AGRO CHEM FEDERATION OF INDIA

ACFI NEWSLETTER

DECEMBER 2025

NEWS

POLICY

Higher penalty, regulating quality: What new Seeds Bill proposes

Harikishan Sharma
New Delhi, November 30

THE CENTRE has come out with a new Seeds Bill, proposing mandatory registration of seed varieties and stricter punishments for violations. The draft law, released by the Ministry of Agriculture and Farmers Welfare on November 13, will replace the Seeds Act, 1966 once enacted.

Why is the new Seeds Bill required?

The existing law regulates only notified seeds (new varieties 'notified' for public cultivation by the government). Also, registration of seeds is not compulsory. Green manure seeds, commercial crops and plantation crops are excluded. Penalties under the current law are low, going up to six months in prison and a fine of Rs 1,000.

These gaps have long prompted the demand for a new law. A previous attempt was made in 2004, when a Bill was introduced in the Rajya Sabha on December 9. It was referred to a Parliamentary committee on December 17, 2004, but never became law.

How big is the problem of spurious and substandard seeds?

There have been complaints of substandard seeds in the market, repeatedly flagged by Agriculture Minister Shivraj Singh Chouhan.

Responding to a question by Congress member Randeep Singh Surjewala on August 8, Minister of State for Agriculture and Farmers' Welfare Ramnath Thakur said 43,001 seed samples were found "non-standard" in the last three years (2022-25). West Bengal accounted for 62 per cent (26,603) of such seeds, followed by Tamil Nadu (4,448) and Madhya Pradesh (3,517).

"During the last three years (2022-23 to 2024-25), Centre and States authorities combined tested a total of 5,27,814 fertilizers samples out of which, 28,303 samples were found non-standard. Similarly... 5,97,859 seed samples were tested out of which, 43,001... were found to be non-standard," the minister said.

States issued 12,287 warnings, 12,915 stop-sale orders, filed 1,914 FIRs/cases, and reported 164 forfeitures over the same period, Thakur said.

How much seed does India require annually?

According to the Agriculture Ministry, annual seed requirement in 2024-25 was estimated at 48.20 lakh tonnes, against the availability of 53.15 lakh tonnes. India's seeds market is valued at about Rs 40,000 crore.

From May 2014 to August 2025, 3,053 varieties were released — 85 per cent from the public sector and 15 per cent from the private sector.

India's seeds market is valued at about Rs 40,000 crore. ARCHIVE

Open for feedback

- The ministry has invited public comments before finalising the Bill for introduction in Parliament.
- The deadline for feedback is December 11. After incorporating the feedback, the draft will go to the Union Cabinet for approval.

What are the key provisions of the new Seeds Bill?

The Seeds Bill, 2025 proposes mandatory registration of seed varieties and penalties of Rs 30 lakh and three years' imprisonment for major offences such as sale of "spurious" and non-registered seeds.

Section 13 states: "On and from the date of commencement of this Act, no seed of any kind or variety except farmers' variety and kind or variety produced exclusively for export purpose shall... be sold unless such kind or variety is registered..."

Existing varieties notified under Section 5 of the Seeds Act, 1966 will be deemed registered under the new law.

The Bill seeks to regulate the quality of seeds for sale and import and to ensure supply of quality seeds.

According to the ministry, the Bill is "aligned with current agricultural and regulatory requirements" and will replace the Seeds Act, 1966 and the Seeds (Control) Order, 1983. "The draft Seeds Bill, 2025 seeks to regulate the quality of seeds and planting materials... ensure farmers' access to high-quality seeds at affordable rates, curb the sale of spurious... seeds, protect farmers from losses, liberalise seed imports... and safeguard the rights of farmers," the ministry said.

"On the enforcement side, the draft Bill proposes to decriminalise minor offences... while maintaining strong provisions to penalise serious violations effectively," it said.

What happens next?

The ministry has invited public comments before finalising the Bill for introduction in Parliament. The deadline for feedback is December 11. After incorporating the feedback, the draft will go to the Union Cabinet for approval.

Once cleared, the Bill can be introduced in Parliament.

At an event on October 30, Chouhan said the government aims to introduce the Seeds Bill and Pesticides Bill during the Budget Session early next year.

Climate change forces state to redraw farming map

Pearl.DSouza@timesofindia.com

Bengaluru: Karnataka is gearing up for a major shift in the way it understands farming landscapes. For the first time in nearly four decades, the state is revisiting — and redefining — its 10 agro-climatic zones, a legacy framework that has long guided farmers on what to grow, when to sow, and how to irrigate. The exercise comes as climate patterns grow increasingly unpredictable.

The zones — historically mapped on rainfall, soil type, elevation, topography, major crops and irrigation practices — are now being reassessed to reflect a rapidly warming world.

A high-level committee headed by BV Patil, former vice-chancellor, University of Agricultural Sciences, Raichur, has already met four times on the issue. The panel includes agricultural scientists, vice-chancellors, and representatives from India Meteorological Department, ISRO, Karnataka State Natural Disaster Monitoring Centre, the groundwater board, KSRSAC and the National Bureau of Soil Survey and Land Use Planning.

CB Balareddy, additional director of agriculture, said the next meeting is expected soon, with KSRSAC currently analysing more than 30 years of data on cropping systems and weather trends to support re-delineation. The report is expected by the end of Jan 2026.

PTI

BEATING CLIMATE: For the first time in nearly four decades, the state is redefining its 10 agro-climatic zones, which guides farmers on what to grow, when to sow, and how to irrigate

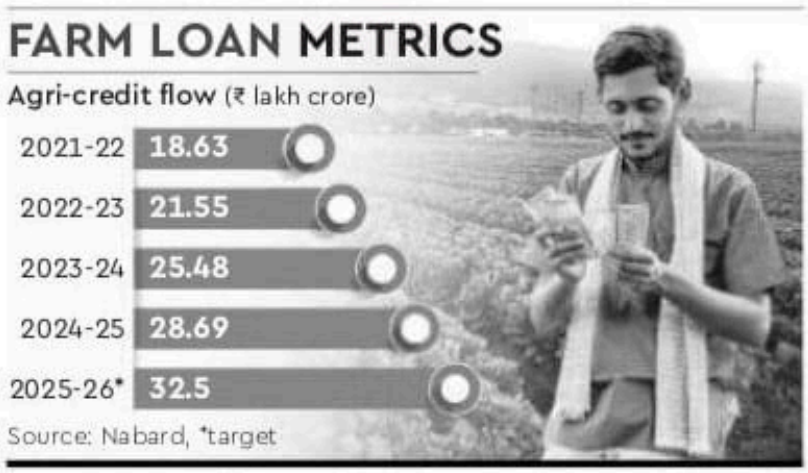
The shift also aligns with the 2025-26 state budget, which highlights an integrated farming system model to be piloted in each agro-climatic zone under the Raita Samruddi Yojane for farmer demonstrations.

Manju AC, deputy director of agriculture, said the new boundaries will enable sharper advisories. "North interior Karnataka is seeing a steep rise in days of heavy rainfall," she said. "With the new delineation, we can advise farmers exactly where short-duration crops like cowpea and green gram (harvest in 60 days) and long-duration crops like red gram (160 days) will work best based on available rainy days and soil moisture."

Officials acknowledged that real-time mapping of climate effects will reshape existing cropping patterns. "Farmers are already shifting to climate-resilient crops — more maize and arecanut, and less sunflower, despite central incentives," Balareddy said. He said resilient millets and pulses are likely to dominate fields of the future.

Nabard: Agri credit to grow to ₹32.5 lakh cr in FY26

SANDIP DAS
New Delhi, November 30



CREDIT TO THE agriculture sector from commercial banks and regional rural banks is set to exceed a record ₹32.5 lakh crore in FY26, driven by greater formalisation of rural lending and rising credit demand, according to Nabard.

Banks disbursed ₹14.51 lakh crore in farm loans in the first half of FY26. Financial institutions are expected to meet the agriculture credit target of ₹32.5 lakh crore for 2025–26, the agency said. In FY25, commercial banks, cooperatives and regional rural banks together extended ₹28.69 lakh crore, with about 60% going to short-term crop loans and the rest to investment credit for agriculture and allied sectors.

Despite a decade of double-digit growth, credit distribution remains uneven. Southern states accounted for 48% of the more than ₹28 lakh crore in agricultural loans disbursed in FY25, even though Andhra Pradesh, Telangana, Karnataka, Kerala and Tamil Nadu together hold only about 17% of the country's gross cropped area.

According to an analysis by Nabard, the regional disparity in credit flow can be attributed to factors including weak rural financial institutional infrastructure and lower credit absorption due to low level financial literacy across states.

Nabard, which refinances banks based on their on-ground lending, is sharpening its focus on productivity improvements and agri–value-chain financing. To narrow regional gaps, it plans to leverage existing frameworks such as the SHG–Bank Linkage Programme, Joint Liability Groups, micro-enterprise and livelihood development programmes, skill initiatives and farmer-producer organisations.

In FY25, about 55% of total agricultural credit went to short-term crop loans.

Agrochemical industry to witness 6-7% revenue growth in 2025-26: Crisil Ratings report

MUMBAI, Dec 1: The agrochemical industry's revenue is expected to grow 6-7 per cent this financial year driven by a revival in global demand and the normalisation of inventories, just as domestic offtake slows, following an extended monsoon, a report said on Monday.

The report by Crisil Ratings stated that improved farm sentiment globally will drive up export revenue by 8-9 per cent this fiscal but domestic demand will see the perils of excess rainfall causing crop damage, product returns and delayed field readiness. "With realisations stabilising after two years of significant adjustments, the overall growth outlook of 6-7 per cent remains more volume-driven than price-led," Crisil Ratings Senior Director, Anuj Sethi said.

The revenue of Indian agrochemical industry 6-7 per cent will grow this fiscal, supported by a favourably timed revival in global demand and normalisation of inventories just as domestic offtake slows due to a protracted monsoon that impacted kharif season sales, the report said. The report stated that the industry's return to its long-term growth range of 8-10 per cent next fiscal, however, depends on exports sustaining the momentum and domestic demand picking up.

Domestic and export markets each account for almost 50 per cent of the industry revenue. Steady realisations, stable raw material prices and limited US tariff impact will keep operating margins range bound this fiscal and the next, the report stated. It further stated that modest capital expenditure and stable working capital will likely support lower age discipline, helping maintain credit profiles that have been under pressure in recent years.

Crisil Ratings said the domestic agrochemical prices have stabilised as the post-lockdown inventory overhang of China eased. Realisations on agrochemical imports from China have remained around USD 5 per kg, broadly in line with last year, which are expected to stay steady through the year with inventories now balanced and firmer enforcement of environmental norms that will ensure steadier supply flow and keep realisations steady through the year.

"Operating margins of agrochemical makers are expected to hold steady at 12.5-13 per cent year-on-year, but still below the pre-pandemic peak of 15 per cent. This stability comes after a sharp correction in realisations in fiscal 2024 and is supported by better operating leverage, softer input costs and tighter cost controls. Annual investments of Rs 5,500 crore in import substitution, new registrations and debottlenecking will continue, while steady cash accruals and disciplined working capital management will keep borrowing needs low," Crisil Ratings Director, Poonam Upadhyay said.

However, there are key monitorables including any disruption related to climate change, regulatory tightening and currency movement. Weather shifts are influencing demand patterns, while stricter scrutiny of pesticide use in India and overseas may drive portfolio changes, said the report, adding that currency exchange rate swings in key export markets also pose risks for players with concentrated expo- PTI

Farmers' unions oppose Central Seed Bill–2025

HANS NEWS SERVICE
VIJAYAWADA

Farmers leaders addressing a round table meeting in Vijayawada on Sunday

THE draft Central Seed Act 2025 being brought in by the Central government is a policy that favors corporate forces and is detrimental to farmers, according to the opinions expressed on Sunday at a round table meeting here organised by Andhra Pradesh Rythu Sangham and Tenant Farmers Associations.

The meeting was presided over by Rythu Sangham State president V Krishnaiah.

Former Minister and convener of Coordination Committee of Farmer Associations Vadde Sobhanadri Rao, speaking at the round table, stated that the bill is intended to bring agriculture, which is under the jurisdiction of States, under the control of the Centre. He urged the State government to immediately hold an all-party meeting with farmer and tenant farmer associations, consider all their views, and convey the State's opinion on this draft to the Central government.

Introducing a resolution on Seed Bill, Rythu Sangham senior leader Y Kesava Rao said the government is introducing this draft bill in preparation for a free trade agreement with USA. He added that US is demanding that India freely import genetically modified (GM) seeds through the agreement, and the Central government is agreeing to this. He also pointed out that the bill would place restrictions, making it impossible for affected farmers to approach the court.

Agricultural scientist B Sarath Babu stated that this bill will completely destroy farmers' rights. He said the bill stipulates that only cost of the seed will be given as compensation, despite farmers spending lakhs of rupees on cultivation, including fertilisers and pesticides. He argued that seed companies would give farmers compensation in hundreds, based only on the seed price, and wash their hands of the matter. He warned that the arrival of GM seeds would force farmers to buy seeds from companies every year, gradually leading farmers to a state of complete dependence on corporate companies for seeds.

Another agricultural scientist Venugopal recalled that in the past, farmers had to pay large sums to companies in the form of royalty for certain varieties (like BT cotton). He cautioned that this new act will cause even greater harm to the farming community in the future.

Kolla Rajamohan stated that this law is paving the way for American-made seeds to be sold extensively in India.

Earlier, State general secretary of Tenant Farmers Association M Haribabu welcomed the attendees to the round table meeting.

Leaders from various associations, including Marrapu Suryanarayana, V Narasimha Rao, Jonnakuti Sivasankar, Jamulayya, K Ajay Kumar, K Suresh Babu, K Ganesh Kumar, Bottla Ramakrishna, and others, participated in the meeting.

Delayed paddy procurement worries farmers

STATESMAN NEWS SERVICE

Nabarangpur, 1 December: Farmers across Nabarangpur district , who have already harvested their Kharif paddy, are growing increasingly anxious as the procurement mandis remain closed and are likely to open only on 17 December.

Despite completing their harvests and storing the paddy in their yards, farmers say the delay has put them in a difficult situation—especially those who cultivated their crops with borrowed money.

This year, farmers in the Umerkote block battled multiple challenges: heavy and unseasonal rains, fertilizer shortages, and pest attacks. Yet, they managed to save their crops and bring them home. Over 70% of the paddy in the region has already been harvested, and within the next two weeks almost all fields will be cleared. Still, procurement has not begun. The district committee has set 17 December as the date for opening the mandis.

Middlemen make merry buying at distress rates

The delay, combined with winter chill, intermittent rains, and fear of theft, has forced farmers to guard their harvested crop round the clock. Meanwhile, moneylenders and input suppliers are pressuring them for repayment.

Taking advantage of the situation, private traders and middlemen are visiting villages and buying paddy at prices between ₹1,800 and ₹2,000 per quintal—far below the government rate that includes an ₹800 bonus. As a result, many farmers fear losing out on rightful government benefits.

With traders dictating prices in the absence of formal procurement, farmers say they feel helpless.

'UP to boost export units, logistics hubs'

TIMES NEWS NETWORK

Lucknow: Uttar Pradesh is set to accelerate the development of export-oriented industries, world-class manufacturing zones and logistics hubs, infrastructure and industrial development minister Nand Gopal Gupta 'Nandi' announced on Friday.

Speaking at the Economic and Industrial Policy Conclave organised by the Indian Investors Federation during the 10th Grand Banking Leadership Summit at Hotel Taj, Gomti Nagar, he said the state is building a high-trust, high-efficiency industrial ecosystem that meets global standards.

The event brought together leading bankers, policymakers, industrialists and entrepreneurs to discuss investment flows, MSME empowerment, credit reforms and industrial strategies. Minister Gupta highlighted special incentive packages for manufacturing, logistics, and high-tech sectors, aimed at attracting NRI and global investment.

Infrastructure and industrial development minister Nand Gopal Gupta 'Nandi' at the economic and industrial policy conclave

Industry and banking leaders praised UP'seconomic trajectory. CEO Ajay Thakur cited unprecedented MSME growth, rising capital inflows and an 8.2% GDP growth rate under Chief Minister Yogi Adityanath. Executives from Canara Bank and other national banks highlighted support for financing initiatives in expressways, ethanol, One District One Product, food processing, and renewable energy sectors.

Buy maize for use as animal, chicken feed at MSP: CM

BENGALURU, DHNS:

Chief Minister Siddaramaiah said on Monday that producers of animal and chicken food should purchase maize at minimum support price (MSP) of Rs 2,400 announced by the union government.

The chief minister was chairing a meeting of animal and chicken food producers.

Siddaramaiah

Noting that maize grown by farmers would be purchased through the Karnataka State Cooperative Marketing Federation (KSCMCF) Limited, Siddaramaiah said the government would bear transportation, loading and unloading costs.

The government had taken steps to help farmers battered by decreasing maize prices, adding that distilleries had already begun the process of procuring 7 lakh metric tonnes of maize, he said.

"The KSCMF has initiated the process of purchasing 50,000 tonnes of maize. Similarly, an indent will be issued to animal and chicken producing sector and the purchase of 5 lakh metric tonnes of maize will be started," Siddaramaiah said.

In kharif season, maize has been grown on 17.6 lakh hectares, and 53.8 lakh tonnes are expected to be produced.

Of this, 50-60% maize is expected to be used as feed for chicken and animals.

According to officials, 25.89 lakh tonnes of maize is used annually as feed for chicken and animals.

Animal Husbandry Minister K Venkatesh, Food & Civil Supplies Minister K H Muniyappa, Agriculture Minister N Chaluvarayaswamy, Excise Minister R B Thimmapur and others were present.

Stir for purchase centre

Farmers held a protest in the town on Monday, demanding that the government should set up maize purchase centres, reports dhns from Lakshmeshwar in Gadag district.

They set fire to tyres during the protest on the Pala-Badami state highway and warned that they would not withdraw it till their demand was met.

Hundreds of farmers had gathered, at the venue of the indefinite agitation, to celebrate the announcement recently on starting maize purchase centres and also performed a puja. However, since there was no progress, they resumed the protest and raised slogans against the district administration.

Innovation needed in agri sector to enhance productivity: VC

'Technology, innovation and skilled youth play vital role'

BELAGAVI, DHNS

VTU Vice-Chancellor Vidyashankar S, Gram Vikas Society CEO Jagadish Naik, Registrar Prasad Rampure and Registrar (Evaluation) U J Ujwal take part in the inaugural programme of industrial automation laboratory established in collaboration with Schneider Electric under the CSR initiative of Gram Vikas Society at VTU in Belagavi on Monday. DH PHOTO

Emphasising the importance of innovation, particularly in the agriculture sector, Visvesvaraya Technological University (VTU) Vice-Chancellor Vidyashankar S stated that modern engineering solutions can significantly transform farming practices, enhance productivity and boost rural development.

He was speaking at the inaugural programme of the industrial automation laboratory established in collaboration with Schneider Electric under the CSR initiative of Gram Vikas Society at VTU here on Monday.

He highlighted the VTU's commitment to fostering innovation by promoting emerging technologies such as Artificial Intelligence, machine learning, quantum computing, robotics and cybersecurity.

He also spoke about VTU's efforts to implement outcome-based curriculum reforms, expand innovation and incubation ecosystems and establish Centres of Excellence (CoEs) across various domains to support research, start-ups and advanced skill development.

He reiterated India's vision of becoming an indigenously developed, self-reliant nation and underscored the crucial role of technology, innovation, and skilled youth in achieving the national goal of Viksit Bharat 2047. He noted that the Industrial Automation Laboratory would significantly enhance industry readiness and future opportunities for VTU students.

The Vice-Chancellor appreciated the CSR support of Schneider Electric and Gram Vikas Society and highlighted VTU's ongoing initiatives aimed at strengthening technological education.

He also stressed the growing importance of employability skills, advising students trained under the programme to apply their newly acquired competencies effectively in their professional careers.

Gram Vikas Society CEO Jagadish Naik outlined the organisation's commitment to inclusive development through various initiatives. The Yuva Vikas Yojana focuses on improving employability skills among youth, while the Guru Vikas Yojana aims to enhance teaching capabilities of high school teachers in Science, Mathematics and English.

He also mentioned the society's flagship programmes, Mahila Vikas Yojana, Sena Vikas Yojana, Samaj Seva Yojana and Prakruti Seva Yojana, reflecting its dedication to women's empowerment, support to defence families, community welfare and environmental conservation.

Naik expressed satisfaction over collaborating with VTU and Schneider Electric in establishing the forward-looking Automation Lab.

The newly established lab aims to strengthen hands-on technical training for engineering students in PLC, SCADA and advanced automation technologies, aligning with Industry 4.0 requirements.

Certificates were handed over to the first batch of students who successfully completed the Industrial Automation Training Programme.

Registrar Prasad Rampure and Registrar (Evaluation) U J Ujwal were present.

Parl panel to govt: 'Conduct long-term field trials to check efficacy of nano-fertilisers'

Production of nano-fertilisers requires small quantity of raw materials, notes panel

MPOST BUREAU

NEW DELHI: A parliamentary panel has asked the government to conduct long-term field trials on various agricultural crops to check the efficacy of nano liquid fertilisers.

A Standing Committee on Chemicals and Fertilizers on Monday presented a report on 'self-sufficiency in the production of fertilisers with a view to curbing the import of fertilisers - reviewing constraints thereof'.

In its report, the committee said that it was informed that nano-fertilisers hold great promise for application in plant nourishment with nano urea and nano DAP (di-ammonium phosphate) available in bottles at lower prices than conventional urea and DAP.

To further promote nano-fertilisers, the panel has given many suggestions to the Department of Fertilizers, under the Ministry of Chemicals and Fertilizers.

The panel has asked the department to take measures for enhancing the production of nano fertilisers, including nano urea and nano DAP (di-ammonium phosphate), conduct field trials to check efficacy and create awareness about this product among farmers.

REPRESENTATIVE PIC

The committee noted that the production of Nano fertilisers requires a small quantity of raw materials.

"The department may extend full support through its policies and programmes to expand the production capacity of nano fertilisers, including Nano Urea and Nano DAP, many fold so that it could significantly replace the use of conventional Urea/ P&K fertilisers over the years and contribute to attaining self-sufficiency in the fertilisers sector," it recommended.

The committee hoped that the department would take concrete, time-bound and sincere steps in this direction.

Moreover, the panel suggested that "long-term field trials of application of nano fertilisers may be got conducted by the Department on various crops throughout the country... to thoroughly assess and validate the merits and demerits of use of nano fertilisers in terms of crop productivity, nutritional quality of crop produced, soil health, etc.; so that it may be optimally adopted by the farmers as replacement to conventional fertilisers".

These field trials should be conducted in coordination with various research organisations and Krishi Vigyan Kendras (KVKs), among others.

