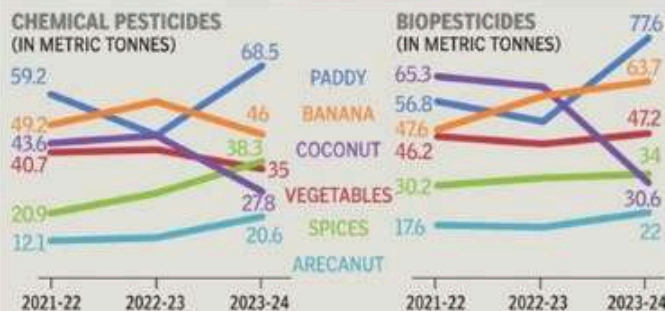
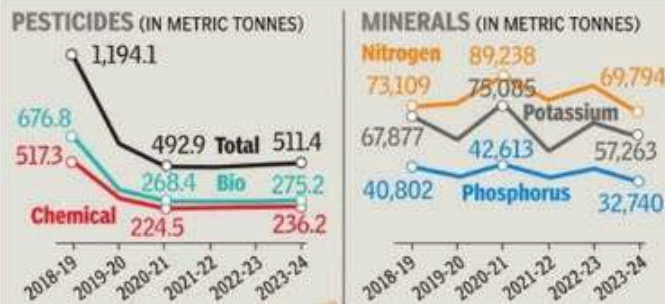
Compared to the previous year, the total consumption of nitrogen, phosphorus and potassium (NPK) fertilisers decreased in 2023-24, to 69,794 MT, 32,740 MT and 57,263 MT respectively. The per hectare (ha) consumption of NPK fertilisers decreased in 2023-24 compared to the previous year, with 26kg per ha, 12kg per ha and 20kg per ha respectively. The ratio of consumption of nitrogenous fertilisers to phosphorus and potassium fertilisers together was 81%, which is less than the previous year. While farmers claim that they use it to eradicate diseases and pest menace, officials admit that the use of fertilisers is callous and without caution.

According to the data, the use of chemical pesticides in the paddy crop increased from 59.2 MT to 68.5 MT from 2021-22 to 2023-24. Except for vegetables and coconut, all other crops like spices and arecanut are high, while there is a slight decrease in the usage in banana from 49.2 MT to 46 MT from 2021-22 to 2023-24. For the banana crop, it was as high as 57 MT in 2022-23.

"Even though it is put in the larger category of spices,

SURGE IN USE OF PESTICIDES

The total consumption of pesticides reported in 2023-24 was the highest in the last three years at 511.4 metric tonnes



the major usage is in cardamom. I believe that there is underreporting on the usage of pesticides and there is no clear idea on how they are getting this data because often farmers will not disclose the usage. So, I don't believe that it has come down, though it shows that there is a drop in the previous year," said AD Dileep Kumar of Pesticide Action Network (PAN) India.

Normally herbicides and weedicides are used as plant-killers and are used to destroy unwanted plants in an area.

These are harmful chemicals, which not only kill unwanted plants but also stay in the environment, harming life in general. The report said as part of quality control enforcement of fertilisers, pesticides, biofertilisers and organic manures distributed in the state, samples were collected from outlets and analysed in departmental laboratories. Accordingly, 2,212 pesticide samples, 4,276 fertiliser samples and 53 biofertiliser and organic manure samples were analysed.

A sustainable food industry is the need of the hour

As the sector expands, businesses must balance affordability with innovation, offering products that meet both health-conscious and budget-conscious demands

VINCENT FERNANDES

FUTURE-proofing our food system is one of the biggest systemic challenges we face globally. The food industry is responsible for a huge portion of CO₂, methane, and nitrogen emissions globally, and contributes massively to deforestation. These sustainability concerns add to challenges like price volatility, rising costs and changing consumer preferences.

Yet, the food sector is pivotal in feeding our growing population. Not to mention an essential part of the global economy, providing a livelihood for millions, through agriculture, transport, retail, innovation and more.

The food industry is shifting towards sustainability and personalization, embracing alternative proteins, local foods, nutraceuticals, and personalized nutrition. Environmental concerns are prompting startups and brands to adopt waste reduction and zero-waste practices.

The food and beverages market will grow from \$7400.31 billion in 2025 to \$9423.34 billion in 2029 at a compound annual growth rate of 6.2 per cent. On a granular level, the food industry is growing steadily at an annual rate of 4.00 per cent as per the Discovery Platform's latest data.