The panel also asked the department to allocate sufficient funds for developing innovative nano-fertilisers. It also felt that more drones should be introduced on a war footing for the application of nano-fertilisers.

The report highlighted that nano Urea is rising as a very important supplement to chemical fertiliser.

During the last two and a half years, 9.32 crore bottles of nano urea have

been sold, which is equivalent to 42 lakh tonnes of conventional urea.

"Similarly, Nano DAP has found excellent acceptance by the farmers. By the end of 2024, more than 3 crore bottles of Nano DAP have been produced, and out of them 2.16 crore bottles have been sold, which is equivalent to 10.82 LMT of conventional DAP, which would have been imported," it added.

KEY POINTS

- Standing Committee on Chemicals and Fertilizers presented a report on 'self-sufficiency in the production of fertilisers
- To further promote nano-fertilisers, the panel has given many suggestions to Fertilizers dept, under the Ministry of Chemicals and Fertilizers

Most of Primary Agriculture Credit Societies in red

Political interference and corruption cripple PACS, according to various audit reports

RAVI KUMAR BOPPANA
PNS ■ Amaravati

An extensive investigation into State's Primary Agricultural Cooperative Credit Societies (PACS) has revealed a staggering financial and structural collapse, with more than 599 societies running into losses and an estimated Rs 430 crore in funds misused. What was once the crucial support system for millions of farmers has deteriorated into a network weakened by corruption, political intervention and systemic failures, leaving rural communities grappling with delayed credit, expensive private loans and deepening distress, according to Cooperative Audit reports and official sources.

Primary Agricultural Cooperative Societies in Andhra Pradesh, established to ensure timely farm credit, input supply and marketing support, are now struggling under severe financial mismanagement. Reports gathered from departmental audits, field enquiries and official reviews between 2023 and 2025 indicate alleged widespread diversion of funds, issuance of fake loans, forged documentation and persistent political pressure on management committees.Once functioning as the backbone of rural economies, these societies today find themselves crippled by poor oversight, negligent administration and a dramatic rise in loan defaults. The erosion of trust has left farmers dependent on private moneylenders, pushing them into cycles of high-interest debt.

In Guntur district, nearly a quarter of PCS units are in the red. Alleged fake cotton crop loans resulted in losses estimated at Rs 55 crore. In 2023, one society alone issued Rs 1 crore in fraudulent loans, while fertilisers and seeds were diverted into local markets. Farmer protests intensified through 2024 as irregularities surfaced.

In Krishna district, about 25 per cent of societies in Krishna district reported losses. Audit findings indicate possible diversion of nearly Rs 45 crore. Loans intended for farmers were redirected to private traders, and in 2024, Rs 25 lakh was allegedly used for political programmes. Farmers staged demonstrations demanding action, but political intervention stalled corrective measures.In Visakhapatnam district, more than 25 societies in the district are operating at a loss. Irregularities in loans issued for coffee and horticulture crops resulted in nearly Rs 25 crore being misused. Tribal farmer groups organised agitations demanding strict inquiry.

In Prakasam district, over 60 PACS units in Prakasam district recorded heavy losses. Mismanagement of tobacco-related loans reportedly led to a Rs 40-crore shortfall. Farmers filed complaints seeking detailed audits.

In Nellore district, around 20 per cent of PACS units reportedly incurred nearly Rs 30 crore in losses due to alleged irregularities in aquaculture and paddy-related loans. In one 2024 case, inputs worth Rs 25 lakh were sold illegally. Farmers alleged that political pressure prevented action on formal complaints.

In Chittoor district: more than 60 societies eported losses amounting to nearly Rs 60 crore. Investigations revealed that multiple loans were sanctioned using forged documents. Farmer groups held protests demanding accountability.

In Anantapur district, nearly a fifth of PACS units in this drought-prone district reported instability. About Rs 70 crore was allegedly diverted during drought-relief schemes. In 2023, one society allegedly siphoned off Rs 10 lakh. Protests erupted again in 2024 due to delays in loan disbursals and input supply.

In Vizianagaram district, out of 65 PACS units, 54 are in financial distress. Rajam PACS alone reported losses of around Rs 5 crore. Long-pending commissions and the absence of elections, with three-member committees running operations for years, contributed to the decline.

Multiple layers of supervision, secretaries, supervisors, managers, audit wings and elected management boards are designed to ensure transparency. However, inquiries reveal that these systems have largely collapsed. Supervisors routinely approved reports without verification. Managers, facing political pressure and frequent transfers, sanctioned questionable loans.

Restoring the PACS framework is vital not only for credit distribution but for safeguarding the economic and social fabric of rural India, experts said.

String Bio, CLRRI complete field trial of biostimulant in Vietnam

Our Bureau
Mangaluru

String Bio, a technology company building sustainable, low-carbon solutions for global agriculture, has completed its first field trials in Vietnam in collaboration with the Cuu Long Delta Rice Research Institute (CLRRI) in the Mekong Delta.

A media statement said that the trial focused on 'CleanRise', String Bio's patented foliar microbial biostimulant, which enhances nutrient-use efficiency and stimulates systemic plant responses to boost productive tillering and reduce grain sterility.

In prior Indian studies, CleanRise has demonstrated reductions of up to 50 per cent in methane and nitrous oxide emissions. It is compatible with a wide range of cultivation systems, including alternate wetting and drying, transplanted rice, direct-seeded rice and single drainage systems, it said.

COMPATIBILITY

During the summer-autumn 2025 season, the CLRRI team tested CleanRise on paddy fields under four treatment scenarios involving two nitrogen levels (100 per cent and 75 per cent of standard N dose), both with and without CleanRise.

Quoting Thach and Cuong from CLRRI, the statement said: "CleanRise is compatible with existing cultivation techniques and aligns with Vietnam's national 'One Million Hectare Low-Carbon Rice Program'. Its ease of use and infrastructure-free adoption position it as a promising tool for scale out across diverse rice farming landscapes in Vietnam."

Ezhil Subbian, CEO of String Bio, said the validation data from CLRRI extends the consistent performance, scaling and benefits of CleanRise witnessed with rice farmers across India. To have studies completed with CLRRI-provides a high level of confidence for us to bring CleanRise to the rice farmers of Vietnam."

Apeda orders 100% physical verification of organic farmers

Subramani Ra Mancombu
Chennai

The Agricultural and Processed Food Products Export Development Authority (Apeda) has made it mandatory for 100 per cent physical verification of Indian farmers cultivating organic crops in all growers' groups.

The verification is mandatory for the registration of new organic farmers, renewal of the scope certificate, which confirms a grower's compliance and issuing a no-objection certificate (NOC) to switch certification organisations, according to a communication by a couple of certification agencies seen by *businessline*.

"It is a demonetisation or a special intensive revision (SIR) moment in India's organic farming," said trade analyst S Chandrasekaran. The development is viewed as one to strengthen the organic farming system.

TIGHTENING THE SCREWS. Verification should be done in 3 months from November 3 or grower groups could face problems as the Centre tries to strengthen the organic farming system

One of the certification agencies told a growers' group that continuation of its organic farming project's certification depends on the timely completion of farmers' verification, to be completed within three months from November 3.

FAILURE IMPACT

Any failure would lead to penalties on the certification body, delay or withholding of transaction certifications and scope certification renewal or registration getting prolonged.

Any inconsistency in farmer names or formatting through Aadhaar identification during the verification would be reported to Apeda or the technical team of Tracenet, the authority's software system.

Apeda's latest directive required farmers to be available for physical verification and ready access of documents, registers, maps and acreage records.

Welcoming the initiative, an industry source wondered why the Aadhaar verification was cancelled a few years ago and is being sought now.

The new stipulations require every farmer group to appoint a manager acquainted with the internal control system (ICS) of organic farming, registering it under the Companies Act or the Cooperative Societies Act or a similar cooperatives or societies Act.

Each group should have a three-member approval committee.

Apeda will fix the maximum charge a certification body can levy for the verification process. The growers' group will have to bear the travel and accommodation expenses of the certification body personnel.

The industry source said a farmer group may have to pay ₹2 lakh, including the fees and travel expenses. The charges could be a burden for some groups.

The government or Apeda should consider subsidising the expenses.

The source said as per the National Programme for Organic Production (NPOP), a square root formula should be applied for farmers' verification.

As per Apeda's Tracenet system, all farmers growing organic crops should have been covered in the past decade.

"Apeda seeking reverification now could mean there have been some lacunae," said the source, wondering why a similar problem had occurred in the participatory guarantee scheme.

Welcoming Apeda's initiative, the source said the authority lacks enough staff to monitor organic farming and hence, there is no direct management of farmers.

"Accreditation agencies monitor farmers, but their selection should be stringent, while Tracenet has to be made vibrant," the source said.

GM EVOLUTION

WHILE INDIA IS STILL DEBATING THE SCOPE OF GM CROP CULTIVATION, IT CAN'T IGNORE THE GLOBAL MOMENTUM

Seeds of change

AMIT KAPOOR
PRADEEP PURI
Respectively Chair and Fellow, Institute for Competitiveness

IN 1994, A tomato changed the world! Flavr Savr, a tomato produced in California, USA, ushered in an era where science could modify crops at the genetic level. Since then, genetically modified (GM) crops have evolved from mere lab experiments to global agricultural staples, driven by breakthroughs in transgenics and gene editing.

In the initial two decades of GM crop commercialisation, global adoption was largely limited to maize, soya bean, and cotton. Eventually, the landscape expanded to include wheat, tomatoes, bananas, and alfalfa, each engineered for pest resistance, drought tolerance, and enhanced nutritional value. Yet, this transformation is far from uniform.

As GM crops continue to reshape agriculture, countries around the world are charting vastly different paths, presenting a mosaic of GM crop adoption. While some countries are sprinting ahead with innovation, such as the US, others in Europe, Asia, and Africa are treading cautiously through layers of domestic regulations and public debate. Moreover, according to the World Health Organization, GM food consumption has no apparent adverse effects on human health, subject to sufficiently rigorous and long-term safety testing protocols. Still, the divergence in regulatory models and public sentiment is stark across the globe. It is particularly relevant for India to understand the root cause of this divergence as the country crafts its own road map for biotechnology in agriculture. Doing so will help ensure that policy decisions strike a balance between innovation, biosafety, and public trust in a rapidly evolving agricultural future.

In the US, approximately 75-80% of the processed foods, such as breakfast cereals, snacks, sweeteners, and cooking oils, contain ingredients derived from GM crops, indicating high indirect consumption. The US has not just accepted GM crops but rather embedded them in the agricultural mainstream, with over 95% adoption in maize, soya bean, and cotton, making it an established leader in biotech farming. What sets the country apart is its product-based regulatory model, overseen by the United States Department of Agriculture, Food and Drug Administration, and Environmental Protection Agency. Instead of focusing on how a crop is made, regulators assess the safety and impact of the final product. This approach has facilitated rapid commercialisation and innovation in gene-edited crops. Furthermore, private biotech giants like Bayer and Syngenta play a pivotal role, driving research, lobbying for favourable policies, and shaping global trade. The result? A thriving GM ecosystem that boosts agricultural productivity and, ultimately, fuels economic growth.

> **The global trade imbalance could influence domestic policy, farmer competitiveness, and food sovereignty in India**

Likewise, in Latin America, GM crops are embraced as tools for economic growth and export competitiveness. Brazil and Argentina are global leaders, with expansive GM acreage and supportive policies. In 2023, Brazil marked a shift towards climate-resilient traits by approving drought-tolerant GM wheat (HB4) and soyabean. Flexible regulations and strong farmer support enables swifter adoption in the country. Brazil's move to commercialise GM wheat could reduce its reliance on imports, indicating a strategic win for food security.

Moving across the Atlantic, the European Union (EU) maintains a cautious stance, with GM maize grown mostly in Spain. Guided by the precautionary principle, the EU enforces stringent regulations through the European Food Safety Authority. Mandatory labelling, traceability, and public consultation are central to EU policy, reflecting deep-rooted public scepticism and thus, GM food consumption is low in the region. In 2023, although the EU approved 13 GM crop transformants for food and feed, their cultivation remains limited. Nonetheless, the EU imports approximately 70% of all protein-rich crops used in the feed sector, most of which are GM, revealing a paradox between consumer sentiment and agricultural necessity.

In East Asia, consumer trust and food safety drive GM crop policy. South Korea and Japan rely heavily on imports. As of December 2019, no GM crops have been commercially cultivated in Korea. The country imported over 11 million tonnes of maize and 1.3 million tonnes of soya beans in 2022, dominated by GM varieties. Similarly, Japan sources nearly 100% of its maize and 95% of its canola from GM-producing countries. Although the ministry of health, labour, and welfare in Japan approved the herbicide-tolerant GM canola in 2023, domestic cultivation remained minimal, signalling cautious progress. Despite scientific acceptance, public scepticism and cultural preferences in Asia have kept GM farming on a tight leash.

Meanwhile, Africa presents a mixed picture. Countries like Sudan, Ethiopia, and Nigeria have approved Bt cotton, aimed at boosting yields and reducing pesticide use. However, progress is uneven due to limited infrastructure, weak biosafety laws, and public mistrust and misinformation. Thus, the continent is yet to fully embrace GM technology as a tool for food security and climate resilience, especially in drought- and pest-prone regions.

Globally, countries like the US, Brazil, and Argentina are major exporters of GM crops, while South Korea, Japan, and China rely heavily on imports due to limited land and high food demand. This trade dynamic can create price imbalances and competitive pressures for local producers in importing countries due to the low production cost and high returns of GM crops.

As the global agricultural landscape is pivoting towards biotechnology, India stands at a critical juncture. Even though the country is still debating the scope of GM crop cultivation, it cannot afford to ignore the global momentum. The global trade imbalance could influence domestic policy, farmer competitiveness, and food sovereignty in India. The path forward lies not in extremes, but in a hybrid model anchored in scientific regulation, farmer empowerment, and transparent public engagement to safeguard biodiversity, strengthen food systems, and position Indian agriculture for global competitiveness. In this race for agricultural transformation, India must sow the seeds of trust, science, and sovereignty together.

With inputs from ***Ananya Khurana****, senior researcher, Institute for Competitiveness*

This is the first of a two-part series

Haryana CM bats for future-ready agriculture

MPOST BUREAU

CHANDIGARH: Haryana Chief Minister Nayab Singh Saini on Thursday directed the Agriculture and Horticulture departments to step up adoption of advanced and sustainable technologies, including vertical farming, to address shrinking cultivable land and emerging agricultural challenges. Chairing a review meeting of the 'Department of Future', he said the state must modernise farming practices in alignment with future food security and global market trends.

Saini noted that departments should work with year-round planning and a clear vision, prioritising reforms that ensure long-term farm sustainability and climate resilience.

Haryana CM Nayab Singh Saini chairs a meeting of Department of Future, in Chandigarh on Thursday MPOST

Highlighting the growing concern of stubble burning, the Chief Minister urged both the Agriculture department and the Future department to jointly develop technology-driven solutions that make crop residue removal easier and eliminate the need for burning. He also suggested consultations with equipment manufacturers to ensure machine-harvested crops meet the moisture standards mandated for procurement.

Saini said agricultural transformation must align with new economic and market forces. With statewide connectivity improving rapidly, he noted that the India International Horticulture Market in Gannaur will see significant demand pressure in the coming years. He asked officials to frame a 10–20-year expansion plan to handle rising volumes, attract global buyers and support farmers in shifting towards high-demand crops.

Ladwa to get 50-bed hospital: CM

CHANDIGARH: Haryana CM Nayab Singh Saini on Thursday announced a set of development initiatives for his Ladwa constituency while marking the birth anniversary of 14th–15th century spiritual figure Bhagat Sain.

Addressing a state-level event in Ladwa, Saini said an educational institution in the state will be named after Bhagat Sain. He announced that the Ladwa Community Health Centre will be upgraded into a 50-bed sub-divisional hospital and a new government college will be set up at Ramsharan Majra in Babain.

The Chief Minister also approved 25 km of rural pathways under the Khet-Khalihan scheme and a new community centre on Indri Road. MPOST

India and Russia discuss ways to deepen cooperation in agri sector

NEW DELHI: India and Russia on Thursday discussed ways to boost bilateral cooperation in the agriculture sector to strengthen farm trade and tap modern farming opportunities.

Ahead of Prime Minister Narendra Modi's meeting with Russian President Vladimir Putin, India's Agriculture Minister Shivraj Singh Chouhan met his Russian counterpart Okasa Lut in the national capital.

"Delighted to meet Russian Agriculture Minister Oksana Lut in New Delhi today. We discussed ways to strengthen Indo-Russian cooperation in agriculture and explored

opportunities in modern farming, innovation, research exchange, and sustainable growth," Chouhan said in a social media post.

Under the leadership of Prime Minister Narendra Modi, he said the relations between the two countries have witnessed a remarkable and positive transformation.

"I am confident that our collaboration will bring new direction and meaningful change to the agriculture sector. Together, we aim to boost agri-trade, empower farmers, and build a future of shared progress for both nations," he said.

Putin arrived in the national capital on Thursday to a red carpet welcome.

In reflection of the importance India attached to the visit, Modi received Putin at New Delhi's Palam airport with a hug and accorded him a warm welcome to India after a gap of four years. PTI

Modi, Putin to expand trade, energy, tech ties despite US pressure

Amiti Sen
New Delhi

Russian President Vladimir Putin and Prime Minister Narendra Modi on Friday agreed on an economic cooperation programme to expand trade "in a balanced manner" till 2030 with greater exports from India, while fast-tracking a proposed free trade deal and an investment treaty.

In a joint statement on Friday after their summit meeting, the leaders stuck to the revised bilateral trade target of $100 billion by 2030, up from $68.7 billion in FY25, despite the US tariff pressure on India to distance itself from Moscow.

PUTIN'S ASSURANCE

Putin promised to keep up a continuous flow of crude to India, notwithstanding the West's sanctions on the top Russian oil companies Rosneft and Lukoil. "Energy security has been a strong and vital pillar of the India-Russia partnership," Modi said, but did not mention crude oil or the US sanctions and tariffs. Prime Minister Modi announced two new 30-day e-visa schemes for Russian tourists, and also referred to two new Indian Consulates that opened in Russia.

Despite Russia's reference to discussions on Su-57 fighter jets and S-400s before the summit, no major defence deals were announced. There were, however, mentions of agreements signed on shipbuilding, investments in civil nuclear energy and critical minerals.

The two sides also agreed to continue their consultations on enabling the interoperability of the national payment systems, financial messaging systems, as well as central bank digital currency platforms. Referring to the economic co-operation programme, Modi said elevating co-operation to new heights was a shared priority.

"This will make our trade and investment more diversified, balanced, and sustainable and will also add new dimensions to our areas of co-operation. It will also open new avenues for exports, co-production, and co-innovation," he said.

TRADE DEFICIT

The two leaders also agreed on the need to address the widening trade deficit ($59 billion in FY25, with India's exports at just $4.9 billion and imports from Russia at $63.8 billion).

"Increasing exports from India in sectors such as pharmaceuticals, agriculture, marine products and textiles is important to correct the imbalance. And each of these sectors was discussed in detail," Vikram Misri, Foreign Secretary, said at a media briefing after the summit.

The two sides signed several agreements to expand cooperation in sectors including health, mobility and migration, food safety, shipping and people-to-people exchange. "As our countries and economies move forward, there are more opportunities for co-operation. We open additional areas of co-operation, including areas related to high tech, as well as cooperation in aircraft, space exploration and AI. We are developing our co-operation fast in the military and technical area. And we are planning to move forward in all these areas," Putin said.

The leaders appreciated the ongoing intensification of the joint work on a Free Trade Agreement on goods between India and the Eurasian Economic Union covering sectors of mutual interest, the statement noted.

Also read p10

MoUs SIGNED ON

- Migration and Mobility
- Health
- Food Safety
- Maritime Co-operation and Polar waters
- Fertilizers
- Customs and commerce
- Post and e-commerce
- Broadcasting

Pb loses 12k hectares of farm land, Hry gains 59k

Cropping Intensity Up, Says Centre

Neel.Kamal
@timesofindia.com

Representative Image

Bathinda: From 2019-20 to 2023-24, the net cultivable/agriculture area in Punjab shrank by 12,000 hectares and increased by 59,000 hectares in Haryana during the same period.

Union minister of state for agriculture Ramnath Thakur gave the information in a written reply in Rajya Sabha on Friday in response to a question by Rajya Sabha member AA Rahim. He had asked the net cultivable/agricultural area for each state in the country, primary causes for shrinkage of cultivable area, and corrective steps to prevent further loss of agricultural land.

The minister said the net cultivable area in Punjab decreased from 42.38 lakh in 2019-20 to 42.37 lakh. It went down a few notches to 42.25 lakh in 2021-22 and 2022-23, before marginally rising to 42.26 lakh hectares in 2023-24.

In Haryana, the area was 37.94 lakh hectares in 2019-20. It increased to 38.47 lakh (in 2020-21 and 2021-22), rose to 38.50 lakh in 2022-23, and reached 38.53 lakh hectares in 2023-24. The minister added that the latest annual publication, 'Land Use Statistics-at a Glance 2023-24,' indicates the national net cultivable area has remained stable.

Due to the implementation of various govt programmes and schemes, the gross cropped area has expanded significantly, rising from 201.3 million hectares in 2013-14 to 217.8 million hectares in 2023-24. The minister further said adoption of modern technologies and effective policy interventions has also led to a continuous improvement in cropping intensity, which has risen from 142.5% in 2013–14 to 156.8% in 2023–24, reflecting a positive shift toward multiple cropping practices, and highlighting farmers' enhanced ability to cultivate the same land more than once annually.

The minister said the Central govt enacted the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation & Resettlement (RFCTLARR) Act, 2013, which came into force on Jan 1, 2014. Under this act, land can be acquired for public purposes. Section 10 of the Act explicitly restricts the acquisition of multi-crop irrigated land, unless in exceptional cases where no alternative land is available, the minister said, adding that in such cases, equivalent wasteland must be developed for agriculture.

NET CULTIVABLE AREA

State / Year	2019–20	2020–21	2021–22	2022–23	2023–24
Punjab	42.38	42.37	42.25	42.25	42.26
Haryana	37.94	38.47	38.47	38.50	38.53

(Area in lakh hectares)

Identify cause of wheat turning yellow, take timely measures, say experts

MANAV MANDER
TRIBUNE NEWS SERVICE

LUDHIANA, DECEMBER 7

Wheat sowing has been done and wheat turning yellow has nowadays become a common problem for farmers.

Many times, the farmers do not know the exact cause and spray pesticides, assuming it to be a disease. It increases costs and can also harm the crop.

"In reality, wheat turns yellow due to several reasons — nutrient deficiency, excess or shortage of water, poor soil health, insect attack and diseases such as yellow rust. Identifying the real cause and taking timely steps can prevent unnecessary expenses and ensure higher yields," said Prabhjit Kaur, Assistant Professor (Agronomy), PAU.