As global life expectancy continues to rise, there is an increasing focus on health and wellness. Consumers are actively seeking nutrient-dense foods that support immunity, mental well-being, and healthy aging. This demographic shift drives a trend towards purpose-driven health, where individuals concentrate on specific functional foods that can aid in achieving their health goals and go beyond basic nutrition.

To address the growing demand of consumers who prioritize healthy aging, manufacturers should consider fortifying with functional ingredients.

This includes gut-friendly probiotics to support digestive health, ome-



The rise of plant-based diets, functional nutrition, and cultural culinary experiences signals a shift towards more mindful consumption. However, challenges such as supply chain disruptions and resource scarcity require long-term strategies that integrate local sourcing, alternative proteins, and waste reduction

ga-3 fatty acids and phytosterols for heart health, glucosamine for joint health, and vitamins and minerals for overall wellbeing.

Additionally, developing accessible packaging and appropriate portion sizes will be essential. The demand for longevity-focused products paves the way for purposeful eating habits, creating opportunities to design targeted nutrition solutions.

Inflation and economic volatility from the past years are reshaping consumer spending patterns, making affordability a top priority. With budget-conscious consumers seeking value-driven products, this macro factor is driving the trend for affordable and satisfying solutions, such as meal kits or bulk packaging, that strike a balance between cost, quality, and innovation.

Reformulating products with cost-effective raw materials, such as using locally-sourced flours and grains, replacing some meat and dairy with alternative proteins, or using mul-

tifunctional ingredients, can help maintain affordability while preserving taste and nutrition. Offering smaller product sizes and partnering with private-label brands may attract price-sensitive customers, enabling manufacturers to effectively meet the needs of value-seeking consumers.

The resurgence of global travel and cultural exploration reignites interest in international cuisines. As consumers seek unique flavors inspired by diverse cultures, this macro trend connects with the "feel-good foods" movement—where indulgence, mood enhancement, and sensory enjoyment take center stage.

To cater to this trend, manufacturers can explore innovative culinary techniques and flavor combinations that enhance value without sacrificing quality. For example, trending flavors include Japanese-inspired flavors such as miso in baked goods or yuzu in chocolates. Local and traditional flavors could also be added to reinvent modern foods. These flavors

serve as a portal to the past, igniting a sense of nostalgia and familiarity for consumers. By pairing these flavors with emotional benefits like indulgence or stress relief, brands can build stronger connections with consumers who crave culinary adventure and emotional satisfaction. For savory applications, consider collaborating with chefs or food scientists can lead to the development of exciting products that excite consumers.

The Food market Worldwide is experiencing steady growth due to factors such as increasing health consciousness among consumers and the convenience of online food services. However, the market's growth rate is hindered by challenges in the sub-markets of Dairy Products & Eggs, Meat, Fish & Seafood, Fruits & Nuts, Vegetables, Bread & Cereal Products, Oils & Fats, Sauces & Spices, Convenience Food, Spreads & Sweeteners, Confectionery & Snacks, Baby Food, Pet Food, Processed Vegetables, Fruit & Potatoes and Pasta & Rice. These sub-markets face competition, changing consumer preferences, and supply chain disruptions, which impact the overall market's growth.

In the food market industry, there is a growing trend towards plant-based and sustainable food options. This trend is driven by increasing consumer awareness of the environmental impact of traditional meat production and a desire for healthier, more ethical food choices. As a result, companies are investing in alternative protein sources and developing innovative plant-based products. This trajectory is significant as it has the potential to disrupt traditional food supply chains and impact the entire industry. Industry stakeholders must adapt to these changing consumer preferences to remain competitive in the market. Additionally, this trend has implications for sustainability and food security on a global scale, as it addresses issues such as climate change and resource scarcity.

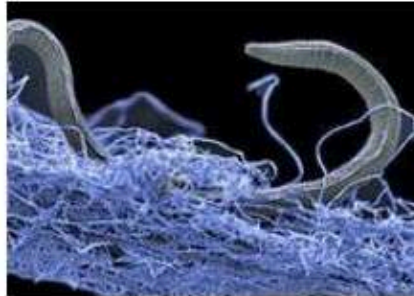
Scientists and Syngenta join forces to combat invisible crop threat nematodes

Our Bureau

Chennai

In a first-of-its-kind initiative, over 100 agricultural scientists from across the country convened to address the growing threat of nematodes — a major cause of crop losses, resulting in an estimated financial impact of ₹25,000 crore annually.