Weather and water conditions are often responsible for wheat turning yellowish. Sudden drop in temperature or persistent fog in winter can change the leaf colour, though it usually corrects itself in a few days. Farmers should ensure timely irrigation to maintain soil moisture. Excess water after irrigation or rainfall could deprive roots of oxygen, leading to yellowing and drying of leaves, especially in heavy soils, she said.

To avoid this, farmers should make eight plots per acre in heavy soils and 16 plots per acre in light soils and drain stagnant water quickly. Poor-quality tube well water, especially saline water, could also cause yellowing. Water should be tested before use and gypsum should be applied, if needed. Mixing saline water with good-quality water can minimise damage, Kaur said.

Nutrient deficiencies were another major cause. Nitrogen deficiency was common, appearing first in older leaves that turn yellow from tip downwards. It could be corrected with urea as per soil test recommendations, with 25 per cent extra nitrogen in saline or alkaline soils. Zinc deficiency slows growth, stunts plants and causes central leaves to turn yellow with white bands. Preventive measures include applying 25 kg zinc sulphate per acre at sowing or spraying 0.5 per cent zinc sulphate solution during growth, says Harwinder Singh Buttar from the Department of Plant Pathology.

Manganese deficiency shows as yellowing between veins of leaves, often with grey or pinkish streaks, and is common in light soils and wheat-rice systems. Spraying manganese sulphate after first irrigation helps. Sulphur deficiency, common in sandy soils, causes yellowing of new leaves while older ones remain green. Applying gypsum or bentonite sulphur per acre can manage the problem but gypsum should always be applied after irrigation.

Pests and diseases also contribute significantly, Buttar said.

Termite attack after sowing leads to yellowing, drying and easy pulling of seedlings, especially in sandy soils. Seed treatment before sowing or application of fipronil or chlorpyriphos mixed with moist sand could prevent damage. Pink stem borer larvae bore into stems, causing yellowing and dead hearts, adds Sanjeev Kumar Kataria, another expert from the PAU.

Farmers should avoid October sowing in infested fields, irrigate during daytime and apply recommended insecticides if infestation is high. Nematodes cause stunted, yellow plants with root galls, reducing yield. Management includes ploughing fields in May-June, avoiding wheat in infested areas, and applying furadan at sowing. Yellow rust disease was another major threat, producing yellow powdery pustules on leaves that spread in cool, moist conditions. Preventive measures include sowing resistant varieties, monitoring from mid-December and spraying fungicides such as captan + hexaconazole, tebuconazole, trifloxystrobin+Tebuconazole, Azoxystrobin combinations, or Propiconazole. Sprays should be applied only on affected patches and repeated as needed, Kataria said.

Experts emphasise that farmers should not rush to spray pesticides without identifying the cause of yellowing. Timely irrigation, soil testing, balanced nutrient management and vigilant monitoring of pests and diseases were key to keeping wheat fields green and healthy.

Yellowing of wheat can occur due to various reasons and farmers need to be careful about the same.

ADVICE FOR FARMERS

Experts emphasise that farmers should not rush to spray pesticides without identifying the cause of yellowing. Timely irrigation, soil testing, balanced nutrient management and vigilant monitoring of pests and diseases are key to keeping wheat fields healthy. They should avoid October sowing in infested fields, irrigate during daytime and apply recommended insecticides if infestation is high.

Soil expert stresses on sustainable practices in cities

B. RAVICHANDRAN | DC
OOTY, DEC. 5

'The soil is the great connector of our lives, the source and destination of all'. This quote from Wendell Berry defines the importance of soil that supports and sustains life on earth.

It is really astounding to note that anything, especially living organisms that are buried inside the soil, finally decompose and bio-degrade, but, the seed sown inside the soil, germinates to give life to flora and finally the food that every living organism needs.

This is the wonder of soil which takes care of food production. This amply demonstrates how soil supports life on earth as food supply and food chain are paramount to sustain life on earth.

This makes soil an eternal support to life on earth. We need soil for constructions and what not? Soil must be nutrient-rich to serve as the perfect substrate to support the germination and related soil ecosystem services.

On Friday, World Soil Day was observed to celebrate soil - the life-giver, supporter and the root of all growth.

Dr. Somasundaram Jayaraman, head and principal scientist at the ICAR - Indian Institute of Soil and Water Conservation, Research Centre, here in this hill town, noted that World Soil Day is observed annually on December 5 as a means to focus attention on the importance of healthy soil and to advocate the sustainable management of soil resources. Our research centre celebrates this function to bring greater awareness among students, farmers and other stakeholders, he said.

Dr.J.Somasundram, Head of the ICAR- IISWC at Ooty.

"Our planet's survival depends on the vital connection with soil. Over 95-98 per cent of our food comes from soil. Besides, they supply 15 of the 18 naturally occurring chemical elements essential to plants. However, in the face of climate change and human activity, our soils are being degraded. Erosion disrupts the natural balance, reducing water infiltration and availability for all forms of life, and decreasing the level of vitamins and nutrients in food. Sustainable soil management practices reduce erosion and pollution, and enhance water infiltration and storage. They also preserve soil biodiversity, improve fertility and contribute to carbon sequestration, playing a crucial role in the fight against climate change," he elaborated.

World Soil Day 2025 focuses on urban landscapes with the theme 'Healthy Soils for Healthy Cities'. Beneath asphalt, buildings, and streets lies soil that if permeable and vegetated, helps absorb rainwater, regulate temperature, store carbon, and improve air quality. But when it's sealed with cement, it loses these functions, making cities more vulnerable to flooding, overheating, and pollution.

Therefore, the day attracts everyone's attention i.e., from policymakers to people, to rethink urban spaces from the ground up, to build greener, more resilient and healthier cities, Jayaraman added.

Preparing next generation of soil warriors

B. RAVICHANDRAN | DC
OOTY, DEC. 5

Students who excelled in competitions held on World Soil Day were felicitated at IISWC at Ooty.

ICAR–Indian Institute of Soil and Water Conservation (ICAR–IISWC), Research Centre, here on Friday celebrated World Soil Day 2025 with the global theme 'Healthy Soils for Healthy Cities'.

The event witnessed enthusiastic participation of students from Indira Gandhi Krishi Vishwavidyalaya, Raipur, and school students from the JSS International School and Vivekananda Memorial School, Muthorai Palada, here.

Chief guest, Prof. K.S. Subramaniam, scientific advisor, Coromandel International Ltd., and former director of research and founder-head, Centre for Agricultural Nanotechnology, Tamil Nadu Agricultural University (TNAU), Coimbatore, in his address, offered thought-provoking insights on the potential of nanotechnology in maintaining soil health to ensure a sustainable future.

He further delivered a keynote lecture on 'nano-fertilisers and nano-based products in agriculture, explaining their relevance in enhancing soil productivity and nutrient-use efficiency'.

The students actively interacted with Prof. Subramaniam, raising questions on various dimensions of nanotechnology and its applications in modern agriculture.

Shibila Mary, joint director of horticulture in the Nilgiris, who was the guest of honour, discussed the landscape changes observed in the Nilgiris over the past two decades and highlighted the government's initiatives to promote organic farming and sustainable horticultural practices in the district. She also highlighted the importance of kitchen garden in every household for chemical-free farming.

A students–scientists interaction session was organised to raise awareness on the importance of soil health and soil conservation among young learners. A quiz competition was also conducted for school students, and the winners were awarded prizes in recognition of their participation and knowledge.

The programme concluded with a collective pledge, reaffirming that healthy soils are fundamental for healthy cities, and emphasising the responsibility of every citizen to protect and conserve natural resources.

Govt signs MoU with ICAR for 5-year nano urea evaluation project

NEW DELHI

IN a bid to assess the field-level efficacy of nano fertilisers, the government has signed an MoU with the Indian Council of Agricultural Research (ICAR) for a network project focused on nano urea, Union Minister Anupriya Patel informed the Lok Sabha on Friday.

The five-year initiative under the MoU signed on November 3, 2025, with a total outlay of Rs 21.20 crore (including GST), will be jointly funded by fertiliser public sector undertakings and cooperatives, the Minister of State for Fertilisers said in her written reply. The project will be carried out across multiple agricultural universities and institutes, including the ICAR-Central Rice Research Institute (CRRI) in Cuttack, Odisha. The minister said the ICAR also launched another project in August 2024, backed by the Indian Council for Fertilizers and Fertilizer Technology Research (ICFFTR) with an allocation of Rs 1.60 crore.

Spanning two years, it aims to study the effects of nano fertilisers on crop growth, soil health and nutrient uptake in diverse agro-ecological zones. Meanwhile, the Indian Farmers Fertiliser Cooperative (IFFCO) has conducted evaluations of its nano fertilisers in drought-prone districts such as Balangir, focusing on crops like paddy, cotton and brinjal.

These included farmer field trials and collaborations with the Odisha University of Agriculture and Technology (OUAT) in Bhubaneswar. Trials on brinjal at the Regional Research and Technology Transfer Station (RRTTS) of OUAT in Bhawanipatna, Kalahandi, and on paddy at OUAT's Seed Research Farm in Bargarh.

India, Russia sign Vision 2030 cooperation agreement

STATESMAN NEWS SERVICE
New Delhi, 5 December

Prime Minister Narendra Modi on Friday said India and Russia have signed a long-term Vision 2030 Economic Cooperation Agreement to expand bilateral trade, investment flows and mobility initiatives.

Modi and Russian President Vladimir Putin made the announcement at the India-Russia Business Forum as Putin is on a two-day visit to India.

Significantly, PM Modi at the forum said both the countries can have joint ventures in manufacturing electric vehicles, and also said the discussions have also begun on Free Trade Agreement (FTA) between India and Eurasian Economic Union.

"To further economic cooperation, we have signed a Vision 2030 document. Today, both of us will take part in the India - Russia Business Forum. I am confident this platform will strengthen our business relations and open new avenues for co-production and co-innovation. Both countries are also taking new steps to realise an FTA with the Eurasian Economic Union," PM Modi said.

Another important announcement was that soon the Russian nationals would be eligible for a free 30-day e-tourist visa as well as a 30-day group tourist visa, describing the move as an important step to enhance manpower mobility between the two countries and noting that two related agreements had been signed.

Both the leaders also announced that India and Russia have finalised an economic cooperation program until 2030 with an aim to diversify mutual businesses to boost annual trade to USD 100 billion by 2030.

The two leaders also emphasised strong energy ties. Putin noted that cooperation is expanding well beyond conventional fuel, and highlighted the major joint nuclear power initiative already underway. He further said Russia is conducting "a flagship project to build the largest nuclear power plant in India."

"The construction of small modular reactors and floating nuclear power plants, and also non-energy applications of nuclear technologies, for example, in medicine or agriculture.

"Russia will also be establishing the production of industrial products in the framework of the Make in India programme, which is a hallmark project of distinguished Prime Minister Modi," Putin said.

"We will discuss the key global and regional problems. We have confirmed the concerns between the positions of our countries," he added.

Time to reconsider GM seed as a tool

AMIT KAPOOR
PRADEEP PURI
Respectively Chair and Fellow, Institute for Competitiveness

Policymakers face a delicate task of ensuring food security and farmer welfare while maintaining public trust and ecological integrity

THIS YEAR'S NOBEL laureates in Economics affirm that the future of growth models will be driven by innovation. This is both a challenge and an opportunity, and resonates deeply with India's agricultural ambitions.

As India seeks to boost agricultural productivity, few innovations have sparked as much debate and promise as genetically modified (GM) crops. In many ways, the story of GM crops in India mirrors the invention of the light bulb as a paradigm-shifting innovation. GM crops arrived with the promise of solving persistent agricultural challenges, such as pest infestations, low yields, and climate stress. But its journey from lab to land has been uneven.

Just as consumers were once reluctant to switch from incandescent bulbs to LEDs due to cost and unfamiliarity, GM crops face scepticism related to ethical concerns, regulatory hurdles, and public mistrust. Yet, the parallels continue. Like LEDs use less energy and last longer, GM crops use less pesticides and water, and produce more food per acre. While LEDs cost more upfront but save money over time, GM crops also require investment in research and regulation but promise long-term gains in food security and sustainability. Customisation is another shared trait. Akin to LEDs that can be tuned for brightness and colour, GM crops can be designed for drought tolerance, enhanced nutrition, and a longer shelf life. Like LEDs, GM crops have the potential to reduce environmental impact in terms of chemical runoff, greenhouse gas emissions, and resource utilisation, making them a compelling tool to combat climate change.

The light bulb analogy is a reminder that innovation often begins with hesitation, but its true value lies in what it illuminates over time. The question is no longer whether GM technology works, but how India can use it wisely, ensuring that farmers are benefitted, ecosystems are protected, and decisions are guided by science and trust. After all, the real impact will not be seen in labs, but in the lives of farmers and the resilience of our food systems.

India's engagement with GM crops began in 2002, when the imported Bt cotton gene (Cry1Ac) engineered to combat the American bollworm was approved for commercial use by inserting it into Indian cotton hybrids. The results were promising as yields improved, pesticide use declined, and many farmers reported better incomes. Within a decade, Bt cotton hybrid spread over 90% of India's cotton-growing area, and yields surged from a stagnant six quintals per hectare (q/ha) to 16 q/ha by 2013. However, the story didn't end there.

> **Like any tool, their value depends on how they are integrated into broader agricultural strategies**

Initially, Bt cotton brought tangible benefits, but over time the pink bollworm pest began to develop resistance to the Bt toxin, forcing farmers to use pesticides again. Farmers, once relieved from heavy pesticide use, were back to square one. This shift not only increased costs but also reignited concerns about environmental and health impacts. Simultaneously, debates emerged around GM seed pricing, intellectual property rights, and the role of multinational corporations. In response, public sector institutions attempted to develop indigenous Bt cotton hybrids, unlike the pure line GM cotton popular globally. This experiment failed in India due to poor adaptation to uncertain rainfed conditions. Thus, some narratives link high seed costs, rising input costs, and crop failures in rainfed areas to farmer distress. Research suggests that these issues are complex and often rooted not only in biotechnology but also in broader systemic concerns such as market volatility and inadequate support systems.

The need for next-generation GM traits, such as stacked genes and herbicide tolerance, has been recognised. Yet, their approval is pending, reflecting the importance of thorough regulatory review and public scrutiny. India's regulatory framework for GM crops is overseen by the Genetic Engineering Appraisal Committee under the ministry of environment, forest, and climate change. The committee undertakes rigorous biosafety assessments, multi-location field trials, and public consultations. State governments also play a role in granting final approvals for cultivation. Despite these provisions, the pace of approvals has been slow. For instance, Bt brinjal was approved in 2009, but placed under indefinite moratorium following public opposition. On the other hand, GM mustard, developed by Indian scientists, has passed safety evaluations but awaits final clearance amid ongoing debate. This cautious approach reflects a desire to balance innovation with safety, but it also raises concerns about delays in accessing potentially beneficial technologies. India's competitiveness in crops such as maize and sugar could improve significantly with GM adoption. For example, GM maize yields in countries like Ukraine, Brazil, and Argentina (average of 6,045 kg/ha) are more than double of India's conventional maize yield (2,703 kg/ha). Similarly, Brazil's approval of GM sugarcane has boosted its sugar output per factory to 101,157 tonnes, nearly twice India's output of 52,336 tonnes using non-GM varieties.

Public perceptions of GM crops in India are shaped by a confluence of scientific discourse, cultural perspectives, and media narratives. While some view GM technology as a tool for progress, others worry about its long-term impacts on health, biodiversity, and traditional farming practices. Therefore, policymakers face a delicate task of ensuring food security and farmer welfare while maintaining public trust and ecological integrity. In addition to technological advancement, this calls for clear and participatory regulation, accessible farmer education, and sustained public engagement.

Rather than viewing GM crops as a binary choice between good and bad, it may be more productive to see them as tools. Like any tool, their value depends on how they are integrated into broader agricultural strategies. As India continues to explore this path, the goal should be to empower farmers, protect ecosystems, and ensure that the light of innovation reaches every corner of the field.

With inputs from ***Ananya Khurana****, senior researcher, Institute for Competitiveness*

Series concludes

Agri-marketing board chargesheets 39 market secys for irregularities

Multiple IPs used for gate pass fraud; huge paddy, bajra gaps detected

BHARTESH SINGH THAKUR
TRIBUNE NEWS SERVICE

CHANDIGARH, DECEMBER 6

The Haryana State Agricultural Marketing Board (HSAMB) has initiated major disciplinary action against 39 secretaries of market committees (SMCs) across Karnal, Kaithal, Ambala, Kurukshetra, Fatehabad and Yamunanagar after large-scale irregularities surfaced in kharif 2025 procurement.

Officials confirmed that the secretaries have been chargesheeted under Rule 4(b) for major penalty of the Haryana Civil Services (Punishment and Appeal) Rules, 2016, after it was established that gate passes were generated from multiple IP addresses, raising suspicion of manipulation.

A senior official in the Food and Supplies Department said the action follows a series of FIRs, suspensions and verification reports highlighting glaring discrepancies in paddy and bajra procurement.

In Taraori (Karnal), SMC secretary Sanjeev Sachdeva allegedly granted permission to multiple rice mills to store paddy at a common site — a practice millers reportedly used to avoid accurate physical verification. When officials checked three mills, they found a shortage of 855 MT of paddy. The Karnal DC lodged an FIR against SMC Taraori and an Inspector of the procurement agency on October 30.

FILE PHOTO

In Karnal mandi, too, the issuance of gate passes from several IP addresses triggered suspensions on October 24. These included Hardeep, Mandi Supervisor; Ashwani, Mandi Supervisor; and Satbir, Auction Recorder.

Further, the ADC Karnal reported that there were "credible inputs that the Mandi Secretary has employed private individuals for issuance of gate passes." Several passes were issued from IPs located outside the mandi. As a result, an FIR was lodged against SMC Karnal Asha Rani on November 4. Names of Pankaj Tuli, Mandi Supervisor, and Yashpal, Auction Recorder, have also been added to the FIR.

Irregularities were not limited to paddy. In Kosli mandis, officials found that 4,655 quintals of bajra were missing from physical stock on October 22. Further, 10,046 quintals were not entered in the H register the next day. SMC Kosli Narender Kumar was suspended on October 24, and an FIR followed on October 28.

In Kanina, 4,935 quintals of bajra were unrecorded in both the Market Committee and Commission Agent registers. SMC Kanina Manoj Prasher was suspended on October 24, though the FIR recommended against him on October 7 is still pending.

In Mahendragarh, a massive gap of 53,394.50 quintals was detected between bajra arrival recorded at the incoming gate pass and the outgoing gate pass at the Satnali sub-yard. The SMC Mahendragarh was suspended on October 27, though the FIR recommended against him also remains pending.

Officials said the chargesheets mark the first phase of action and further accountability will be fixed as investigations progress.

Relentless rains flatten ragi crop

Cyclone Ditwah leaves bad impact on standing crops in Chintamani

CHINTAMANI, DHNS

Continuous rain triggered by Cyclone Ditwah over the southwest Bay of Bengal has plunged Chintamani taluk into a week-long spell of cloudy, stormy weather, leaving ragi farmers devastated as their nearly ready crops lie flattened in the fields.

For the last one week, uninterrupted showers and overcast skies have obstructed harvest operations. Ragi crops that had matured and were ready for cutting have collapsed under the weight of persistent rain.

Farmers say the once-healthy crops, heavy with grain, now lie pressed to the ground like a soaked mat, turning black along with the accompanying fodder. With the panicles touching the wet soil, fears of sprouting and premature grain drop have intensified.


Ragi crop ready for harvest lies flattened in a field in Kaiwara village in Chintamani taluk. DH PHOTO

Moisture-laden fields have made harvesting nearly impossible. Labourers are refusing to enter the slushy fields, and those who agree are demanding significantly higher wages. Farmers who managed to cut some panicles are now struggling to dry them; damp grain is turning mouldy, rendering it unfit for consumption or processing.

Chintamani taluk saw ragi sown on 17,477 hectares, and large tracts today show varying degrees of lodging, from bent stalks to panicles fully resting on the soil. If harvested, the crop may not stand up to threshing; if left in the field, it risks sprouting.

After 2–3 years of deficit rainfall that brought repeated crop losses and mounting debt, this year's early monsoon had sparked hope among farmers. But the rains linked to Cyclone Ditwah have crushed that optimism.

SHASHIKUMAR
Farmer

"The ragi crop had grown well and was ready for harvest. But a week of rain has prevented timely cutting. The weight of the grain has caused the crop to lodge completely. When the panicles touch the soil, they begin to sprout, turn black and fall off. Continuous rain is damaging both the grain and the fodder.

KRISHNAPPA
Kaiwara farmer

"There is a shortage of labourers for ragi harvesting. I had decided to use a harvester, but machine harvesting is also impossible when the weather stays cloudy and light rain continues. Machines can work only when the soil and fodder are dry. So farmers are helpless. Our hard-earned crop is slipping away right before our eyes.

Rains stall ragi drying in Chintamani

Though nearly 50% of the early-sown crop has already been harvested, rains brought by Cyclone Ditwah have halted drying and threshing. Even the late-sown crop has reached harvest stage and farmers were preparing to cut it.

Due to the shortage of farm labourers and the rising cost of wages and hire rates, some farmers had planned to use harvesting machines. But constant rain and overcast skies over the past week have made harvesting impossible.

Despite a good crop, farmers are now in distress, said farmer Munikrishnappa.

Pb reports India's worst FCI grain damage in 5 yrs

7,746 MT: Max Damage In 2023-24

Vinod.Kumar3
@timesofindia.com

Chandigarh: Punjab, widely regarded as the country's food bowl, recorded the maximum foodgrain loss in the nation within FCI stocks over the past five years, with a staggering 7,746 metric tonne (MT) damaged in 2023-24. This far exceeded losses reported by other states, according to a Lok Sabha reply by the Union ministry of consumer affairs, food and public distribution.

The figures were placed on record by the Union ministry of consumer affairs, food and public distribution in response to a question by Delkar Kalaben Mohanbhai, the MP from Dadra and Nagar Haveli.

The ministry's state-wise assessment showed that Punjab's cumulative loss over five years stood at 8,226.04 MT, driven by massive losses in 2023-24. The state's other yearly figures were far lower at 25MT (2020-21), 100MT (2021-22), 264MT (2022-23), and 91.04MT (2024-25). Punjab's overall storage capacity stands at 174 lakh MT, comprising 124 lakh MT under the Food Corporation of India and another 49 LMT with state agencies. Increasing spoilage of foodgrains has become a concern, highlighting the need for stronger storage systems, tighter oversight, and greater accountability to curb avoidable losses.

While Punjab recorded the sharpest single-year damage, several other states reported sizeable losses. Tamil Nadu showed the second-highest losses in recent times, with 3,001.39 MT damaged in 2024-25, bringing its total to 3,008.39 MT. Haryana reported a significant 2,511-MT loss in 2023-24, and Uttar Pradesh registered 2,254.32 MT in 2024-25, taking its overall figure to 2,450.32 MT.

Among states, Maharashtra accumulated 2,856.68 MT of damaged stock over five years, including highest 1,985.68 MT in 2024-25. Odisha reported 1,157 MT, mostly from 1,145 MT in 2020-21.

The ministry also provided year-wise and commodity-wise assessments of damaged wheat and rice, along with valuation. The highest recorded value of damaged foodgrains in the period was for rice in 2024-25, amounting to Rs 13.06 crore, linked to 0.072 lakh tonnes of damaged stock against an offtake of 259.55 lakh tonne, translating to a 0.028% loss. For 2023-24, rice damage stood at 0.012 lakh tonnes, valued at Rs 2.06 crore. Wheat losses were recorded as 0.01 lakh tonnes in 2020-21, 0.004 lakh tonnes in 2022-23, and 0.0067 lakh tonnes in 2024-25, with corresponding values of Rs 0.64 crore, Rs 0.46 crore, and Rs 0.814 crore.

FOODGRAIN LOSSES: WORST 5

State	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Punjab	25	100	264	7,746	91	8,226
Tamil Nadu	0	0	0	7	3,001.4	3,008.4
Haryana	0	0	0	2,511	0	2,511
Uttar Pradesh	69	78	47	2	2,254.3	2,450.3
Odisha	1,145	3	0	9	0.02	1,157
Maharashtra	0	140	713	18	1,985.7	2,856.7

(Figures in metric tonnes (MT)

Agricultural varsity VC suggests amendments to Seed Bill draft

The Hindu Bureau
HYDERABAD

The draft Seeds Bill must be prepared as a model Act and sent to all State governments so that modifications or amendments can be suggested as per specific needs of its farmers.

However, the current Bill only empowers the Central government as issuing direction to State governments to act upon such directions - and the rights and powers of States must be adequately protected, Vice-Chancellor, Professor Jayashankar Telangana Agricultural University, Aldas Janaiah, wrote to the Seeds Division of Department of Agriculture & Cooperation. His four-page letter to Jt. Secretary (Seeds) on Saturday captures the essence of provisions, which are supposedly not in the interest of State needs, and which need suitable amendments. He pointed out 13 issues along with a suggested amendment.

Seeds intended for marketing must be certified by a recognised agency, suggests PJTAU VC Aldas Janaiah. REPRESENTATIONAL PICTURE

Mr. Janaiah says the Bill mandates prior registration with the Central seed committee before release of agricultural seed for sale to farmers and the seed variety would be registered based on performance evaluation data generated by the ICAR and approved agencies.

The State seed committee should be empowered to register varieties that are specific to the State, and for seed registration they must be tested at least for one season rather than solely depending on generated data.

He suggests that seeds intended for marketing must be certified by a recognised certification agency, and seed dealers and distributors should meet minimum educational needs either in agriculture or seed production.

The Bill also provides for regulation of seed prices during emergency situations by the Centre. The State government should be allowed to regulate seed prices, to review and recommend rational prices. Mr. Janaiah also suggests that for imported seeds it is crucial to mandate multi-location trials at ICAR centres in regions where they are intended for commercialisation for at least two years, to avoid poor performance due to adaptability reasons.

New tech to speed up soil health assessment

TIMES NEWS NETWORK

Kochi: Traditional soil testing is extensive work that requires a long time for processing. Now, a team of researchers from different institutions, including Kerala University of Fisheries and Ocean Studies (Kufos), CWRDM and Isro, have developed a technology that could transform soil health assessment across India's farmlands.

This new technology, hyperspectral remote sensing (HRS), presents a promising alternative for soil testing by providing precise information in high spatial dimensions, rapidly and non-invasively. Normally, soil testing relies on chemical reagents, extensive laboratory work and a long processing period, factors that limit large-scale soil health monitoring. In contrast, hyperspectral sensing captures hundreds of narrow spectral bands from soil samples, allowing scientists to 'read' soil properties instantly through light reflectance, the researchers said in the study titled 'Soil Spectra for Smart Farming' which was published in the science journal Springer.

The research team collected soil spectral data from diverse agro-ecological regions — Palakkad in Kerala and Tirunelveli in Tamil Nadu — and evaluated machine learning models to predict key nutrients such as nitrogen, phosphorus and potassium, and other properties such as pH and soil organic carbon. Different models were tested after enhancing the spectral signatures using advanced pre-processing techniques.

A BOON FOR FARMERS

- Managing soil nutrient content holds immense importance for farmers
- Govt soil health card gives details like crop-specific fertiliser advice using traditional soil analysis

Palakkad district experiences a humid tropical climate with higher temperature and humidity levels throughout the year. The other micro-watershed chosen was in Radhapuram, in the southern part of Tirunelveli. They suggest that HRS combined with machine learning can serve as a fast, non-destructive and cost-effective alternative to conventional wet chemistry methods for analysing soil nutrients. The findings show that existing details, when fused with machine learning, can reliably indicate nutrient levels, particularly for identifying broad nutrient classes such as low, medium and high.

"The breakthrough could significantly strengthen precision agriculture by enabling timely fertiliser recommendations, reducing input costs and promoting sustainable farming," said Girish Gopinath, head of the department of Climate Variability and Aquatic Ecosystems, Kufos.

MoUs signed to boost agro growth, digitization

STATESMAN NEWS SERVICE
Bhubaneswar, 9 December:

The State's Department of Agriculture & Farmers' Empowerment (DAFE) on Tuesday signed two significant Memoranda of Understanding (MoUs) to advance agricultural projects and digital transformation in the agricultural scenario of the state.

The first MoU was signed between the DAFE and Heifer International to support the value chain development of ginger, turmeric and millets in Odisha. This initiative focuses on enhancing farmer income and value chain development for ginger, turmeric and millets (Shree Anna) producers in Odisha, fostering agricultural modernisation and market linkages.

The second MoU was executed between the DAFE and M/s Tatwa Technologies Limited for operation, management and maintenance of Odisha's digital mobile based extension service, Krushi Samrudhi Helpline.

This MoU will help in the implementation of mobile-based digital Agri-service platform available at grass root level. The project aims to create an open, farmer-centric value chain extension system, improving agricultural operations and outreach through digital innovation, real time basis crop, and weather advisories.

The agreements were signed in the presence of Deputy Chief Minister Kanak Vardhan Singh Deo and Minister of State (Independent Charge) for Fisheries & Animal Resources Development (FARD), Gokulananda Mallik.

Deputy Chief Minister Singh Deo said that these two MoUs will help us to reach the unreached and provide government assistance during their need.

The FARD Minister Mallik highlighted how the real-time livestock advisories helped the farmers & rearers.

Principal Secretary Agriculture department Arabinda Kumar Padhee said that Krushi Samrudhi Helpline program is a toll-free phone based advisory service by the Government of Odisha. Currently, the platform has more than 80 lakh farmers on board and provides advisories on 70 crop types, 11 livestock varieties and 3 fisheries practices.

Since its inception, it has sent 95,15,36,941 crop advisories, 40,88,27,235 Livestock advisories, 5,32,69,226 fishery and 26,04,19,107 weather and schematic advisories, he added.

NITI member urges farmers to adopt crops not covered under MSP

NEW DELHI, Dec 9: NITI Aayog member Ramesh Chand on Tuesday urged farmers to adopt crops that are not covered under the government's Minimum Support Price (MSP) regime to achieve self-reliance and support a holistic food system in line with the Atmanirbhar Bharat vision.

Addressing the 'Rural Voice Agriculture Conclave and Awards 2025' here, Chand emphasised that while government support plays a role in agriculture development, true self-reliance would come when farmers themselves take initiative in crop choices and farming practices.

He noted that over the past decade, MSP-linked crops have grown at a rate of 1.8 per cent, while crops without MSP have grown at around 4 per cent, a press statement said.

Global agricultural planning is now shifting towards a food-system approach

He said the country's agricultural growth has averaged at 4.6 per cent over the past decade, but domestic demand is growing at just about 2 per cent. In such a scenario, what should be done with surplus production, he questioned.

A wealthy class with strong purchasing power is growing in the country, he said, and farmers can earn significantly more by cultivating crops that cater to this demand. This will require developing the entire value chain.

He noted that global agricultural planning is now shifting towards a food-system approach, covering the entire value chain from seeds to marketing and distribution. Integration into the value chain, he said, boosts farmers' incomes.

Harveer Singh, Editor-in-Chief of *Rural Voice*, spoke about the platform's five-year journey. He said *Rural Voice* was launched to empower farmers through information, and the conclave was organised with this objective.

For India to become self-reliant, farmers must be empowered, which requires innovation, technology, and policy support, he said. – PTI

Seeds Bill isn't what the farmer ordered

It reads like a document drafted with an eye towards 'ease of doing business' rather than 'ease of farming'

Ramanjaneyulu GV

India's seed governance is being quietly rewritten. Alongside new standards proposed for Community Seed Banks and ongoing consultations to amend the Protection of Plant Varieties and Farmers' Right (PPV&FR) Act, the draft Seeds Bill, 2025 has been released for public feedback. Together, these developments signal a deep structural shift in how seeds will be produced, traded and governed in the years ahead. But it is the Seeds Bill that sits at the heart of this transformation — and it raises unsettling questions about whose interests the law is designed to serve. For nearly two decades, farmers, State governments, and civil society have waited for a modern seed law that would finally bring accountability, transparency, and real protection to the seed sector. The first draft surfaced in 2004, another in 2019, and both collapsed under the weight of competing demands: farmers asked for protection, industry asked for freedom, and States demanded regulatory powers — no consensus ever held.

At first glance, the Bill appears responsive: it introduces mandatory traceability for registered varieties, strengthens penalties, and acknowledges price regulation — at least in theory. But these additions are overshadowed by deeper structural choices that tilt the law firmly towards centralised control and corporate convenience, rather than farmer empowerment.

ACCREDITATION SYSTEM

The most striking shift comes through Section 17(8), which establishes a Central Accreditation System. Under this mechanism, a company accredited by the Centre is automatically "deemed to be registered" across all States — whether or not the State wants that company operating within its borders. States must immediately record the registration and are explicitly barred from rejecting applications on technical, financial, or infrastructural grounds. This is not cooperative federalism; it is an erasure of State authority. At a time when seed failures have had intensely local consequences — from cotton in Maharashtra to chilli in Telangana — removing the ability of States to regulate who enters their seed markets is both imprudent and undemocratic.

Equally troubling is the Bill's silence on the issue that farmers have pleaded about for decades: compensation. When poor-quality or spurious seed leads to crop failure, penalties may be imposed — but they flow to the state treasury, not to the affected farmers. The draft offers no automatic, time-bound compensation mechanism, no seed liability fund, and no accountability pathway that farmers can realistically

AT A CROSSROADS. The Seeds Bill needs to be reshaped

access. After years of court battles and rare compensation orders — often secured only after public pressure — this silence feels like a profound betrayal. Same is the case with seed producing farmers in contract (unwritten!) with the seed companies.

Even the mention of price regulation rings hollow. The Bill allows the Centre to intervene in seed pricing only during "emergent situations," a phrase left undefined and conveniently narrow. In a market where seed prices have soared and proprietary hybrids increasingly dominate, farmers deserve predictable protections, not occasional rescue.

Then there is the issue of foreign trials and certification. By allowing foreign agencies to conduct VCU trials and certify seed, the Bill undermines India's hard-won system of local agro-climatic testing through ICAR and State Agricultural Universities. Seeds succeed or fail in the field — not on foreign land with different soils, climates, pests and practices. Giving foreign data a statutory gateway into Indian markets is risky at best, reckless at worst. And what of the small seed producers who form the backbone of India's informal seed economy? The Bill's expanded registration, traceability and compliance requirements create barriers that many small players — local seed producers, cooperatives, farmer groups — may struggle to cross. While big companies gain a streamlined national entry pathway, local systems are pushed closer to the margins.

The Seeds Bill, 2025 could have been the law that restored trust in the seed market, protected farmers from predatory practices, and strengthened India's seed sovereignty. Instead, it reads like a document drafted with an eye towards "ease of doing business" rather than "ease of farming."

India's seed future stands at a crossroads. If this legislation is to serve the interests of the millions who sow the nation's fields, it must be reshaped — rooted not in centralised power or corporate entitlement, but in the lived realities of farmers, the wisdom of States, and the ecological diversity of Indian agriculture.

The writer works with Centre for Sustainable Agriculture

UP, IIT-Roorkee join hands to launch carbon credit model for farmers

To Add To Farmers' Income, Curb Air Pollution: Govt

Neha Shukla
@timesofindia.com

Lucknow: The Uttar Pradesh govt, in collaboration with IIT-Roorkee, has come up with a carbon credit model to help farmers earn extra income by retaining carbon in their agricultural fields. Besides, it will also reduce the emission of greenhouse gases which spike air pollution.

It is the first such large-scale carbon credit model to be launched in the country. The UP agriculture department has authorised IIT Roorkee to implement the programme which will start as a pilot in the Saharanpur division and gradually be implemented in the rest of the state.

Farmers will earn carbon credits for reducing carbon emissions because trees planted by them on their land absorb carbon dioxide from the atmosphere continuously for photosynthesis. In the process, while trees keep the carbon stored, they give out oxygen, thus reducing carbon concentration in the air and improving air quality. One metric tonne of carbon dioxide stored in trees will earn them one carbon credit, which is monetized and farmers will be paid accordingly.

Once sold in the market, 50% of the revenue generated will go to the farmers as direct income in their bank accounts. The better the quality of soil, the higher the income generated for the farmers.

IIT Roorkee director Prof KK Pant said the initiative will give farmers a meaningful stake in climate action by ensuring that their sustainable practices translate into real and measurable income.

Principal secretary, agriculture, Ravinder, said, "This partnership will allow farmers to benefit directly from sustainable practices while contributing to India's climate commitments. Large-scale sustainable practices under this programme are scheduled for launch soon."

Farmers will have to adopt sustainable agricultural practices to keep increasing the carbon content of the soil in their fields.

Prof AS Maurya, principal investigator, faculty department of earth sciences, IIT Roorkee, who is also the nodal officer for the project, said it may take a year or more before the farmers registered under the scheme get their first income through carbon credit. But, once initiated, it will be a lifetime income for them, he added.

"Our scientific framework ensures that every tonne of carbon stored in the soil is measured, verified, and monetised. This programme is not just about carbon credits, but about restoring soil health, reducing farm input costs, and creating new income streams for millions of farmers," Prof Maurya said.

The soil samples taken from farmers' fields will be tested in labs to scientifically verify the carbon content present in them. This will generate baseline data. The farmers, from then on, will have to keep adding to the carbon stored in their fields by adopting simple practices such as using the agricultural waste generated in the field rather than burning or dumping it. This will increase the carbon content in the soil, said Prof Maurya, adding that minimum tillage is another practice to keep carbon retained in the soil. Equipment is available in the market that can help sow seeds without tilling the soil.

"Our objective is to not force farmers but instead motivate them to adopt these practices," he said. Farmers will be asked not to use urea as it emits nitrogen dioxide, which is a more efficient greenhouse gas than carbon. They can, instead, switch to using biofertilisers.

Over a period of time, the water-holding capacity of the soil and its fertility will improve, which, in turn, will increase the yield. This will reduce the cultivation cost for farmers.

IIT Roorkee will monitor the pilot programme in Saharanpur through remote sensing. The institute will enable connections between farmers, carbon markets, and global buyers. Half of the revenue generated from the sale of carbon credits will directly go to farmers' bank accounts, in proportion to carbon credits accumulated by them, while half of it will be spent on registration of land under the scheme, maintenance, monitoring, and other processes involved.

For industry, the programme offers access to transparently measured, scientifically validated, high-quality carbon credits, advancing Net Zero commitments while supporting regenerative agriculture and rural livelihoods.

The institute will use advanced digital monitoring, reporting, and vetting (MRV) systems to provide high-quality carbon credits aligned with global standards.

EARNING GREEN DIVIDENDS

One metric tonne of carbon dioxide stored in trees will earn them one carbon credit

Once sold in the market, 50% of the revenue generated will go to the farmers as direct income in their bank accounts

- UP govt launches carbon credit model in collaboration with IIT Roorkee
- It links soil health to more income for farmers
- Pilot programme to be launched in Saharanpur division of UP
- UP farmers will earn carbon credits for reducing carbon emissions
- IIT Roorkee will employ advanced digital monitoring, reporting, and vetting (MRV) systems to provide high-quality carbon credits

India must boost farm R&D to stay competitive in agriculture: RG Agarwal

SOURAV SHEKHAR
New Delhi, 10 December

RG Agarwal, Group Chairman, Dhanuka Agritech, on Monday said that India's agriculture sector needs a decisive shift towards technology, innovation and stronger research support.

In an exclusive interview with UNI, he advocates incentives to push agricultural science developments.

"The withdrawal of the earlier 2 per cent tax exemption on Research and Development (R&D) spending has come at a difficult time," Aggarwal said, adding that the industry was "already struggling to invest in research due to high costs and limited institutional support. Without incentives, companies find it harder to push scientific development."

Agarwal, who is also the Chair, Agribusiness Committee, PHDCCI highlighted that India's R&D expenditure remains among the lowest in the world.

The country spends only 0.7 per cent of its Gross Domestic Product (GDP) on research, while nations like Israel invest more than 4 per cent. This wide gap directly affects the ability of Indian agriculture to innovate at the pace required.

One of the biggest consequences of low R&D investment is India's dependence on imported pesticide technology. Agarwal said almost all modern pesticide molecules and formulations are developed abroad because India lacks the research ecosystem needed to build them.

He pointed out that setting up even one pesticide research centre demands an investment of Rs 2,500-3,000 crore. This makes it extremely challenging for domestic companies to create new technologies without significant government support.

Indian laboratories continue to struggle with basic equipment shortages. Modern chemical research needs advanced tools like HPLC and GLC, but many labs do not have these facilities. As a result, India falls behind in developing safer and more efficient crop protection products.

High-Performance Liquid Chromatography (HPLC) and Gas Liquid Chromatography (GLC) are crucial analytical tools in

agriculture, which are used to separate, identify and quantify compounds in complex samples like pesticides, nutrients, toxins and natural products.

Agarwal also drew attention to the misconception around pesticide use in India. He said Indian farmers actually use far less pesticide compared to other major agricultural nations. India uses around 360 grams per hectare, while Brazil uses nearly 20 times more and China about five times more.

Despite this, Indian agriculture faces criticism over alleged high pesticide use. Aggarwal stressed that better technology and appropriate training, not blanket restrictions, are the real solutions for safe and balanced crop protection.

He also highlighted the need to improve credit access for farmers. According to him, formal credit is now a necessity for modern farming, not an option. The Kisan Credit Card (KCC), he said, can play a major role in strengthening farmers' financial security if used widely.

The Kisan Credit Credit (KCC) scheme was introduced in 1998 for the issue of Kisan Credit Cards to farmers on the basis of their holdings for uniform adoption by the banks so that farmers may use them to readily purchase agricultural inputs like seeds, fertilizers, pesticides, etc.

Aggarwal believes that better credit availability would help farmers invest in machinery, quality seeds, fertilisers and new technologies. When farmers have access to organised credit, they become more resilient and better equipped to manage risks.

He warned that rising input costs, changing climate patterns and global competition make it urgent for India to accelerate technology adoption. Countries that invest in precision farming, scientific research and advanced crop protection are rapidly pulling ahead.

Aggarwal said India cannot depend only on traditional practices if it wants to remain competitive in global markets. Future growth, he argued, will come from innovation, not from expanding agricultural land.

He emphasised that strengthening laboratories, encouraging companies to invest in research, building indigenous pesticide technologies and creating a strong credit framework for farmers must become immediate national priorities.

According to him, a technology-driven approach will not only raise productivity but also increase incomes, reduce crop losses and ensure long-term sustainability.

Aggarwal's message to policymakers is straightforward: India must act now. A stronger push for agricultural R&D, along with better infrastructure and financial support, can help the country build a self-reliant, globally competitive farm economy.

He said the next decade offers India a chance to transform its agriculture sector-if the right investments are made today.

Iffco may have to wait for granular nano-NPK nod

Prabhudatta Mishra
New Delhi

Iffco, which applied for approval of its new nano-complex fertilizer (in granular form) NPK fertilizer in October, may have to wait till the Agriculture Ministry decides whether to continue issuing temporary approval for three years with renewal option or a permanent licence under the Fertilizer Control Order.

Facing the challenge of taking the new technology to farmers, producers of nano-fertilizers also face regulatory uncertainty and want permanent approval as they have made large investments in creating manufacturing facilities.

"The system of three-year approval is faulty, and it is good that the government has realised that now and wants to make changes," said a top official of a company that produces nano fertilizers.

Earlier this week, Iffco's Managing Director KJ Patel said tests had been already conducted, and the co-operative is waiting for approval before the commercial launch. He expected that farmers would be able to use the nano-complex (granular) either during rabi 2026 or kharif 2027.

5-KG BAG FORMAT

Unlike liquid nano-urea or nano-DAP, the nano-complex will be in granular form and a 5 kg bag would be equivalent to a conventional 50-kg bag of complex fertilizers, where nitrogen (N), phosphorus (P), potash (K) and sulphur (S) are distributed in different ratios in line with the needs of various crops.

Companies sold 14.97 million tonnes (mt) of complex fertilizers in 2024-25, up 28 per cent from 11.68 mt in 2023-24. Experts said that if nano-complex becomes as effective as conventional complex fertilizers, it would reduce fertilizer consumption substantially and help the government reduce imports and save on subsidy.

Patel said the co-operative had already created capacity to produce 29 crore bottles (of 500 ml each) annually, whereas it is now producing as per demand.

Since the sales were only 3.5 crore bottles in FY25, he said the non-utilisation of capacity had also impacted its finances.

₹2,000 CR R&D SPEND

He said the recent decision to re-test the efficacy of nano products jointly with the Indian Council of Agricultural Research over the next five years in 25 different centres across India in agro climatic different zones would help remove misgivings on the technology. According to US Awasthi, former MD, Iffco has spent about ₹2,000 crore on research and manufacturing facilities of nano fertilizers.

Patel said Iffco expects to match 3.5 crore bottles sales in FY26, the same as the previous fiscal.

Greater centralisation in Draft Seeds Bill a cause for concern

PARTICIPATION: Public suggestions to the Draft Seeds Bill, 2025 were sought till December 11. SANDEEP JOSHI

NAVTEJ SINGH BAINS | BALDEV SINGH DHILLON

MEMBERS, SUSTAINABLE AGRICULTURE DEVELOPMENT ACADEMY, PUNJAB

THE Seeds Bill, 2025 drafted by the Ministry of Agriculture and Farmers Welfare to provide for regulating the quality of seeds and planting materials of crop varieties is in the public domain for receiving suggestions by December 11. This is the third version of the Bill first proposed in 2004 with the objective of replacing the Seeds Act, 1966.