At a symposium in Goa organised by Syngenta India, experts called for an effective nematode management to safeguard soil health, sustain crop productivity and minimise chemical interventions. The scientists urged stronger investments in research and a more robust R&D pipeline to combat this



“killer”. The symposium “Management in Agriculture” highlighted the impact of nematodes, microscopic worms that attack plant roots, causing stunted growth, reducing yields and increasing their vulnerability to diseases.

Sustainable management strategies, including crop rotation, resistant plant varieties and biological control agents, to mitigate losses and ensure long-term agricul-

tural productivity were suggested.

TECH-DRIVEN

The day-long symposium, held at the Syngenta Research & Technology Centre, aligns with the company’s commitment to collaborative partnerships with universities and research institutes, a statement said.

The initiative aims to develop technology-driven solutions for nematode management while increasing farmer awareness about its impact.

Susheel Kumar, Country Head and MD, Syngenta India, said, “Collaborations between industry and academia are essential to transforming Indian agriculture.”

New agriculture policy likely to boost horticulture through contract farming

‘Will Benefit Landowners And Farmers’

Nida.Sayed@timesofindia.com

Panaji: Goa’s new agricultural policy, unveiled on Tuesday, is likely to open new avenues for horticulture crop cultivation with the possible introduction of contract farming in the state.

According to Chandras Desai, the managing director of Goa State Horticulture Corporation Limited (GSHCL), the policy could be-



Officials hope the policy would pave way for a rise in vegetable production

benefit farmers and landlords by introducing legal structures for contract farming.

“Presently, Goa lacks a formal contract farming law, which has resulted in hesitation among farmers and lan-

downers to enter into agreements. The fear of losing control over land to external farmers has stifled opportunities for cultivating under-used agricultural land. However, the new policy, once ap-

proved by the cabinet and supported by necessary legal amendments, will make it possible to lease land for farming without granting ownership rights,” Desai said.

He further said that the introduction of a contract farming law would pave the way for a rise in vegetable production in the state. “This policy could prove especially advantageous for people who own paddy fields in rural areas but have moved to the urban areas. Under the new provisions, these barren lands can be brought back into production while easing the burden on landowners,” he added.

A major highlight of the

new policy is the formation of state boards for key cash crops in Goa—mango, cashew, and coconut.

“There will be a more intensive and focused programme on these horticulture crops. There are national boards for mango, cashew, and coconut, and once the Goa state boards are set up, they can access funding from these national bodies to support local farmers,” he said.

In terms of vegetable production, Goa is already a strong producer of cucumber, okra, cluster beans, green chilli, and bottle gourd, which thrive well in the state’s climate and laterite soil.

India sets up EFTA desk to promote trade, investment and business facilitation

Press Trust of India
New Delhi

India on Monday announced the setting up of a dedicated platform — European Free Trade Association (EFTA) desk — to promote trade, investment and business facilitation between the two regions.

India and the four European nations of the EFTA bloc signed a free trade agreement on March 10 last year to boost trade and investment ties.

The pact, officially dubbed as Trade and Economic Partnership Agreement (TEPA), is expected to come into force by the end of this year.

The EFTA members are Iceland, Liechtenstein, Norway and Switzerland.

\$100-B INVESTMENT

The setting up of the desk is important as under the pact, India has received an investment commitment of \$100 billion in 15 years from the



Minister of Commerce and Industry Piyush Goyal

grouping while allowing several products, such as Swiss watches, chocolates and cut and polished diamonds, at lower or zero duties.

This is a first-of-its-kind pledge agreed upon in any of the trade deals signed by India so far.

It aims to serve as a dedicated platform to promote trade, investment, and business facilitation between India and the four EFTA nations. Inaugurating the desk along with ministers from the bloc, Commerce and Industry Minister Piyush

Goyal said that it would operate from Invest India, a national investment promotion agency.

"It will help businesses of EFTA countries to navigate areas of concern and would make it easier for them to do business in India," Goyal told reporters.

The dedicated desk will act as a centralised support mechanism for EFTA companies looking to expand in India. It will provide market insights and regulatory guidance, business matchmaking, and assistance in navigating India's policy and investment landscape, it added.

Speaking at the event, Helene Budliger Artieda, Swiss State Secretary, said that they are informing their companies about investment opportunities in India.

RATIFICATION PROCESS

Dominique Hasler, Minister of External Affairs, Liechtenstein, said that the process of ratification of the agreement

is under process.

Tomas Norvoll, State Secretary of Trade and Industry, Norway, too said that the pact will be approved in their parliament. Norwegian businesses "see potential in the Indian market," he said.

A high-level EFTA-India business roundtable also met here and discussed ways to strengthen economic ties.