Improved crop varieties are pivotal in agricultural production as all other crop management practices are tailored to maximise returns from this foundational input. Seed quality is thus of prime importance. Seed varieties are released for cultivation based on their performance or 'Value for Cultivation and Use (VCU)' evaluated in multi-year, multi-location experiments conducted under the All-India Crop Research Projects (AICRPs) of the Indian Council of Agricultural Research (ICAR), apart from trials at the state level.

The best performers get released/identified at both state and Central levels, followed by 'notification' by the Central committee, thereby bringing seed production and supply under a legal framework. The seeds of notified varieties must meet such quality standards as genetic purity and germination percentage. The seed is sold through dealers registered with state governments and any shortfall in the quality claimed on the label or stipulated otherwise is liable to penal action.

The regulatory system was established in the post-Green Revolution decades when the varietal development and seed production were largely in the public sector. The private seed sector, however, has now become a major player, accounting for about 70 per cent of the market turnover, but only a miniscule proportion of the private sector varieties is notified.

The sector depends on hybrid varieties (requiring seed purchase by the grower every year) to ensure seed demand and the Protection of Plant Varieties and Farmers Rights (PPV&FR) Act, 2001 to gain IPR protection for its products. A few states, however, opt for the testing-based approval of the un-notified varieties and the regulation of sales and seed quality remain a grey area.

The Draft Seeds Bill, 2025 proposes to deal with the above situation through a system of mandatory registration as a replacement of notification, which is voluntary as per the current Act. The implementation of this strategy, as reflected in the clauses of the Seeds Bill, 2025, is marked by two strands — one, the centralisation of regulatory powers and two, a bias towards big seed companies and MNCs. These powerful entities may get greater access to farmers and be assured of high volumes of sales of seeds while the space for state-level interventions is likely to shrink.

The placement of agriculture in the State List of the Constitution recognises the diversity in climate, soil, land-use patterns, cropping systems and other agricultural practices across different states and ensures a state-specific approach for agricultural development. Agricultural diversity in the northern region is evident among the three geographically contiguous states of Himachal Pradesh, Punjab and Rajasthan. There is a large variation even within small states like Punjab, marked by the kandi region versus the rest of the state.

The centralisation of regulatory powers is evident from the cutting down of state representation in the Central Seed Committee from one member per state to five total members. The Central prerogative is also seen in several administrative aspects, such as fixing qualifications for the functionaries. The clause referring to the powers of Central government states: "The decision of Central Government whether a question is one of policy or not shall be final." With respect to the Centre-accredited multi-state companies, states are directed to accord registration forthwith and no intervention is allowed on any technical ground.

> The Seeds Bill, 2025 shows bias towards big seed companies and MNCs.

The provision for a separate testing channel through accredited testing centres for generating VCU data for the private sector is likely to result in a stream for variety release without the elaborate and coordinated testing that the public institute products undergo. This would create an asymmetry with respect to the public sector. The likely high costs of the outsourced testing procedures would ensure that even within the private sector, MNCs and large companies would be better placed.

The draft Bill also has a provision for the evaluation of VCUs outside the country. It allows for the acceptance of the information furnished by the importer on multi-location trials conducted in the exporting country, recognition of seed certification agencies located outside the country and the registration of varieties developed outside India based on the data generated there. These provisions place MNCs at a higher pedestal compared to the public institutes and Indian companies.

The imprint of the private sector on the draft Bill is visible in the omission of open-pollinated varieties from the definition of a variety. These varieties are under cultiv
tion in minor crops and less-endowed agr
ecologies on which no large corporate
working. The bias for MNCs is visible eve
in the categorisation of offences into trivi
minor and major made in the Bill. Practic
ly only players other than the seed comp
nies, ie, anyone operating without registr
tion, are placed under major offence
Offences that can be committed primari
by registered companies, likes mislabellir
and sales outside recommended agro-c
matic zones are categorised as trivial.

To list the positives, the continuation
the farmers' right to re-sow, share and s
(without branding) removes a maj
apprehension. The exemption of farmer
varieties as well as small nurseries fro
registration is another saving grace of t
Seeds Bill, 2025.

Forward-looking steps like the widenir
of the coverage to perennial crops and ne
types of planting materials, besides the int
gration of the seed chain with digital trac
ability, are in step with the changing tim
and offer new possibilities. There is a pro
sion of exemption by notification, researc
and educational organisation from specif
provisions of the Act.

One area that needs to be addresse
explicitly is a standing short-perio
exemption to new varieties released at t
state level while the registration is
process to ensure smooth flow
improved plant material to farmers' field

Agricultural states like Punjab an
Haryana in the region have lagge
behind southern and Central states
fostering a home-grown seed industr
Much of this industry came up und
the regulatory flexibilities available
the private sector in current Act. T
direction and substance of the Dra
Seed Bill 2025 implying much high
regulatory costs might make it hard
for upcoming start-ups and small pla
ers. These are important spaces in t
seeds ecosystem which may get tra
pled under the large company jugge
naut unleashed by this Bill.

The importance of space and manoe
vrability to state governments in the See
Act came out strongly during the rece
attempt by the Punjab government
modify the varietal spectrum of rice in t
state. The attempts failed when the ban
hybrid varieties (wherein milling issu
were apprehended) and Pusa 44 (in t
interest of conserving groundwater ar
reducing stubble burning) were shot dow
by courts of law. The Seeds Bill, 2025, ho
ever, has a clause wherein states c
request the revocation of registratio
which can be helpful in such cases.

On the whole, in the absence of a su
able regulatory space, states have n
been able to evolve a clear seed-relate
policy and their action, as in the abo
cases, is restricted to dealing with eme
gent issues. It is apprehended that great
centralisation under Seeds Bill, 2025 m
further push back the possibility of Pu
jab proactively engaging the seed sect
to serve its priorities of natural resour
conservation and sustainability.

India eyes agricultural transformation, govt pushes hard on tech & quality inputs

UNITED NEWS OF INDIA
New Delhi, 10 December

Union Agriculture Minister Shivraj Singh Chouhan on Monday highlighted the scale of transformation underway in the farm sector under the Modi government. From a sharp surge in sugarcane output to breakthroughs in climate-resilient seed development, the Minister said India is entering a phase of growth powered by technology, innovation and stronger support systems.

Addressing the inaugural session on 'Tripling the Agricultural GDP by Using New Technology and Quality Agri Inputs', Chouhan said sugarcane production has risen by 44 per cent since 2014. He presented this as a reflection of how Indian agriculture has benefited from scientific interventions and policy reforms.

He also highlighted the creation of 3,300 climate-resilient seed varieties and a 36 per cent improvement in overall agricultural production, driven by quality seeds, mechanisation and schemes such as the strengthened Minimum Support Price (MSP) framework.

Chouhan said India's next phase of growth must focus on integrated farming systems, particularly for small and marginal farmers who operate landholdings of less than one hectare. By combining crops, cattle, fisheries and allied activities, farmers can diversify income and reduce vulnerability. He stressed that such models help create sustainability and steady earnings even during climate-linked uncertainties.

The Minister also called for a strong push towards value addition, saying farmers must shift from selling raw produce to processing, packaging and branding their products.

These interventions, he said, hold the key to enabling farmers to capture higher value in domestic and global markets.

He underlined the government's recent crackdown on low-quality bio-inputs. The number of bio-input producers has been brought down from 30,000 to just 8,000, leaving only those firms that meet strict quality standards. Chouhan also flagged concerns over imbalanced fertilizer usage across the country. He said unscientific application can degrade soil quality and reduce long-term productivity.

Balanced fertilisation, based on scientific soil assessment, is vital to protect the prosperity of future generations.

Adding a global perspective, NITI Aayog Member Ramesh Chand said India must adopt a more precision-driven and meticulous approach to farming.

Drawing a comparison with China, he said Chinese farmers act like highly skilled land managers – paying attention to each detail, using inputs efficiently and innovating continuously. Their intensive management practices, he said, help them achieve superior per-acre yields. India, he noted, can learn from such scientific fertiliser management and precision techniques to boost productivity. Amid these discussions, Dr RG Agarwal, Chair of the Agribusiness Committee at PHDCCI, set the tone for the industry's expectations and commitment.

He said, "India's farmers have always delivered for the nation. Now, it is time we deliver for them – by ensuring they receive the best technologies, knowledge, and support to enhance their productivity and income. This summit reflects a united commitment to empower our annadatas and strengthen India's agricultural future."

Rabi crop sowing surpasses 479L hectares nationwide

NEW DELHI

THE total area sown under rabi crops in the ongoing winter season has exceeded 479 lakh hectares (as on December 5), according to latest government data.

This is an increase of 27.89 lakh hectare compared with the corresponding figure of 451.12 lakh hectares in the same period last year.

Also, 106.21 lakh hectare area is now covered under pulses, compared to 105.78 lakh hectare during the corresponding period of last year, according to Agriculture Ministry.

While 36.28 lakh hectare area coverage under 'Shri Anna and Coarse Cereals' has been reported till December 5, oilseeds have crossed 84 lakh hectares.

The increase in sown area is expected to lead to higher production, which in turn would increase the incomes of farmers and also help to keep food inflation in check.

The official figures show that the area under wheat has shot up by 23.59 lakh hectares to 241.40 lakh hectares from 217.81 lakh hectares during the same period last year.

DCM Shriram, Bayer Cropscience sign MoU to boost sustainable farming

Our Bureau
Bengaluru

DCM Shriram Ltd, a diversified Indian conglomerate, and Bayer Crop Science Ltd, a global leader in crop solutions, have signed a memorandum of understanding (MoU) to jointly explore opportunities that strengthen India's agriculture ecosystem through innovation, sustainability and farmer-centric solutions.

The MoU establishes a strategic framework for collaboration across areas such as agri-inputs, digital advisory, sustainable farming practices and value-chain strengthening, according to a statement.

Under this collaboration, both organisations will explore synergies in crop solutions, seeds, specialty plant nutrition, biologicals, digital tools and advisory platforms.

The two companies will also assess opportunities to jointly support farmer organisations and strengthen sustainable agriculture initiatives, including pilots in soil health, carbon sequestration and integrated crop management.

Additionally, both companies will evaluate possibilities for partnership across select areas of the chemicals business.

LONG-TERM VALUE

Ajay S Shriram, Chairman & Senior Managing Director, and Vikram S Shriram, Vice Chairman & Managing Director, DCM Shriram Ltd, said, "By bringing together complementary strengths, we aim to support sustainable and productive agriculture while creating long-term value for farmers and the wider ecosystem."

Simon Wiebusch, Chief Executive Officer, Bayer CropScience Ltd, said, "Indian agriculture is entering a phase where resilience and value-chain integration will define long-term success. With this partnership, Bayer and DCM Shriram can enhance market access, strengthen value-chain connections and help farmers tap into emerging opportunities. Our combined and complementary expertise enables us to scale solutions quickly and create lasting positive change."

By combining Bayer's global expertise in advanced agricultural solutions with DCM Shriram's deep rural footprint and integrated agri-business capabilities, the partnership aims to enhance farmer livelihoods, improve productivity and promote climate-resilient farming practices.

Agri startups struggling to stay afloat after seed funding phase

Only 20% able to scale up in terms of finance, employment

PAVAN KUMAR H
HUBBALLI, DHNS

Nearly 80% of agriculture-related startups in Karnataka are finding it difficult to stay afloat after the initial seed funding phase.

In the state, agri startups are venturing into sectors such as precision agriculture, farm mechanisation, agri logistics and supply, organic farming, animal husbandry, fishery, among others.

The Department for Promotion of Industry and Internal Trade (DPIIT), a Union government agency, has registered over 2,000 agriculture-related startups in India.

Around 250 of them are in Karnataka, second only to Maharashtra (300) at the Pan-India level.

Taslimarif Saiyed, Director-CEO, Centre for Cellular and Molecular Platforms (C-CAMP), says only around 20% of the agri startups are able to scale up both in terms of finance and employment, while nearly 25%-30% of the rest face eventual closure due to the sector's complexity.

He says that out of the 100 agri startups that are registered with C-CAMP, 25 have already scaled up in terms of revenue and global market share.

Lack of secondary financial assistance, gap in technology adoption, a lack of agriculture domain experts, high compliance, climate variability, need for user understanding of advanced technology, a lack of marketing network, and poor ideation are resulting in nearly 20% of agri startups winding up within two-three years of initiation, he says.

C-Camp hosts the Centre of Excellence for Agri Innovations, which is supported by the ITBT and agriculture departments of the Karnataka government, to comprehensively encourage agri startups.

Ravi Shankar, an agro-consultant, says agriculture is a complex subject and is riddled with multiple problem statements. "The higher the problems, means more opportunity for startups to find solutions."

He attributes this to changing market dynamics that are often driven by climate change, requiring the agri startups to be agile and responsive.

"Many of the startups that started in Karnataka were incubated in the urban set-up with a limited understanding of agriculture. A few of the startups also failed to capture the market and scale up as they lacked marketing experience."

Experts say that large numbers of startups are fading out as they have limited access to funding, high upfront costs and long gestation periods. Though the state government has been providing Rs 5 lakh seed funds for a majority of startups, a poor business model has meant that they failed to get secondary investment.

Manjunath R, founder of Future Biotech, a Dharwad-based startup that was incubated at the Krishik-Agribusiness Incubator of University of Agriculture Science (UAS), Dharwad, says acceptance from customers is one of the challenges for organic-based products.

"It takes at least five to six years for a startup to stabilise. However, due to a fund crunch, many are unable to sustain till then," he says, adding that the cumbersome license process is also hurting the cause.

The UAS-Dharwad in the last 12 years has incubated 136 startups. While 90 of them are still afloat, not many of them have been able to break the Rs 1-crore annual turnover bench, says S S Dolli, CEO of Krishik-Agribusiness Incubator.

Market expansion is another challenge for these startups. Sudhanshu Rai, founder of Bengaluru-based Fyllo, an agro-tech startup, says the agri-tech sector has huge potential. However, establishing a market is a challenge. "The government, which has been subsidising agriculture, needs to invest in technology related to agriculture and provide them long-term handholding to improve the income of farmers and sustain startups."

Taslimarif says the government is making significant efforts to fund promising startups even after the initial seeding phase.

"We are working with investors from within and outside countries to fund sectors that can provide greater returns in future and also make agriculture sustainable."

How they fare?

- India has around 2,000 agri startups
- Karnataka has 250 of them
- Agri-startups in state focus on precision agriculture, farm mechanisation, agri logistics and supply, organic farming, etc.
- Only 20% are able to scale up
- 25%-30% face eventual closure

Main issues

- Lack of secondary financial assistance
- Gap in technology adoption
- Lacking agriculture domain experts
- Climate variability
- Lack of marketing network, poor ideation

PI's herbicide woes force plan B

Harsha Jethmalani
harsha.j@htlive.com

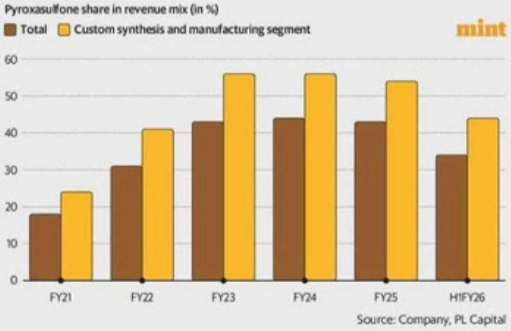
PI Industries Ltd's shares have fallen 22% in the past six months. Subdued global and domestic demand have marred the agro-chemicals company's recent earnings performance and investor sentiment. The custom synthesis and manufacturing (CSM) segment, which contributed 77% of revenue in H1FY26, has been bearing the brunt. PI now faces another hurdle that could accentuate the downward pressure on the stock.

Japanese giant Kumiai Chemicals, a major PI customer, has lowered its FY26 revenue and profit guidance. PI supplies the herbicide pyroxasulfone to Kumiai, which anticipates a 5% revenue decline and a 32% fall in operating profit, hurt by pricing pressure and muted herbicide demand in some overseas markets.

Kumiai's revised outlook will affect PI's revenue visibility linked to pyroxasulfone sales. PL Capital analyst Saurabh Ahire said, "Our analysis shows that, in FY25 pyroxasulfone was 54% of PI's CSM revenue and 43% of its overall revenue; this reduced to 44% and 34% in H1FY26. Other agrochemical products such as Fluindapyr, PCM N-2-Chloro-4-Fluoro-5-Ethoxycarbo do not contribute more than 7-8% each to the CSM segment, which means declining pyroxasulfone sales is a dampener."

Waning away

PI Industries has seen revenue contribution from key product pyroxasulfone decline lately.



Source: Company, PL Capital

SATISH KUMAR/MINT

PI has seen earnings downgrades by some brokerages. JM Financial Institutional Securities cut its FY27-28 earnings per share estimates by around 4%, cautioning that PI is likely to see only muted incremental contribution from pyroxasulfone in FY27.

But fetching meaningful contributions from these businesses will take time. The pharma business is still in its ramp-up phase, with higher overheads and one-off costs impacting profitability. In Q2FY26, this segment saw 54% year-on-year (y-o-y) growth in revenue, but remained loss-making. Here, the company is onboarding new clients and investing in an integrated contract research, development, and manufacturing organization (CRDMO) platform.

In short, while measures may be directionally positive to generate new earnings streams, for now, PI's fate is tied to its core agro-chemicals business.

The global crop protection industry faces multiple headwinds such as distributor/farmer destocking, weak prices and Chinese overcapacity, so management expects recovery to be gradual. It sees a modest improvement in global demand from Q3FY26, but a full recovery is not anticipated until H2FY26.

Agrochemical exports were soft in H1FY26 as customers delayed deliveries to rebalance inventories. In the domestic business, the Rabi season is crucial for H2. While good water reservoir levels and paddy crop support Rabi prospects, fast-changing weather remains a risk, management cautioned.

PI guided for an Ebitda margin of 25-27% for FY26, despite clocking 28% margin in H1FY26. As things stand, PI's performance in Q3FY26 is expected to be muted. Emkay Global Financial Services is pencilling in a low-single-digit y-o-y dip in FY26 revenue after a 12% decline in H1FY26 sales. Meanwhile, the stock is trading 28 times estimated FY27 earnings, showed *Bloomberg* data. "PI is better placed on margin than some domestic peers such as Coromandel International Ltd, Anupam Rasayan India Ltd and Dhanuka Agritech Ltd, but as of now there are no visible upside positive triggers for the stock," Ahire added.

SLIPPERY SLOPE

SUBDUED global and domestic demand has marred PI Industries' earnings, sentiment

PI now faces another hurdle that could accentuate the downward pressure on the stock

India-US framework trade deal soon: Commerce secy

SHREYA NANDI
New Delhi, 15 December

India and the United States (US) are hoping to finalise a framework trade agreement "soon", Commerce Secretary Rajesh Agrawal said on Monday.

India is moving forward on a range of agreements — from an easier preferential trade deal with Mexico to full-fledged free trade agreements (FTAs) with Canada, the US, Peru, Chile, the EU and Eurasian Economic Union (EAEU), he added.

With the US, the talks have been moving in parallel on two tracks – a broader bilateral trade agreement or BTA, which is expected to take longer, and the framework deal that seeks to address the specific issue of 50 per cent American tariffs on Indian exporters.

"We have had five-six rounds of negotiations, where we have discussed the full-fledged BTA and also an interim agreement/framework trade deal, which addresses the reciprocal tariff. The visit of the Deputy US Trade Representative (USTR) and the team (to New Delhi last week) was to familiarise him with India," Agrawal said.

"It was also important to stock-take, in terms of the trade relationship with India and the stage of the negotiation – in terms of the BTA and the framework agreement. We are close to a framework deal, but I would not like to put a timeline to it," Agrawal told reporters in a briefing.

With India and the US having missed the 'Fall', or autumn, deadline, New Delhi is aiming to conclude the first tranche of the deal before the end of the calendar year. But despite the visit of the US trade team last week, headed by the Deputy USTR Rick Switzer, there is no clarity on when the deal will be finalised.

India also rejected accusations made by the US that it is dumping rice in the country. Basmati rice comprises over 80 per cent of India's rice exports to the US, which typically commands a higher price as compared to non-basmati rice. "We don't see a prima facie case of dumping. As far as we know, the US has not started any anti-dumping investigation either," Agrawal said.

"WE DON'T SEE A PRIMA FACIE CASE OF DUMPING (RICE IN THE US MKT). AS FAR AS WE KNOW, THE US HAS NOT STARTED ANY ANTI-DUMPING INVESTIGATION EITHER"

Rajesh Agrawal, Commerce secretary

Narrowing difference with EU

Meanwhile, India is also engaging with the EU as the two sides try to narrow differences and close their FTA talks at the earliest, again with a year-end deadline.

Agrawal said the negotiations with the EU have entered their "most difficult" stage.

"We are in the most difficult stage, most difficult issues are on the table...we are trying to ease that out wherever we are finding a fine balance. There is a set of issues on the table... CBAM is definitely on the table," he said, referring to the Carbon Border Adjustment Mechanism, a controversial European proposal to tax exports of carbon-intensive goods. India views CBAM as a non-tariff barrier. Since the beginning of the month, the two sides have held intense discussions with the aim of working towards concluding the long-pending agreement at the earliest. The 16th round of negotiations took place from 3 to 9 December in New Delhi.

Asked if the two sides might consider dropping a few chapters to speed up matters, he said a decision on this will only be taken at the last moment. "I do not think we are dropping (any chapter) as of now. Whatever is on the table is on the table. But in case, in the interest of agreement at some point in time, we feel that there are certain issues or areas that need to be dropped, may be (they will be dropped). That call will be taken at the level of either chief negotiators or my ministers or my level — but that is not the stage we are at."

Mexico tariffs and the way forward

He said India has proposed a preferential trade agreement (PTA) or a limited trade deal with Mexico, days after it came up with surprise tariffs of up to 50 per cent on imports from its non-FTA partners. A PTA is expected to help Indian exporters deal with the steep tariffs. Mexico imposed tariffs ranging from about 5 to 50 per cent on shipments of a wide range of goods – about 1,463 tariff lines – from countries that do not have a free trade agreement with Mexico.

"Technical level talks are on...The only fast way forward is to try to get a preferential trade agreement because an FTA will take a lot of time. So we are trying to see what can be a good way forward," Agrawal said. "We have proposed a PTA because it's a WTO-compatible way forward... we can do a PTA and try to get concessions that are required for Indian supply chains and similarly offer them concessions where they have export interests in India," Agrawal said. He also said that the duties are on a most favoured nation basis and within WTO bound rates.

IIL brings science-led crop care to chili farms in AP, Telangana

Bizz Buzz Bureau
Hyderabad

WITH chili farmers in Andhra Pradesh and Telangana grappling with rising input costs, volatile market prices and yield pressures, Insecticides India Ltd. (IIL) has stepped up its field-level engagement through its Integrated Crop Solutions (ICS) programme to promote cost-efficient and productivity-enhancing farming practices.

Under the initiative, IIL has established multiple demonstration plots across key chili-growing regions, where crops are treated using the ICS package alongside neighbouring plots following conventional farmer practices. These side-by-side comparisons allow farmers to directly observe the impact of scientific crop management at regular intervals, helping them assess improvements in plant health, pest control and overall yield potential.

Farmers visiting the ICS plots reported healthier crop growth, improved flowering and fruit setting, and more effective pest management, achieved through precise and timely application of crop care solutions.

The programme aims to equip growers with practical, science-driven approaches to improve input efficiency while maintaining crop health. Dushyant Sood, Chief Marketing Officer, Insecticides India Ltd., said the initiative focuses on building farmer confidence through visible results.

"When farmers see the difference with their own eyes, it strengthens their belief that adopting scientific practices can improve yields and livelihoods.

Integrated rice farming cuts emissions, lifts yields, says TRRI study

The study, conducted during 2022–23 and 2023–24 samba seasons, showed that the new method reduced methane emission by 34.2% and oxide emission by 24.9%

M. Nacchinarkkiniyan
THANJAVUR

Ducks released into a paddy field as part of the integrated rice-farming model.

A rice field that raises fish, feeds ducks, and carries a green mat of Azolla may look unusual at first glance, but a two-year field study by the Tamil Nadu Rice Research Institute (TRRI), Aduthurai, suggests that it could be one of the most pragmatic climate change solutions for paddy – cutting greenhouse gas emission while delivering a sharp jump in yields.

The study, conducted during the 2022-23 and 2023-24 samba seasons, found that an integrated rice farming system combining green manuring, beneficial microbes, and multiple farm components reduced the overall climate change impact – measured as carbon dioxide equivalent (CO_2e) – by 32.6% compared with conventional rice monoculture reliant on chemical fertilizers. At the same time, grain yield rose by about 45%, the researchers reported.

Paddy cultivation is among the biggest sources of farm-related greenhouse gases, largely because flooded fields create oxygen-starved conditions that favour methane formation, while high fertilizer use drive nitrous oxide emission.

In the integrated plots, paddy followed a green manure crop (daincha) and was supported with phosphorus-, potassium- and zinc-solubilising bacteria, while fish rearing, duck foraging and dual cropping of Azolla were introduced as complementary components. Together, the interventions altered the soil-water environment in ways that improved nutrient recycling and weakened the conditions that favour methane-producing microbes.

Measurements showed a 34.2% reduction in methane emission and a 24.9% reduction in nitrous oxide emission compared with rice fields that thrive with chemical fertilizers. Researchers said that carbon dioxide emissions rose, consistent with higher biological activity, and decomposition under organic inputs, but the overall warming potential still declined, because methane and nitrous oxide trap more heat than CO_2 over comparable timeframe.

K. Subrahmaniyan, Director, TRRI, said the approach redefined "productivity" in paddy cultivation. "Integrated Farming System is not just about yield. It is about food security, nutrition, and soil security – things we often forget in regular farming," he said. When multiple components are integrated with paddy, he added, the farm generates more value from the same land: "Fish becomes a source of protein and additional income, alongside the crop."

Importantly, TRRI researchers say the model is designed to be workable even for small farmers. Mr. Subrahmaniyan said even on a one-acre farm, dedicating roughly 10% of the area to a peripheral trench – about one metre wide and one metre deep – could cost about ₹10,000, and under suitable management, produce up to 400 kg of fish, offering an estimated ₹25,000 additional income, apart from the rice crop.

In such layouts, about 90 cents of land remains under paddy and 10 cents supports fish, with ducks integrated in some versions.

CROP GUARDIANS

AGROCHEMICAL INDUSTRY TRENDS
WHAT FARMERS SHOULD KNOW IN 2026

The Agrochemicals industry is going to face a profound transformation in 2026, shaped by environmental imperatives, technological innovation and evolving farmer expectations. For farmers and Agri-input companies alike, this is a pivotal moment to adapt, innovate, and lead. As a company embedded in the Agri- input ecosystem, we believe it's essential to decode these trends and help farmers make informed decisions that ensure productivity, profitability, and sustainability.

A shift Towards Sustainable Solutions

One of the most significant shifts in the agrochemical landscape is the growing preference for sustainable inputs. Farmers are increasingly turning to biopesticides, biofertilizers, and plant growth regulators derived from natural sources. These products not only reduce the ecological footprint of farming but also align with global regulatory trends that are phasing out harmful chemical residues.

Biopesticides, for instance, offer targeted pest control without the collateral damage to beneficial insects or soil health. Biofertilizers enhance nutrient uptake and improve soil microbiology, reducing dependence on synthetic fertilizers. As an Agri-input company, we are investing in research and development to bring these next-generation products to market, ensuring farmers have access to effective and eco-friendly alternatives.

Digital Agriculture: The New Normal

Technology is no longer a luxury in agriculture - it's a necessity. Precision farming tools, powered by artificial intelligence and machine learning, are helping farmers make smarter decisions about input application. Drones are being used for targeted spraying, reducing waste and improving coverage. Soil sensors and satellite imagery provide real-time data on crop health, enabling timely interventions.

As part of our commitment to farmer success, we are integrating digital advisory services with our product offerings. Through mobile apps and field-level support, we help farmers optimize dosage, timing, and method of application, ensuring maximum return on investment.

Farmer-Centric Innovation

At the heart of these trends is a renewed focus on the farmer. Innovation today is not just about new molecules—it's about solving real problems on the ground. Farmers need inputs that are effective, af-

About the **AUTHOR**

Mr Sanjay Aggarwal is the Managing Director of Indogulf Cropsciences Ltd

India, Ethiopia elevate ties to strategic partnership

Focus on cooperation in mining, critical minerals, DPI and clean energy

ARCHIS MOHAN & PTI
New Delhi, 17 December

During Prime Minister Narendra Modi's two-day visit to Ethiopia, which concluded on Wednesday evening, the two sides discussed deepening the economic partnership, especially in the fields of digital public infrastructure (DPI), mining, critical minerals, and clean energy in the context of the African country opening up its economy.

In his address to the joint sitting of the Ethiopian Parliament on Wednesday and also during his discussions with his Ethiopian counterpart Abiy Ahmed on Tuesday evening, Modi stated that Indian companies have invested over $ 5 billion in the Ethiopian economy, especially in essential sectors of manufacturing and pharmaceuticals, creating over 75,000 local jobs. More than 650 Indian companies are registered with the Ethiopian licensing investment department.

Given the reform agenda that the Ethiopian PM has undertaken in the area of economy and development, Modi conveyed to Prime Minister Abiy that India will work very closely with Ethiopia as per Ethiopia's priorities and encourage the Indian private sector to do more in Ethiopia, Indian officials said.

In his address to the Ethiopian Parliament, Modi said, "India's national song 'Vande Mataram', and the Ethiopian national anthem, both refer to our land as the mother. They inspire us to take pride in the heritage, culture, natural beauty and protect the motherland."

PM Narendra Modi (*left*) with Ethiopian counterpart Abiy Ahmed at the Ethiopian Parliament in Addis Ababa PIC: X/@NARENDRAMODI

In his discussion with the Ethiopian PM, Modi conveyed India's support to Ethiopia's accession process at the World Trade Organisation (WTO), as well as membership to the New Development Bank. Ethiopia has recently joined the BRICS grouping, and India has been a consistent supporter of Ethiopia's bid to join as a borrowing member to the New Development Bank.

During their meeting, the two leaders decided to elevate the bilateral partnership to a strategic partnership. Both sides agreed to further expand cooperation in several other areas including trade and investment, agriculture, renewable energy, health, education, skill development, defence, and artificial intelligence (AI).

At a special ceremony organised at the Addis International Convention Centre last evening, Modi received Ethiopia's highest award, the "Great Honor Nishan of Ethiopia" from the Ethiopian PM. On Tuesday, the Ethiopian PM received Modi at the airport and drove him directly to the National Science Museum and Friendship Park in Addis Ababa.

India has also offered to support Ethiopia with the G20 Common Framework on debt to address the debt vulnerability of some developing countries. India has signed an agreement that will give some sort of leeway to Ethiopia in terms of debt payment under the lines of credit given by India to Ethiopia in the past few years, Indian officials said. During Modi's visit, the two sides signed agreements in the fields of UN Peacekeeping Operations Training, Mutual Administrative Assistance in the Customs Matters, and the establishment of a data centre at the Ministry of Foreign Affairs of Ethiopia. The two sides also announced upgrading ties to 'Strategic Partnership', debt restructuring under G20, more Indian Council for Cultural Relations scholarships and AI short courses for Ethiopians, and support for maternal and neonatal healthcare.

In an X post, Modi said: "These are significant steps forward in our longstanding and trusted partnership." He said that from governance and peacekeeping to digital capacity and education, the focus remains on empowering people.

"The emphasis on knowledge, skills and innovation underscores our shared faith in youth as the drivers of tomorrow. Cooperation in health care reflects a deeper commitment to human dignity and care for the most vulnerable. "These outcomes reflect an India-Ethiopia partnership focused on growth and people-centric development," he said.

Modi landed in Muscat on Wednesday evening, the last leg of his three-nation visit. India and Oman will sign a free trade agreement on Thursday in Muscat, opening greater opportunities for sectors such as textiles, food processing, automobiles, auto components, and gems and jewellery. Commerce and Industry Minister Piyush Goyal has reached Muscat for the FTA signing. Oman is the third-largest export destination for India among the Gulf Cooperation Council (GCC) countries. Speaking at the Oman-India Business Forum in Muscat, Goyal said it would be the first trade agreement Oman is entering into in nearly two decades. Oman last inked a similar agreement with the US in January 2006, he said.

"The free trade agreement offers immense opportunities for all of you," Goyal told the gathering of businesses.

He said huge potential is

Soon, home delivery of fertilisers for farmers

TIMES NEWS NETWORK

Bhopal: In a major announcement, Madhya Pradesh chief minister Mohan Yadav announced on the floor of the state Assembly that the state government is planning to work out a model for home delivery of fertilisers for farmers. Yadav made the announcement while addressing the special one-day session of the House on Wednesday.

The special session of the House was held to commemorate the 70 years of the first session of the MP Assembly and it continued for over 12 hours from 11 am to 11.20 pm on Wednesday.

Chief minister Yadav, who was the last speaker said a satellite-based survey would be done

and based on that the demand of fertilizer would be calculated and fertilizer would be supplied on the doorstep of farmers. He also announced plans to set up medical colleges in all 55 districts of the state, besides a zoo and animal rescue centres at every divisional level.

He also said that a Cheetah corridor would be jointly developed in MP, UP and Rajasthan.

Stating that the govt is working to have a helipad in each assembly constituency of the state, the chief minister said MP's state budget would be increased from existing Rs 4.21 lakh cr to over Rs 7.28 lakh cr by 2028.

Referring to the issue of Naxalism he said MP has become free from Naxalism with effect from Dec 11.

'Indian farming entering a rapid transition period'

bl.interview

Subramani Ra Mancombu
Chennai

"Science-first farming" is the path to sustainable income growth, and Indian farming is entering a period of rapid transition, says Ankur Aggarwal, Executive Chairman & MD, Crystal Crop Protection Ltd.

Aggarwal, who was recently elevated as the Executive Chairman, said unpredictable weather, shifting pest patterns, soil fatigue and a widening knowledge gap among smallholders are the major challenges.

Edited excerpts:

What, in your view, is the way forward for the Indian farm sector?

Indian agriculture is entering a period of rapid transition. Farmers are becoming more informed; technology is becoming more accessible and climate patterns are becoming more unpredictable. This combination means the next ten years will define the next five decades.

The future will be shaped by three things: efficiency, sustainability and technology. Precision input use will become essential. Crops will need to be more climate-resilient. Digital advisory will become as important as the product itself.

I see a future where Indian agriculture is not just feeding our nation but is globally competitive, technologically confident and more inclusive of small farmers.

> I see a future where Indian agriculture is not just feeding our nation but is globally competitive, technologically confident and more inclusive of small farmers
>
> **ANKUR AGGARWAL**
> MD, Crystal Crop Protection Ltd

Farmers are now looking at reducing their cost of cultivation and increasing their incomes. How will Crystal help them achieve these?

India needs five fundamental shifts. We need a subsidy system that encourages smart input use, not overuse. We need universal digital land records so farmers can access credit, insurance and precision support more easily. We need better strategies for climate-resilient farming. We need stronger post-harvest and export infrastructure to reduce wastage and improve price realisation. And most importantly, we need closer coordination between research institutions, industry and farmers.

It is not enough to just sell a product; we must help the farmer see real outcomes in the field. That is where income improvement truly begins

What are the structural shifts needed to make India an agricultural powerhouse?

India needs five fundamental shifts. We need a subsidy system that encourages smart input use, not overuse. We need universal digital land records so farmers can access credit, insurance and precision support more easily. We need better strategies for climate-resilient farming. We need stronger post-harvest and export infrastructure to reduce wastage and improve price realisation. And most importantly, we need closer coordination between research institutions, industry and farmers.

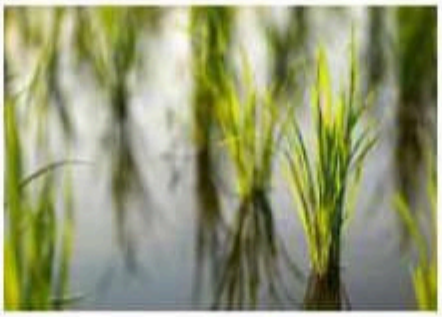
Your view on agricultural costs rising and yields not increasing?

The biggest opportunity lies in precision. Yields are plateauing in many crops, and the cost of cultivation is rising... With better crop protection practices, stronger genetics through seeds, balanced nutrition and timely advisories, farmers can unlock significantly higher yields without increasing cost.

"Science-first farming" is the path to sustainable income growth.

ICAR initiates genome editing in 24 field, 17 horticultural crops

Our Bureau
Mangaluru



The Indian Council of Agricultural Research (ICAR) has initiated genome editing in 24 field and 17 horticultural crops, according to Bhagirath Choudhary, Union Minister of State for Agriculture and Farmers' Welfare.

In a reply in the Lok Sabha earlier this week, he said the Department of Biotechnology (DBT) and the Council for Scientific and Industrial Research (CSIR) are also undertaking research in genome editing in 10 crops, in addition to the ICAR's initiatives.

Asked about the present status of product development through the application of genome editing in various crops in the country, he said two genome-edited varieties of rice had been developed by the ICAR. The Biotechnology Research and Innovation Council - National Institute of Plant Genome Research, New Delhi, had developed a low glucosinolate genome edited line in mustard. This is being evaluated under the ICAR-All India Coordinated Research Project trials, he said.

RADIATION TECHNIQUE

To a separate question on the development of crop varieties using radiation techniques, Choudhary said a total of 23 varieties were released for cultivation by using radiation techniques during the last five years. These include seven varieties of rice, five of mustard, three of black gram (urad), three of sorghum (jowar), two of groundnut, one of mung bean, one of sesamum (til) and one of banana.

Till date, 72 improved crop varieties had been developed through radiation and released for cultivation, he said.

The new varieties are released for different agroclimatic conditions of various States and different growing seasons. The varieties have key desirable traits like increased yield, larger seed size, seed dormancy, early maturity, higher nutrient content, resistance to lodging, improved disease resistance and wider adaptability to abiotic stresses.

Centre to bring new law to curb sale of fake seeds: Agriculture Minister

- 'I will never allow the honour, self-respect, or the pride of farmers to be diminished; Central government is bringing a new Seed Law and Pesticide Act to curb the sale of fake seeds and spurious agricultural inputs'
- Chief Minister Bhajan Lal Sharma presented a plough to Shivraj Singh Chouhan. The Union Minister lifted it and greeted the farmers, a gesture symbolising respect for agriculture and farming communities

HANS NEWS SERVICE
JAIPUR

UNION Agriculture Minister Shivraj Singh Chauhan on Tuesday addressed a large farmers' conference in Merta, Nagaur in Rajasthan, where he reaffirmed the Centre's commitment to protecting farmers' dignity and interests.

"I will never allow the honour, self-respect, or the pride of farmers to be diminished," Chouhan said, adding that the Central government is bringing a new Seed Law and Pesticide Act to curb the sale of fake seeds and spurious agricultural inputs.

Referring to Rajasthan Agriculture Minister Kirodi Lal Meena, Chouhan said in a lighter vein, "We are Mama (uncle), and he is Baba (elder). He was saying we have to leave soon, but once we come, we don't leave for a lifetime."

Addressing the gathering, Minister Kirodi Lal Meena said that veteran leader Nathuram Mirdha was fondly called "Baba," and now people call him Baba as well.

"Today, Mama has also come here. It is my responsibility to get the work done through Mama," he remarked, drawing applause from the crowd.

At the conference, benefits and development projects worth over Rs 3,200 crore were announced for farmers.

According to officials, over Rs 2,000 crore has been sanctioned under the Pradhan Mantri Gram Sadak Yojana, Rs 1,200 crore will be transferred directly to farmers' accounts under state schemes, and 31,600 farmers will receive Rs 200 crore under agriculture and horticulture schemes.

Around five lakh farmers will get Rs 700 crore as agricultural input subsidies, 18,500 beneficiaries will receive Rs 100 crore under PM Awas Yojana (Rural), and 4.5 lakh livestock farmers will benefit from Rs 200 crore under the Chief Minister Milk Production Support Scheme.

Chief Minister Bhajan Lal Sharma presented a plough to Shivraj Singh Chouhan. The Union Minister lifted it and greeted the farmers, a gesture symbolising respect for agriculture and farming communities.

Notably, Khinvsar MLA Revantram Danga was absent from the stage. Danga was recently caught on camera in a sting operation, allegedly demanding a 40 per cent commission for a project. Following the expose on December 14, the BJP issued him a notice seeking an explanation. The matter has since been referred to the party's ethics committee, with a final decision still pending.

'Chemicals in fertilisers and arsenic in water behind many ailments'

Vivek.Chauhan
@timesofindia.com

Lucknow: The increasing use of chemical fertilisers in agriculture and the presence of contaminants such as arsenic in water may be contributing to a rise in several serious health conditions, doctors at Ram Manohar Lohia Institute of Medical Sciences (RMLIMS) said during a medical conference on Wednesday.

The observations were shared at the Association for Medical Update.

Dr Manish Raj Kulshreshtha, from the biochemistry department and organising secretary of the conference, said that the widespread use of chemical fertilisers and contaminated irrigation water can lead to the accumulation of heavy metals in the human body. He noted that such exposure is associated with conditions affecting the kidneys, heart, nervous system, and metabolism, including diabetes. Dr Kulshreshtha said blood tests conducted at the institute detected heavy metals in a significant number of patients. He explained that ICP-MS (Inductively Coupled Plasma Mass Spectrometry) is being used to identify the presence of these metals, which may enter the body through food and drinking water.

Representational photo

LETHAL POISON

In children, it may lead to learning and behavioural difficulties, while adults may experience anaemia, high blood pressure, and reproductive health issues. Severe cases can result in coma.

RMLIMS director Dr CM Singh said lead poisoning poses a public health challenge in both rural and urban areas.

He attributed the problem to factors such as industrial pollution, informal battery recycling, contaminated water sources, and the use of lead-based paints and household products. He added that the institute is working with WHO and Unesco to strengthen screening, laboratory assessment, and research related to lead poisoning.

Empowering India's Farmers for a Sustainable Future

In order to build a $5 trillion economy, we must first rebuild our agricultural sector on pillars of dignity, sustainability and prosperity

CHAMBAL FERTILISERS AND CHEMICALS LIMITED

At the very core of our country, where commitment is tilled into every acre, our farmers embody the spirit of our nation's prosperity. Backed with this zeal and enthusiasm, we celebrate Kisan Diwas every year on December 23, marking the birth anniversary of Chaudhary Charan Singh, a champion of the peasantry. Today, the story of Indian agriculture is not one of serene bounty but of a precarious tightrope walk over a chasm of debt, climate volatility and systemic neglect. Henceforth, this annual ritual serves not merely as a remembrance of the Indian farmer's arduous journey but as a stark reminder of the formidable tasks that lie ahead on our agricultural frontier.

Beyond Annadata: A Nation's First Builders

Approximately 90 per cent of the Indian population is concentrated in the agricultural sector acting as a cornerstone of the country's economy and a key driver of nation-building. Altogether agriculture contributes to 17.7 per cent to the Gross Value Added (GVA) at current prices in fiscal year 2023-24. With over half of India's land dedicated to farming, the farmer remains the indispensable pillar of this intensive and critical sector. Their role extends far beyond cultivation. They are the modern day architects of the rural agricultural industry and national building. To undermine their viability is to destabilize the nation's very foundation.

However, this stewardship exists within a box of immense pressure resulting in the very land to be in distress. Shrinking farm plots, stifling productivity, soaring costs and unstable incomes trap economic precarity forces impossible choices, allowing farmers to stand at the nexus of our greatest national challenge, ensuring daily bread for all while safeguarding the ecological and social integrity of the nation itself. Their empowerment, therefore, is not a sectoral issue but a non-negotiable prerequisite for a secure and sustainable future.

A Maze of Policies And Interventions

The Government of India has recognized this critical role and accordingly launched a plethora of schemes. The Pradhan Mantri Kisan Samman Nidhi (PM-KISAN), a direct income support initiative, has disbursed over ₹2.81 lakh crore to more than 110 million beneficiaries as of late 2023. This provides crucial liquidity but is often critiqued as a palliative, not a cure for structural income deficiencies.

Besides, The Pradhan Mantri Fasal Bima Yojana (PMFBY), the crop insurance scheme, aims to de-risk farming. However, its acceptance is debated, with concerns over delayed claim settlements, low penetration among marginalized farmers, and the calculation of compensations. According to government data, crore farmer applications have been insured since 2016, yet the promise of seamless risk coverage remains partially fulfilled. Other key initiatives include Per Drop More Crop, which promotes micro-irrigation to combat water stress; Paramparagat Krishi Vikas Yojana (PKVY), which incentivises organic farming and e-NAM (National Agriculture Market), a digital marketplace intended to break the monopoly of APMC mandis and ensure better prices, though its integration and

Budget Allocation For The Indian Agricultural Sector

The national budget reveals the true essence or importance of any sector in India. For 2023-24, the Ministry of Agriculture and Farmers' Welfare was allocated ₹1,25,036 crore, a small increase from the previous year's revised estimates. While substantial in absolute terms, this represents a small fraction of the total government expenditure. As a matter of fact, a significant portion is consumed by

> NEARLY 90 PER CENT OF THE INDIAN POPULATION IS CONCENTRATED IN THE AGRICULTURAL SECTOR ACTING AS A CORNERSTONE OF THE COUNTRY'S ECONOMY AND A KEY DRIVER OF NATION-BUILDING

PM-KISAN. The allocation for crucial areas like agricultural research and development and market infrastructure often falls short of need. For instance, the push for natural farming or millet promotion requires sustained research and development and extension investments that budget headlines rarely capture. The funding pattern suggests a focus on consumption support over capital creation in the agrarian economy.