Over 100 leading businesses from India and EFTA nations, aimed at fostering collaboration across key sectors, including pharma, life sciences, financial services, fintech, engineering, energy, seafood, maritime, food processing, agritech participated in the roundtable discussions.

It provided a structured forum for companies to explore joint ventures, investment opportunities, and technology partnerships under the framework of TEPA.

India-EFTA two-way trade was about \$24 billion in 2023-24 against \$18.65 billion in 2022-23.

Maha to supply 100% green energy for irrigation by March '26

Saurabha Kulshreshtha
hkmumbai@hindustantimes.com

MUMBAI: The Maharashtra State Electricity Distribution Company Ltd (MSEDCL) says it is making a shift to purchasing solar power for agricultural pumps, which would ultimately benefit industrial consumers, who are cross-subsiding irrigation for farmers. This shift is expected to reduce the ₹13,500-crore cross-subsidy being shouldered by industrial consumers, and make industrial tariffs in Maharashtra competitive with those of Gujarat, Karnataka and Tamil Nadu.

Spelling out MSEDCL's plans for the power sector in Maharashtra, Lokesh Chandra, Managing Director of India's largest power distribution company, told HT that by March 2026, the entire demand for electricity to power agricultural pumps in the state would be met by solar



Maharashtra will be the first state to give 100% green energy for agriculture pumps, said MSEDCL managing director Lokesh Chandra (centre).

power generation. To achieve this, contracts have been awarded to various companies under the Mukhyamantri Saur Krishi Vahini Yojana (MSKVY 2.0), with a capacity of 16,000 MW. This would make Maha-

raashtra the first state to supply 100% green energy for irrigation. MSEDCL has submitted its tariff proposal to the Maharashtra State Electricity Regulatory Commission, said Chandra. Chandra said that due to tru-

ing-up — pending recovery for extra expenditure on power purchase and distribution for the last couple of years — the electricity tariff of certain categories of consumers, including residential, may increase from April 2025. However, he claimed, due to upcoming projects relating to cheap solar power, tariffs will fall across five years, in a phased manner.

For decades, pending dues from agricultural consumers towards electricity bills have been impacting the balance sheet of MSEDCL. Maharashtra has 4.74 million agricultural pump consumers, whose arrears amount to ₹65,565 crore. Further, to provide electricity to agricultural consumers at concessional rates, the state government offered a subsidy of ₹6,900 crore, and industrial consumers were paying a cross-subsidy, an additional sum in the form of higher tariffs. Due to this, the

average tariff for industrial consumers went up to as much as ₹9.45 per unit.

"MSEDCL has the highest agricultural load in India, which accounts for 30% of its total demand or 40,000 million units. Providing them power at concessional rates entails a burden of ₹13,500 crore on industrial consumers across state. Besides, including the earlier subsidy and a new scheme of free power to farmers, the government pays around ₹15,000 crore. But under MSKVY 2.0, we have already expedited the process for 16,000 MW solar power projects. We will get this power in the range of ₹2.69 per unit to ₹3.10 per unit, which is much cheaper. As a result, by March 2026, Maharashtra will be the first state to give 100% green energy for agriculture pumps. This will immediately give relief of ₹13,500 crore in electricity bills to industrial consumers. "So in the next

five years, industrial tariffs will decrease from ₹9.45 per unit to ₹9.14 per unit," said Chandra.

He added that in the absence of this, the power tariff for industry would have risen to ₹14.67 per unit in the next five years. He further said that since this will be decentralised solar generation, MSEDCL will save on the cost of transmission and distribution too.

Chandra said that in the next five years, MSEDCL has planned to purchase 45,000 MW, the highest capacity addition since the state's formation in 1960. "To support Maharashtra's \$1 trillion economy dream, we have prepared a plan to purchase 45,000 MW of power. Besides, MSEDCL will invest ₹65,000 crore to expand and strengthen its distribution network. There will also be an investment in the transmission network and a total of ₹3.5 lakh crore will be invested in power sector," said Chandra.

Address:

207, Prakash Deep Building, 7 Tolstoy Marg, New Delhi-
110001

Contact Us: 011-43065365 | Email Us: info@acfiindia.com
Visit Us: www.acfiindia.com

DISCLAIMER

The report is prepared using information of a general nature and is not intended to address the circumstances of any particular individual or entity. The report has been prepared from various public sources and the information received from these sources is believed to be reliable. The information available in the report is selective and subject to up-gradation, revision and amendment. While the information provided herein is believed to be accurate and reliable, Agro Chem Federation of India does not make any representations or warranties, expressed or implied, as to the accuracy of completeness of such information and data available in the public domain.