Understanding The Ground Reality

Despite this complex web the agrarian crisis persists due to critical design and implementation gaps: the MSP Conundrum leaves growers of pulses, oilseeds and horticulture at the mercy of volatile markets; a crippling infrastructure deficit post-harvest losses annually due to a lack of cold chains and processing units; and these vulnerabilities are brutally exposed by Climate Change, where a single extreme weather event can nullify the benefits of insurance, subsidies and MSP overnight, pushing families into irreversible debt.

Sowing Seeds For A Better Future

The need is to acknowledge the systemic failures. The first step is commitment which lies in constructing a resilient and remunerative agricultural ecosystem. Honouring the farmers requires shifting from populist support to empowering prosperity and from temporary relief to transformative resilience. The blueprint for the coming years must be built not on scattered interventions, but on four foundational pillars that address the core issues of income, infrastructure, knowledge and ecology.

From Tribute To Transformation

This Kisan Diwas, let us replace symbolic homage with a concrete accord. The true homage to Chaudhary Charan Singh's legacy lies not in speeches, but in systemic action that restores agency and dignity to the farmer. The data from schemes and budgets are not just statistics; they are a progress report on our national conscience. They reveal a system still struggling to bridge the gap between intent and outcome. The season for palliatives is over. The time has come to forge a new covenant where every seed sown is an investment in a future of security, prosperity and respect. Our national ambition can only take root if our

Parliament panel asks govt to raise budget for agriculture, fill up research posts in time

Our Bureau
New Delhi

RAISE SHARE. Budget allocation for the Department of Agriculture and Farmers Welfare for FY25 increased 1.73%, to ₹1,17,528.80 crore (BE) from ₹1,15,531.79 crore in FY24 PTI

The parliamentary standing committee on agriculture, animal husbandry and food processing has asked the government to enhance budgetary allocation to the Department of Agriculture & Farmers Welfare to ensure that agriculture gets its due importance and legitimate share, improving the scalability of the ongoing schemes. The panel has also asked the government to expedite recruitment process for research bodies to fill vacancies in time.

The panel in its report, submitted on Thursday, emphasised that filling vacancies is imperative for strengthening the efficiency of research institutes under its mandate.

The committee reiterated the need to fill up vacancies after the government informed the panel that it has been filling up vacant posts through recruitment as well as promotions.

With regard to raising the budget, the government had said that the total budget allocation for the Department of Agriculture and Farmers Welfare (DA and FW) for FY25 increased 1.73 per cent, to ₹1,17,528.80 crore (BE) from ₹1,15,531.79 crore in FY24.

"The budgetary allocation for DA and FW depends upon various factors like the amount approved for the scheme; previous years' expenditures under the schemes; absorption capacity of the Department, and the actual requirement of funds depending upon the progress of the scheme and overall fiscal situation of the government during the respective financial years," the ministry had said.

India's first indigenous water-soluble fertilizer pilot plant launched in Nagpur

Our Bureau
Mangaluru

India has completed its first indigenous water-soluble fertilizer (WSF) pilot plant in Nagpur, marking a significant step towards reducing the country's import dependence on specialty fertilizers.

Anupam Agnihotri, Director, Jawaharlal Nehru Aluminium Research Development and Design Centre (JNARDDC), on Monday inaugurated phase-1 of a soluble fertilizer pilot plant in Nagpur.

Supported by JNARDDC-funded research, the facility was completed nearly a month ahead of schedule.

CHINESE CURBS

A media statement said that the commissioning of the pilot facility marks a significant milestone in strengthening India's indigenous capabilities in specialty and value-added fertilizer production.

Supported by JNARDDC-funded research, the facility was completed nearly a month ahead of schedule

The plant is expected to enable domestic manufacturing of all critical soluble fertilizers that are currently imported each year at a time when China has curbed global exports of specialty phosphate fertilizers.

This has resulted in fertilizer prices surging in the global market.

SELF-RELIANCE

Planned for scale-up, the pilot plant is likely to be adopted by leading Indian fertilizer companies in the coming months, helping India move towards self-reliance in specialty soluble fertilizers.

JNARDDC, which is the nodal agency under the Union Ministry of Mines, continues to fund research and development across multiple strategic sectors, including critical minerals, it said.

The green technology for producing specialty soluble fertilizers, developed by Ishita International, received JNARDDC's support in April and has progressed from bench scale to pilot scale in record time.

This underlines the role of focused institutional support in accelerating the development and deployment of indigenous technologies vital to India's self-reliance objectives, the statement added.

Chandrababu Naidu presents agriculture wishlist of ₹865 crore to Modi government

STATESMAN NEWS SERVICE
Hyderabad, 25 December

Andhra Pradesh Chief Minister and key NDA ally N Chandrababu Naidu has handed a wish list of more than Rs 865 crore to Union Minister for Agriculture Shivraj Singh Chouhan, who visited Amaravati on Thursday to unveil the statue of former prime minister Atal Bihari Vajpayee on his birth anniversary.

The CM handed over a memorandum containing the demands of a new agricultural university that was promised to the state, as well as substantial additional funds and subsidies from the Centre. The memorandum demanded that an additional Rs 695 crore be allocated for micro irrigation under the Per Drop More Crop (PDMC) scheme of Prime Minister Rashtriya Krishi Vikas Yojana (PMRKVY) of the Central government. The pending funds of Rs 19.05 crore from the Union Ministry of Food Processing under the Operation Greens scheme should be released. The chief minister also proposed increasing the subsidy under the PM *Matsya Sampada Yojana* to 60 per cent besides requesting for a financial assistance of Rs 150 crore for the procurement of 20 million kg of HD Burley Tobacco through AP MARKFED.

Naidu also wanted a subsidy for transporting bananas in railway wagons to reduce transit losses and assistance to silkworm rearing sheds under the VB G Ram *Ji* scheme, discontinued from 2025-26. He demanded that the National Fisheries Development Board be shifted to Amaravati from Hyderabad.

Naidu also asked for permission for a Mango Board and the regional centres of the Indian Council of Agricultural Research and the National Institute of Food Technology and Entrepreneur Management in Andhra Pradesh. An All-India Shrimp Federation should also be established in Amaravati.

The Chief Minister handed over the memorandum to the Union minister when he visited the former's camp office. Both the Naidu and Chouhan unveiled the 13-foot-long bronze statue of Atal Bihari Vajpayee in a programme attended by key state BJP and TDP leaders.

Agriculture output touches new high, yet farmers' income stagnant

SANDIP DAS
New Delhi, December 25

INDIA'S FOODGRAIN AND horticultural output continued to rise at a satisfactory pace in 2025 on account of surplus monsoon, adequate supply of highly subsidised fertilisers. Several measures including direct cash transfer, crop insurance and assured purchase at remunerative prices from farmers also helped.

However, because of liberalised imports of edible oils and pulses and their higher output, farmers' price realisation remains under stress. Mandi prices of many agricultural commodities continue to rule below the minimum support price (MSP). During most part of 2025, the prices of staple vegetables — tomato, onion and potato — ruled way below the 2024 level because of a sharp rise in production induced by higher price realisation in 2024.

Pushan Sharma, director, Crisil Intelligence, said that in the current rabi season, the prices of onion, potato and tomato declined by 38%, 34% and 24% on-year, respectively. Despite the government's intervention through assured purchase from farmers at MSP, mandi prices of several pulses and oilseeds like soyabean stayed below the benchmark.

"Sole focus on production leads to glut. Lower farmgate prices and stagnating incomes are the most frustrating part. Short-sighted agricultural policy and declining allocations in real terms for agri research and development are not the right strategy for Viksat Bharat," Ajay Vir Jakhar, chairman, Bharat Krishak Samaj, told *FE*.

While persistently low food inflation has come in handy for the macroeconomic managers and monetary authorities, the terms of trade being tilted against farmers is causing rural income revival insufficient and non-durable. Production of foodgrains — rice, wheat, pulses and coarse cereals — rose 7.7% to a record 357.73 million tonne (MT) in the 2024-25 crop year (July-June), up from 332.30 million tonne in 2023-24. Correspondingly, in 2024-25, the horticulture production, which includes fruits and vegetables, increased by 4% to 369.05 MT, up from 354.74 MT in 2023-24.

"At several places prices of crops have tumbled and are ruling below the MSP. This does not augur well for farmers, as their incomes remain low," Ashok Gulati, agricultural economist, told *FE*. Gulati said in the next financial year the government must reform fertiliser subsidies, which has potential to save ₹40,000 crore annually. This can be invested in building more efficient value chains of perishable agricultural products.

The gross value added (GVA) for agriculture and allied activities grew at 3.7% and 3.5% in the first two quarters of 2025-26 in real terms, which may bring down overall farm growth in FY26 below 4%. In FY25, farm sector growth was 4.6%.

Ramesh Chand, member, Niti Aayog, said recently that the agri sector growth is likely to be close to 4% in FY26. Crops account for roughly 55% of farm sector GVA, and the livestock's share is 30%. The crop segment, which includes horticulture, has been losing share in the gross value added in agriculture and allied sectors. The livestock sector has been growing at a larger compound annual growth rate as consumption of dairy, meat and egg continue to surge. In 2025, under the agriculture ministry's flagship scheme to provide unique IDs to farmers which are linked to their land records, 16 states have so far provided over 74 million such IDs also referred to as Kisan Pehchaan Patra. The move to create farmers' digital registry is part of the government's digital agriculture mission, which would enable farmers to access benefits of a host of schemes. Under AgriStack, databases of geo-referenced village maps, crop sown registry and farmers registry IDs are being created.

In 2025, the government continued with the direct benefits transfer under PM Kisan Samman Nidhi of ₹6,000 in three equal instalments to close to 90 million farmers, and since the launch of the scheme in February 2019, over ₹4 lakh crore has been transferred to farmers' bank accounts. The year also saw higher credit flow. Loan disbursal to the agricultural sector by commercial banks and regional rural banks is set to exceed record ₹32.5 crore in FY26, driven by greater formalisation of rural lending and rise in credit demand, according to Nabard. Under the agriculture ministry's modified interest subvention scheme, kisan credit card (KCC) holders can access loans up to ₹3 lakh at 7% interest for working-capital needs, with an additional 3% subvention for prompt repayment, bringing the effective rate to 4%. At present, 77.1 million KCCs are active, including 124,000 for fisheries and 4.44 million for animal husbandry. Over 40 million farmers currently enrolled under the Pradhan Mantri Fasal Bima Yojana. The agriculture ministry has stated that ₹1.82 lakh crore has been paid to farmers under PMFBY since its launch in 2016. Compensation under PMFBY was five times the total premiums of ₹35,864 crore.

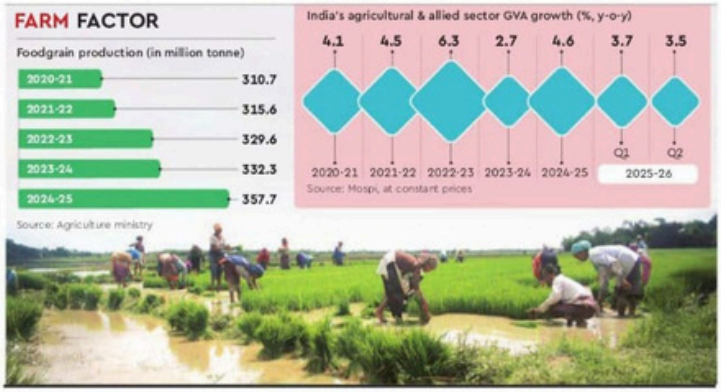
Price realisation still remained a concern. "Because of higher imports and diversion of grains for ethanol manufacturing, prices of several commodities such as maize, soyabean and other crops remained subdued, thus hitting farmers' income," Siraj Hussain, former secretary, agriculture ministry, said.

To boost farmgate prices of pulses, the government imposed a 30% import duty on yellow peas — largely used in the food processing industry as a cheaper substitute for chana — from November 1, 2025, ending duty free imports allowed from December 2023. To bridge the gap between domestic production and consumption, the government extended duty-free imports of tur and urad till March 31, 2026, while Bengal gram and masoor will have import duty of 10%. Indian imports about 15-18% of its annual pulses consumption, mostly tur, urad and lentil (masoor) from Africa, Myanmar, Canada, Russia and Australia.

India imported a record 7.3 MT of pulses in FY25. However it is expected to decline sharply in 2025-26 to about 4 MT because of higher carry forward stocks and robust domestic production. Under the Pradhan Mantri Annadata Aay Sanrakshan Abhiyan (PM-AASHA) and other schemes, the government has decided to procure 100% of the marketable surplus of tur or arhar, urad, and masoor at MSP for the 2025-26 season.

Union Agriculture Minister Shivraj Singh Chouhan recently told *FE* that the government's import policy for agricultural products should balance the interests of farmers as well as consumers so that prevailing depressed prices of commodities do not hit farm income.

THE YEAR THAT WAS 2025



Maharashtra to bring 25 lh under natural farming: Fadnavis

Our Bureau
Pune

The Maharashtra government has decided to intensify the Mission on Natural Farming to enhance agricultural productivity, improve quality, and protect soil health, with a target of bringing 25 lakh hectares (lh) under natural farming over the next two years, Chief Minister Devendra Fadnavis said.


Maharashtra Chief Minister Devendra Fadnavis RANJIT DESHMUKH

Addressing an event at the Laxminarayan Institute of Technology (LIT) in Nagpur, Fadnavis said the State government was fully committed to advancing the mission, as it would benefit farmers while preventing land degradation. He said the move was critical at a time when agriculture was facing multiple challenges, including soil health, rising input costs, and climate stress.

"Two things are important here — natural farming, and the rapid growth of the circular economy driven by institutional participation. Together, they will lead to the creation of largescale green jobs across agriculture, food processing and allied sectors," the Chief Minister said.

MISSION IN STATE

The State government has accelerated the Mission on Natural Farming in Maharashtra, particularly after an appeal by Governor Acharya Devvrat, who urged ministers and legislators to promote natural farming in a mission mode. In October this year, the Governor addressed members of the State Cabinet and the Maharashtra State Legislature at a conference on 'Natural Farming' held at Raj Bhavan, Mumbai, where he stressed the need for farmers and experts to clearly understand the difference between organic farming and natural farming.

COVERAGE EXPANDED

Since then, Fadnavis has repeatedly highlighted that the excessive use of chemical fertilisers and hybrid seeds has reduced soil fertility and increased cultivation costs for farmers. He said natural farming offers a sustainable alternative by lowering input costs, restoring soil health and improving productivity through the use of locally available natural resources.

Maharashtra's mission on natural farming, which began in 2014, has already brought around 14 lakh hectares under natural farming practices.

Following the Governor's guidance in 2023, the State government decided to significantly scale up the programme and expand coverage to 25 lakh hectares.

Referring to the growing impact of climate change on agriculture, the Chief Minister said that addressing these challenges would require a decisive, long-term shift towards natural farming, which he described as essential to building a resilient, sustainable agricultural system in Maharashtra.

Urea app implemented experimentally in 5 districts

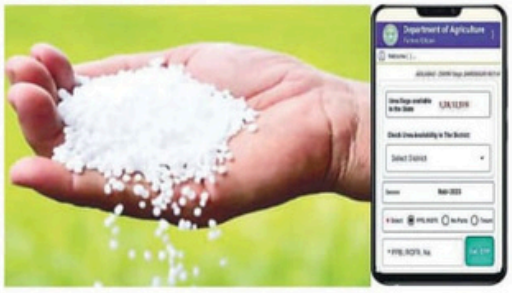
Farmers express satisfaction with the app's performance

PNS ■ Hyderabad

The Urea app, introduced by the Agriculture department, has been tested experimentally in five districts for the past two days, and over one lakh people have downloaded it in these 5 istricts.

In Adilabad district, 897 farmers; in Jangaon district, 5,150; in Mahbubnagar, 3,741; in Nalgonda, 3,618; and in Peddapalli district, 6,289 farmers - a total of 19,695 farmers - booked 60,510 bags of urea through this app from their nearest dealers. Additionally, 217 tenant farmers also booked 678 bags of urea through this app. The technical issues that arose in some places on the first day were immediately resolved.

Farmers expressed satisfaction with the app, stating that they could see how much stock was available at which dealer in their village. They were able to book the urea and purchase it at their convenience by showing the OTP at the shop. With the app's success over these two days, Minister Thummala Nageswara Rao instructed officials to observe the app for a few more days and then prepare for its Statewide implementation.



He also stated that doubts regarding the app were clarified for farmers during 'Rythu Nestham' programme. He stated that the State has already received 5.30 lakh metric tonnes of urea for this Rabi season, and the State government is working to procure sufficient urea in advance for the months of January and February, when urea consumption is high.

Natural farming to boost farmers' income: Shah

'Chemical fertiliser use root cause of diseases'

REWA (MP), Dec 25: Union Home Minister Amit Shah on Thursday termed chemical fertilisers as the root cause of many diseases and made a strong pitch for natural farming, saying it not only increases farmers' income by at least one-and-half times but also saves water and promotes public health.

Addressing a Farmers' Conference held here, Shah said the government was developing a "complete system" – from soil and laboratory testing, certification to packaging – to ensure agricultural produce of the country's farmers reaches global level in a better way as there is a huge market for natural farming in the world.

Shah said, "In the coming time, more than 400 laboratories across the country will provide certificates to farmers, due to which the income of farmers will increase by almost one-and-half times.

"Chemical fertilisers are the root cause of many diseases today. Natural farming is an approach that doesn't reduce farmers' income, but instead makes their produce pure," he asserted.

Natural farming is a traditional practice that people have forgotten over the time, he said while pointing out that dung and urine of a single indigenous cow can help cultivate 21 acres of land. "It (natural farming) increases income, saves water, and relieves people from many diseases," he added.

Shah, who is also Minister of Cooperation, said approximately 40 lakh farmers in the country have adopted natural farming and he has personally practised it on his farms. This has increased production, not decreased it, he said.

"There is a huge market for natural farming in the world. To ensure the produce of the country's farmers reaches the global market in a better way, a complete system is being developed – from soil testing to certification, laboratory testing of the produce and packaging," Shah added.

According to him, Prime Minister Narendra Modi has established two big cooperative institutions through the Ministry of Cooperation, which are doing the work of certification of natural farming produce, its testing in world-class and modern labs, packaging, marketing and export.

"This approach, which generates incomes of up to Rs 1.25 lakh per acre of land, will certainly prove to be a great blessing for small farmers," he said.

Earlier, Shah visited the Basavan Mama Cow Project and described it as a "very good approach".

Shah said that Basavan Mama Govansh Van Vihar is a successful experiment in empowering small and marginal farmers through natural farming. – PTI

GST rate cuts and welfare transfers lifted consumption, but falling crop prices clouded farm incomes

When rural optimism rose but farm returns lagged

SANJEEB MUKHERJEE
New Delhi, 29 December

India's rural economy, which showed signs of revival in 2025 owing to a good monsoon before being hit by a sharp dip in crop prices, appears to have found support from the reduction in goods and services tax (GST).

The tax cuts have lowered prices of several categories of major agricultural equipment, boosting sales. They are also expected to spur broader consumption growth across commodities.

According to the eighth round of the National Bank for Agriculture and Rural Development's (Nabard's) "Rural Economic Conditions and Sentiments Survey (RECSS)", released in November, nearly 80 per cent of rural households reported higher consumption over the past year. Consumption now accounts for 67.3 per cent of monthly household income — the highest share since the survey began in September 2024 — aided by GST rate rationalisation.

RECSS, a high-frequency, bi-monthly assessment conducted since September 2024, showed that in November 2025, about 42.2 per cent of rural households experienced income growth, the best performance across all survey rounds. Only 15.7 per cent reported an income decline of any kind, the lowest so far.

The outlook remains strong, with nearly 76 per cent of surveyed households expecting their incomes to rise next year — the highest level of optimism since September 2024.

The survey also highlighted the role of welfare transfers, which effectively supplement about 10 per cent of the average monthly income of rural households through subsidised food, electricity, water, cooking gas, fertilisers, school support, pensions, and transport benefits. For some households, transfers exceed 20 per cent of total income, helping stabilise consumption and rural demand.

Nominal farm growth slumps

Agriculture growth data, however, presents a mixed picture. In the second quarter of FY26, gross value added (GVA) in agriculture, forestry, and fishing grew 3.5 per cent in real terms, down from 4.1 per cent in the corresponding quarter of the previous fiscal. More worrying was the near-collapse in nominal growth.

In nominal terms, agricultural GVA grew just 1.8 per cent in the July–September quarter of FY26, sharply lower than the 7.6 per cent growth recorded a year earlier, largely due to a steep fall in inflation. In the first quarter of FY26, nominal GVA growth for agriculture and allied activities stood at 3.2 per cent, down from 7.5 per cent in the corresponding period of FY25.

While crop production has been strong, whether this has translated into adequate farm earnings remains open to interpretation as food inflation has crashed.

As of December 12, 2025, agriculture ministry data showed average mandi prices of key kharif crops such as maize, ragi, groundnut, and soybean trading around 20–30 per cent below their respective minimum support prices (MSPs).

Maize, cotton, and soybean prices have remained below MSP throughout the 2025 kharif season, from October through December. In the pulses segment, prices of arhar, gram, masur, moong and urad were also below MSP levels as of December 12.

Barring moong, the extent of price decline moderated between October and December after the Centre re-imposed duties to curb unrestricted imports of yellow peas. Overall, wholesale prices of most kharif crops remained below MSPs, pulling food inflation to multi-year lows but potentially hurting farm incomes and the rural recovery.

Uneven harvest

GVA for agriculture, forestry and fishing (in %)

Note: GVA at basic prices
*Second advanced estimates for FY25
Source: Mospi

GST-driven boost for two-wheelers

Two-wheeler sales, often seen as a barometer of rural health, grew a modest 3.3 per cent year-on-year in April–November FY26 to 14.3 million units, compared with 13.93 million units a year earlier.

Data shows that sales growth was subdued before November, when volumes jumped sharply following the GST cut. In November alone, two-wheeler sales surged nearly 21.2 per cent, driven largely by a 17.5 per cent rise in motorcycle sales.

Before November, bike and moped sales were down 0.2 per cent and nearly 6 per cent, respectively, during April–November FY26 compared with the same period last year.

Rating agency Icra expects domestic two-wheeler wholesale dispatches to grow 6-9 per cent year-on-year in FY26, supported by stronger replacement demand, GST cuts, improving urban consumption, and healthy rural incomes backed by a normal monsoon.

Tractor sales remain strong

Tractor sales, another key rural consumption indicator, have remained strong. Icra recently revised its FY26 wholesale volume growth outlook upward to 15-17 per cent, from an earlier estimate of 8-10 per cent.

The projected growth also marks a sharp acceleration from the 7 per cent expansion seen in FY25. The agency cited robust recent performance, including a 30.1 per cent year-on-year jump in wholesale volumes in November 2025 and cumulative growth of 19.2 per cent in the first eight months of FY26.

Icra attributed the improved outlook to supportive economic and regulatory factors, particularly the reduction of GST on tractors to 5 per cent. The tax cut has lowered tractor prices by roughly ₹40,000 to ₹1 lakh across horsepower segments, significantly improving affordability.

Favourable agricultural conditions have further supported demand, the agency said.

Rural FMCG demand beats urban

In the fast-moving consumer goods (FMCG) sector, where rural markets form a significant base, growth slowed to 7.7 per cent in the July–September quarter. However, according to NIQ (formerly NielsenIQ), rural FMCG growth outpaced urban markets for the seventh consecutive quarter.

"The Indian FMCG sector continues to demonstrate resilience. While urban recovery is gaining traction, particularly in smaller towns, rural demand remains the cornerstone of volume expansion," says Sharangpani Pant, head of customer success-FMCG, NIQ India. "E-commerce continues to be a key growth engine, especially in the top eight metros. With inflation easing, the outlook for consumption remains optimistic and the impact of GST changes on consumption is expected in the next two quarters," he adds.

MGNREGA work demand

Demand for work under the Mahatma Gandhi National Rural Employment Guarantee Scheme, which has since been discontinued, fell for the fifth consecutive month in November 2025. Around 32 per cent fewer households sought work compared with November last year, according to data recorded at 7.35 pm on December 1.

In FY26, only May and June recorded a marginal uptick in work demand compared with the corresponding months of FY25. Some experts attribute the decline to improved rural economic activity, while civil society groups point to funding constraints, with the Centre asking states to cap labour spending at 60 per cent in the first half of the financial year.

Wages and incomes: Mixed signals

Rural wage trends remain difficult to assess due to limited data. In FY25, annual average rural wage growth of general agricultural workers (male) in nominal terms was 6.78 per cent, which was a tad lower than the 7.81 per cent recorded in the preceding financial year.

In the first eight months of FY26, real rural wages are widely believed to have improved as inflation moderated. In a note circulated a few months ago, Ambit Capital said that real rural wage growth, which had been negative for several years, turned positive in mid-FY25 as inflation cooled and government infrastructure spending gathered pace, helping rebuild household savings and lift consumption of FMCG products, entry-level two-wheelers, and consumer durables.

However, the extent to which depressed crop prices will affect the rural growth narrative in FY26 remains uncertain. Nabard's All India Rural Financial Inclusion Survey 2021–22 shows that cultivation's share in average monthly income of agricultural households fell from 35 per cent in 2015–16 to 33 per cent in 2021–22, while wages and salaries rose. For all households, it was just 20 per cent.

Farming, while still central to rural livelihoods, now accounts for a declining share of household income; it's a structural shift that continues to shape the broader health of the rural economy.

Sharleen D'Souza contributed to this report

IFFCO's seaweed extract to boost sustainable farming

Our Bureau
Bengaluru

The Indian Farmers Fertiliser Cooperative Ltd (IFFCO) launched Dharamrut, a natural botanical seaweed extract enriched with amino acids and alginic acids, at the Co-operative & Farmers Conference in Bengaluru on Sunday.

The launch of Dharamrut complements IFFCO's existing portfolio of nano fertilizers and advanced bio-based agricultural inputs.

KJ Patel, Managing Director of IFFCO, emphasised the co-operative's focus on innovation-led, sustainable farming solutions. "The launch of Dharamrut reflects IFFCO's commitment to combining scientific advancement with natural, bio-based solutions. Products enriched with amino acids and alginic acids help improve nutrient efficiency, crop vigour and overall farm performance," he said.

BETTER YIELDS

"By integrating nano fertilizers with botanical inputs like Dharamrut, farmers can achieve better yields with optimised input costs, while also improving soil health. This balanced approach is essential for sustainable agriculture," Patel added.

Around 2,000 farmers participated in the conference, which focused on strengthening cooperative values while promoting the adoption of advanced agricultural technologies.

Dileep Sanghani, Chairman, IFFCO, said, "Cooperatives have been the backbone of India's agricultural growth for decades. By continuously introducing farmer-centric innovations and strengthening cooperative institutions, we are enabling farmers to improve productivity while safeguarding soil health and sustainability."

GROWTH FACTOR. Dharamrut will enhance nutrient absorption, stimulate root and shoot development and improve overall crop vigour

Sanghani added that initiatives like the mega Cooperative and Farmers Conference provide a valuable platform for directly engaging with farmers, understanding their evolving needs, and collectively working towards a resilient agricultural ecosystem.

Dharamrut is a seaweed-based extract formulated to enhance nutrient absorption, stimulate root and shoot development, and improve overall crop vigour. It also supports long-term soil health and enhances crop resilience against environmental stress, making it well-suited for sustainable agricultural practices.

The India-New Zealand FTA — unlocking growth

At a time when developing and developed countries alike are navigating an increasingly unpredictable global trading regime, India is at a crossroads, fast emerging as a resilient player in international trade and as an increasingly reliable economic partner. The conclusion of the India-New Zealand Free Trade Agreement (FTA), announced by Prime Ministers Narendra Modi and Christopher Luxon on December 22, 2025, is a clear signal of this growing confidence. Coming soon after India's FTAs with the United Kingdom and Oman, this agreement reflects a broader global shift toward diversifying trade partnerships and strengthening engagement with India. Domestically, the fast-tracked negotiations concluded within nine months, reflecting a political will to forge mutually beneficial global partnerships which concomitantly further India's national goals and its global vision for a just, equitable and rules-based trading system.

Complementarity without compromise

Primed to be signed early next year, the India-New Zealand FTA emphasises services and labour mobility – areas where India enjoys a clear comparative advantage, but which have remained underleveraged in trade agreements. From both sides, there have been firsts, with India extending duty concessions on apples, and New Zealand offering India the widest service access so far, covering sectors such as IT, education, fintech, telecom, tourism and construction. There is also a commitment by New Zealand to invest $20 billion in India over 15 years.

Mobility provisions for skilled professionals in IT, engineering, health care, and education, and post-study work opportunities for Indian students, would increase the competitiveness of service providers, positioning India as a key supplier of high- and semi-skilled workforce. Moreover, amid policy unpredictability in several advanced economies posing headwinds for skilled mobility, they offer alternatives and stability for India's youth and knowledge workers.

Chandrajit Banerjee

is Director General, Confederation of Indian Industry (CII)

The free trade agreement reflects confidence in India as a resilient player in international trade and also a reliable economic partner

New Zealand has agreed to eliminate duties on 100% of its tariff lines, giving duty-free access to all Indian exports, while India has offered market access on 70% of its tariff lines. Benefits could accrue to India in labour-intensive sectors: textiles, apparel, leather, engineering goods, pharmaceuticals and farm products. Also, duty-free intermediate inputs such as wooden logs, coking coal, metal waste and scrap would lower manufacturing costs for final products, especially in steel, engineering goods and construction.

Inclusion of an annex on health and traditional medicine services creates new opportunities for India's pharmaceutical and health-care sectors, giving them an edge over competitors such as China and the European Union. It would also reinforce India's growing role as a global health partner.

Agriculture, often a sensitive area in trade negotiations, has been handled with balance. The FTA envisages value chain development through knowledge transfers and agri-technology collaboration on apples, kiwifruit, and honey. The livelihood of farmers, however, will not stand compromised since no duty concessions have been made in dairy, sugar, spices and edible oils.

Challenges in optimal utilisation

Overall bilateral trade, which was approximately $2.4 billion in 2024-25, is projected to double by 2030, post implementation of the FTA. However, it must be heeded that the success of any FTA lies in how it is utilised. In the past, India has exhibited a low utilisation rate of only about 25%, as in contrast with developed economies touching 70%-80%. FTAs often remain underused due to awareness gaps, compliance challenges, and non-tariff barriers (NTBs). However, the India-New Zealand FTA has provisions to address technical barriers to trade through enhanced regulatory cooperation, streamlined customs procedures and transparency.

Once implemented, the Confederation of Indian Industry (CII) recommends optimally leveraging the trade pact, with business associations, large enterprises and policymakers sharing responsibility to build awareness and developing capabilities to translate the negotiated benefits into effective market access. They should also look beyond tariffs and expand services trade, deepen skills and education linkages, and leverage mobility and diaspora networks.

A strong foundation exists

The FTA can build on the strong foundations of a growing middle class, a skilled workforce, and a reform-driven, innovation-based Indian economy. It carries elements of global integrated production and service export growth (India already ranks among the top five globally), both of which can propel Indian firms up global value chains and towards the $7 trillion economy goal by 2030. Notably, with the India-New Zealand FTA deal, India has now concluded economic partnership agreements with all Regional Comprehensive Economic Partnership (RCEP) members, except China.

Notwithstanding the modest quantum of bilateral trade, the significance of the India-New Zealand FTA lies not just in trade data. Rather, it marks a coming of age in the way India is viewed on the world stage. The kind of access in terms of labour mobility and services that New Zealand is willing to extend to India, reflects growing strategic trust from developed economies in bilateral economic engagements. This is a particularly welcome development amid India's trade talks with other partners, including the European Union, lending credence to India as a country with a stable trade policy, and capable of establishing norms of effective cooperation through balanced, high-quality agreements that protect domestic interests while promoting openness and growth.

From abundance to alarm: Punjab's soil crisis

A fundamental question is: can an ancient, ecologically fragile, and already degraded mountain system like the Aravali be defined by a rigid geometric benchmark, or does such a definition risk withdrawing protection from large parts of the landscape, thereby enabling mining, real estate expansion, and irreversible ecological harm?

FIRST Column

AS MITTAL

Guru Nanak Dev ji's timeless words — "Pavan Guru, Pani Pita, Mata Dharat Mahat" — frame nature as our teacher, father, and great mother. Vande Mataram, India's national song, similarly celebrates a land of flowing rivers and fertile fields. Yet, as the nation marks 150 years of Vande Mataram, which sings of abundance, the ground beneath our feet tells a far grimmer story. India's soil — once the bedrock of food security and rural prosperity — is now exhausted, contaminated, and dangerously out of balance. Nowhere is this crisis more evident than in Punjab, the epicentre of India's first Green Revolution.

In the race to build roads, factories, and livelihoods — undeniable necessities - we forgot a simple truth: development that damages air, water, and soil ultimately harms people, animals, birds, and even micro-life.

From Delhi to northern states choking under severe AQI levels, to poisoned groundwater and declining farm productivity, climate change and pollution are no longer abstract warnings. They are lived realities. The right to a clean environment — repeatedly affirmed as intrinsic to the Right to Life — is now being tested by prolonged policy inertia.

Punjab's Evidence Is Alarming

Recent findings from the Central Ground Water Board's Annual Ground Water Report 2025 are deeply disturbing. Punjab has emerged as the worst-affected state in India, with uranium levels exceeding the permissible limit of 30 ppb in 62.5 per cent of post-monsoon groundwater samples - up sharply from 32.6 per cent in 2024, a staggering 91.7 per cent year-on-year increase. Sixteen of the state's 23 districts fall within contaminated zones, with Sangrur and Bathinda reporting uranium concentrations above 200 ppb.

This is no longer merely an environmental concern; it is a public health emergency. Elevated uranium levels are linked to kidney disease and cancer. Excess nitrates and fluoride raise the risk of Blue Baby Syndrome and skeletal disorders.

A NATION ASPIRING TO VIKSIT BHARAT CANNOT BUILD PROSPERITY ON POISONED WATER AND DYING SOIL

The author is Vice-Chairman of the Sonalika ITL Group, Vice-Chairman of the Punjab Economic Policy and Planning Board, and Chairman of the ASSOCHAM Northern Region Development Council

dailypioneer
@TheDailyPioneer
The Pioneer

Rising salinity and residual sodium carbonate are rendering once-fertile land increasingly unproductive. Zameen bhi beemar, pani bhi zahreela, aur insaan bhi — the crisis is systemic. Compounding the problem is the excessive use of chemical inputs.

Punjab's fertiliser consumption stands at 247.61 kg per hectare, nearly double the national average. Pesticide usage, at 77 kg per hectare, places the state among the highest users in the country.

What once delivered bumper harvests now depletes soil organic carbon, destroys microbial life, contaminates food chains, and inflates the fertiliser subsidy bill beyond ₹2 lakh crore annually — without commensurate productivity gains.

A nation aspiring to Viksit Bharat cannot build prosperity on poisoned water and dying soil.

The Pioneer SINCE 1865

The human toll is equally stark. In districts such as Bathinda, Mansa, and Ludhiana, up to 60 per cent of soil samples reportedly contain toxic pesticide residues, including chemicals long flagged as hazardous. These toxins migrate through water and food systems, accumulate in human bodies, weaken immunity, and burden future generations with genetic and metabolic risks. Farmers and rural communities — those closest to the land - suffer first and most.

Regulatory Blind Spots

India's pesticide governance remains trapped in another era. The regulatory backbone — the Insecticides Act of 1968 and Rules of 1971 — is outdated. The proposed Pesticide Management Bill, 2020, though well intentioned, leaves critical gaps: inadequate farmer protection, weak labelling norms, limited grievance redressal, and no mandatory provision of personal protective equipment for small and marginal farmers.

Training deficits compound the problem. Over nearly three decades, fewer than six lakh farmers have received Integrated Pest Management training in a country with over 15 crore cultivators. Aggressive marketing by agrochemical companies often fills this knowledge vacuum, turning retailers into the primary — and frequently unreliable — advisers. Yeh sirf fasion ka nahi, nasion ka sawal hai.

Soil Intelligence and the Path Forward

Punjab's revival lies not in abandoning productivity, but in rebuilding its foundation. The future of agriculture must be diagnostic-led, biology-based, and digitally empowered.

The Soil Health Card scheme demonstrated that data-driven nutrient management works. Punjab now needs a Digital Soil Health Mission that integrates satellite imagery, AI analytics, weather models, and real-time soil sensors to deliver farm-level advisories. Decentralised soil-testing labs run by FPOs, rural youth, and women's groups can transform soil testing from a periodic ritual into a continuous intelligence system. Equally vital is restoring the soil microbiome. Decades of chemical overuse have disrupted microbial networks essential for nutrient cycling, moisture retention, and crop resilience. Integrated Nutrient Management - combining chemical, organic, and biological inputs based on real diagnostics - can reduce costs, limit leaching, and rebuild long-term fertility.

Biostimulants offer a promising bridge. Inputs such as seaweed extracts, protein hydrolysates, and beneficial microbes enhance nutrient uptake and stress tolerance without damaging soil ecology. India's decision to regulate biostimulants under the Fertiliser Control Order from June 2025 will boost quality assurance, farmer confidence, and global competitiveness.

India also holds immense untapped potential in seaweed-based biostimulants. Seaweed cultivation requires no freshwater, fertilisers, or arable land, and can generate over ₹13 lakh per hectare annually — creating livelihoods while reducing chemical dependence. For Punjab, this opens a pathway to align agriculture with a broader bio-economy.

Punjab's agricultural renewal must become a coordinated national mission. Policy incentives should reward soil restoration, not just output, through carbon credits, preferential finance, and benefits linked to improvements in soil organic carbon. Massive investments are needed in farmer education, mandatory safety protocols, and transparent data systems to close regulatory gaps.

Research institutions — ICAR, agricultural universities, and IITs — must accelerate the development of crop-specific biological solutions. Rural bio-economy hubs that process agro-waste, seaweed, and organic residues can generate jobs while supplying clean inputs at scale.

Punjab once led India through the Green Revolution. Today, it must lead Green Revolution 2.0 — regenerative, climate-resilient, and rooted in living soil. Because when soil heals, farmers prosper, consumers remain healthy, and the nation stands stronger. *'Mitti bachegi, tabhi bhavishya bachega.'*

GST rate cuts and welfare transfers lifted consumption, but falling crop prices clouded farm incomes

When rural optimism rose but farm returns lagged

SANJEEB MUKHERJEE
New Delhi, 29 December

India's rural economy, which showed signs of revival in 2025 owing to a good monsoon before being hit by a sharp dip in crop prices, appears to have found support from the reduction in goods and services tax (GST).

The tax cuts have lowered prices of several categories of major agricultural equipment, boosting sales. They are also expected to spur broader consumption growth across commodities.

According to the eighth round of the National Bank for Agriculture and Rural Development's (Nabard's) "Rural Economic Conditions and Sentiments Survey (RECSS)", released in November, nearly 80 per cent of rural households reported higher consumption over the past year. Consumption now accounts for 67.3 per cent of monthly household income — the highest share since the survey began in September 2024 — aided by GST rate rationalisation.

RECSS, a high-frequency, bi-monthly assessment conducted since September 2024, showed that in November 2025, about 42.2 per cent of rural households experienced income growth, the best performance across all survey rounds. Only 15.7 per cent reported an income decline of any kind, the lowest so far.

The outlook remains strong, with nearly 76 per cent of surveyed households expecting their incomes to rise next year — the highest level of optimism since September 2024.

The survey also highlighted the role of welfare transfers, which effectively supplement about 10 per cent of the average monthly income of rural households through subsidised food, electricity, water, cooking gas, fertilisers, school support, pensions, and transport benefits. For some households, transfers exceed 20 per cent of total income, helping stabilise consumption and rural demand.

Uneven harvest

GVA for agriculture, forestry and fishing (in %)

Note: GVA at basic prices
*Second advanced estimates for FY25
Source: Mospi

Nominal farm growth slumps

Agriculture growth data, however, presents a mixed picture. In the second quarter of FY26, gross value added (GVA) in agriculture, forestry, and fishing grew 3.5 per cent in real terms, down from 4.1 per cent in the corresponding quarter of the previous fiscal. More worrying was the near-collapse in nominal growth.

In nominal terms, agricultural GVA grew just 1.8 per cent in the July–September quarter of FY26, sharply lower than the 7.6 per cent growth recorded a year earlier, largely due to a steep fall in inflation. In the first quarter of FY26, nominal GVA growth for agriculture and allied activities stood at 3.2 per cent, down from 7.5 per cent in the corresponding period of FY25.

While crop production has been strong, whether this has translated into adequate farm earnings remains open to interpretation as food inflation has crashed.

As of December 12, 2025, agriculture ministry data showed average mandi prices of key kharif crops such as maize, ragi, groundnut, and soybean trading around 20–30 per cent below their respective minimum support prices (MSPs).

Maize, cotton, and soybean prices have remained below MSP throughout the 2025 kharif season, from October through December. In the pulses segment, prices of arhar, gram, masur, moong and urad were also below MSP levels as of December 12.

Barring moong, the extent of price decline moderated between October and December after the Centre re-imposed duties to curb unrestricted imports of yellow peas. Overall, wholesale prices of most kharif crops remained below MSPs, pulling food inflation to multi-year lows but potentially hurting farm incomes and the rural recovery.

GST-driven boost for two-wheelers

Two-wheeler sales, often seen as a barometer of rural health, grew a modest 3.3 per cent year-on-year in April–November FY26 to 14.3 million units, compared with 13.93 million units a year earlier.

Data shows that sales growth was subdued before November, when volumes jumped sharply following the GST cut. In November alone, two-wheeler sales surged nearly 21.2 per cent, driven largely by a 17.5 per cent rise in motorcycle sales.

Before November, bike and moped sales were down 0.2 per cent and nearly 6 per cent, respectively, during April–November FY26 compared with the same period last year.

Rating agency Icra expects domestic two-wheeler wholesale dispatches to grow 6-9 per cent year-on-year in FY26, supported by stronger replacement demand, GST cuts, improving urban consumption, and healthy rural incomes backed by a normal monsoon.

Tractor sales remain strong

Tractor sales, another key rural consumption indicator, have remained strong. Icra recently revised its FY26 wholesale volume growth outlook upward to 15-17 per cent, from an earlier estimate of 8-10 per cent.

The projected growth also marks a sharp acceleration from the 7 per cent expansion seen in FY25. The agency cited robust recent performance, including a 30.1 per cent year-on-year jump in wholesale volumes in November 2025 and cumulative growth of 19.2 per cent in the first eight months of FY26.

Icra attributed the improved outlook to supportive economic and regulatory factors, particularly the reduction of GST on tractors to 5 per cent. The tax cut has lowered tractor prices by roughly ₹40,000 to ₹1 lakh across horsepower segments, significantly improving affordability.

Favourable agricultural conditions have further supported demand, the agency said.

Rural FMCG demand beats urban

In the fast-moving consumer goods (FMCG) sector, where rural markets form a significant base, growth slowed to 7.7 per cent in the July–September quarter. However, according to NIQ (formerly NielsenIQ), rural FMCG growth outpaced urban markets for the seventh consecutive quarter.

"The Indian FMCG sector continues to demonstrate resilience. While urban recovery is gaining traction, particularly in smaller towns, rural demand remains the cornerstone of volume expansion," says Sharangpani Pant, head of customer success-FMCG, NIQ India. "E-commerce continues to be a key growth engine, especially in the top eight metros. With inflation easing, the outlook for consumption remains optimistic and the impact of GST changes on consumption is expected in the next two quarters," he adds.

MGNREGA work demand

Demand for work under the Mahatma Gandhi National Rural Employment Guarantee Scheme, which has since been discontinued, fell for the fifth consecutive month in November 2025. Around 32 per cent fewer households sought work compared with November last year, according to data recorded at 7.35 pm on December 1.

In FY26, only May and June recorded a marginal uptick in work demand compared with the corresponding months of FY25. Some experts attribute the decline to improved rural economic activity, while civil society groups point to funding constraints, with the Centre asking states to cap labour spending at 60 per cent in the first half of the financial year.

Wages and incomes: Mixed signals

Rural wage trends remain difficult to assess due to limited data. In FY25, annual average rural wage growth of general agricultural workers (male) in nominal terms was 6.78 per cent, which was a tad lower than the 7.81 per cent recorded in the preceding financial year.

In the first eight months of FY26, real rural wages are widely believed to have improved as inflation moderated. In a note circulated a few months ago, Ambit Capital said that real rural wage growth, which had been negative for several years, turned positive in mid-FY25 as inflation cooled and government infrastructure spending gathered pace, helping rebuild household savings and lift consumption of FMCG products, entry-level two-wheelers, and consumer durables.

However, the extent to which depressed crop prices will affect the rural growth narrative in FY26 remains uncertain. Nabard's All India Rural Financial Inclusion Survey 2021–22 shows that cultivation's share in average monthly income of agricultural households fell from 35 per cent in 2015–16 to 33 per cent in 2021–22, while wages and salaries rose. For all households, it was just 20 per cent.

Farming, while still central to rural livelihoods, now accounts for a declining share of household income; it's a structural shift that continues to shape the broader health of the rural economy.

Sharleen D'Souza contributed to this report

Address:

Address: 207, Prakash Deep Building, 7 Tolstoy Marg, New Delhi 110001

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

DISCLAIMER