

ACFI NEWSLETTER

JANUARY 2023

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Crop protection chemicals crucial to ensure food security in India: ACFI

India uses just a one third quantity of crop protection chemicals per hectare in comparison to China

By ICN Bureau | January 14, 2023



The Agro Chem Federation of India (ACFI) organized a panel discussion to clear the myth about the use of pesticides in the country. The deliberation aimed to bring the truth that India does not use excessive chemicals in farming.

भारत में खाद्य सुरक्षा के लिए क्रॉप प्रोटेक्शन केमिकल जरूरी: एग्रोकेम फेडरेशन

क्रॉप प्रोटेक्शन केमिकल: मिथ्स वर्सेस फैक्ट्स' नामक डिबेट में एग्रोकेम फेडरेशन ऑफ इंडिया ने कहा कि भारत चीन के बाद कृषि उत्पादन में दुनिया में दूसरे स्थान पर है, लेकिन कीटनाशकों के उपयोग में 12वें नंबर पर आता है. संगठन के प्रतिनिधियों ने कहा-एग्रो केमिकल के बिना खतरे में पड़ जाएगी खाद्य सुरक्षा.

CROP PROTECTION

Crop protection chemicals essential to ensure food security in India: ACFI

January 13, 2023 - by Agriculture Post - Leave a Comment

Crop protection chemicals essential to ensure food security in India: ACFI Industry body rejects the myths being propagated against it

ANN, News Bureau

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Business/Economy Editor's Picks Top News

Crop protection chemicals essential to ensure food security in India: ACFI

by Team NC January 13, 2023 0 1016

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Friday, Feb 03, 2023

नवोदय टाइम्स

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/ खबरें



फसल सुरक्षा कैमिकल्स : मिथ बनाम सच्चाई पर ACFI ने छेड़ी बहस

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क्रॉप प्रोटेक्शन केमिकल्स पर इम्पोर्ट ड्यूटी और GST कम करे सरकार, ACFI ने वित्त मंत्री से की मांग

Budget 2023: आज घरेलू उद्योग को बढ़ावा देने के लिए वित्तीय सहायता प्रदान करना आवश्यक है. उन्होंने कहा, भारत के पास वर्तमान समय में आयात करने के अलावा कोई विकल्प नहीं है. इसलिए आयात शुल्क कम करना जरूरी है ताकि भारतीय किसान नए टेक्नोलॉजिकल क्रॉप प्रोटेक्शन सोल्यूशन्स से वंचित न रह जाएं.

Budget 2023: Industry Seeks GST, Import Duty Reduction On Crop Protection Chemicals

Union Budget 2023: The Agro Chem Federation of India sought import duty reduction on crop protection chemicals. It also urged the government to bring down the GST on crop protection chemicals to 5 per cent.

Budget 2023-24: ACFI Urges Finance Minister to Cut Import Duty & GST on Crop Protection Chemicals

The Union Budget will be presented in the parliament on February 1 by Finance Minister Nirmala Sitharaman

Ayushi Sikarwar Updated 17 January, 2023 12:06 PM IST

Economy » Agri Business

Agro Chem Federation seeks cut in import duty, 5% GST on crop protection chemicals

Budget 2023: Industry seeks GST, import duty reduction on crop protection chemicals

ANI | Updated: Jan 17, 2023 09:17 IST

New Delhi [India], January 17 (ANI): The Agro Chem Federation of India (ACFI) has urged Finance Minister Nirmala Sitharaman to reduce import duty on crop protection chemicals and provide fiscal incentives to private players for undertaking research and development in the upcoming Union Budget for 2023-24.

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Economy

Budget 2023: Industry seeks GST, import duty reduction on crop protection chemicals

ANI | 17 January, 2023 10:14 am IST

ET THE ECONOMIC TIMES

CHEM / FERTILISERS

Agro-chemicals industry body ACFI seeks cut in import duty for crop protection chemicals in Budget 2023

Outlook

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Agro-Chemicals Industry Body ACFI Seeks Cut In Import Duty For Crop Protection Chemicals In Budget

f t in

The ACFI is an industry body representing manufacturers/ importers of technical and formulation of pesticides at the pan-India level

पंजाब केसरी

एग्रो केम फेडरेशन का फसल सुरक्षा वाले टसायनों पर आयात शुल्क, जीएसटी कम करने का आग्रह

नयी दिल्ली, 17 जनवरी (भाषा) कृषि टसायन क्षेत्र से जुड़ी कंपनियों के संगठन एसीएफआई ने केंद्रीय वित्तमंत्री निर्मला सीतादमण से आगामी बजट में फसलों का संरक्षण करने वाले टसायनों पर आयात शुल्क और वस्तु एवं सेवा कर (जीएसटी) कम करने का आग्रह किया है। कीटनाशक बनाने वाली और आयातक इकाइयों का प्रतिनिधित्व करने वाले एग्रो केम फेडरेशन ऑफ इंडिया (एसीएफआई) ने इस संदर्भ में वित्त मंत्रालय को दिये प्रतिनिधित्व में सरकार से कृषि टसायनों के लिए अनुकूल कदम उठाने और कृषि विज्ञान केंद्रों (केवीके) के तत्वावधान में अनुसंधान और विकास कार्य को बढ़ावा देने के लिए निजी क्षेत्र को वित्तीय सहायता मुहैया कराने का भी अनुरोध किया है।

हि हिन्दुस्तान

ऐप में फ्री

ई-पेपर

डाउनलोड ऐप

शहर चुनें

होम राज्य क्रिकेट फोटो वीडियो बजट ब्रीफ

हिंदी न्यूज़ > बिजनेस > Budget 2023: बजट में कीटनाशक पर ...

Budget 2023: बजट में कीटनाशक पर GST कम करने का हो ऐलान, सरकार से ACFI ने की मांग

एसीएफआई ने कहा, "देश के पास मौजूदा समय में आयात के अलावा कोई विकल्प नहीं है। इसलिए आयात शुल्क कम करना जरूरी है ताकि भारतीय किसान नए प्रौद्योगिकीय फसल संरक्षण समाधान से वंचित न रह जाएं।"



Crop protection sector seeks import duty cut

Prabhudatta Mishra
New Delhi

Agro Chem Federation of India (ACFI) has sought a reduction in import duty on crop protection chemicals and fiscal incentives to private players for undertaking research and development in the forthcoming Union Budget 2023-24.

Pointing out that India has not invented any new crop protection chemical molecules in recent years because the cost of discovery to commercialisation is around \$280 million spread over 10 years, Parikshit Mundhra,

Chairman, ACFI, in a letter to Finance Minister Nirmala Sitharaman said adequate in-

centives are needed to promote the domestic industry. "India presently has no choice but to import to ensure that farmers are not deprived of new technological crop protection solutions," he said, urging the minister to extend data protection to new molecules registered in India so that farmers can avail the latest technology and molecules at a competitive cost.

Mundhra has sought the inclusion of more crop protection chemicals and intermediates in the PLI scheme.

the agro sector and the upliftment of the farmers. Also, with an investment of INR 2,516 crore for computerisation for 63,000 primary agriculture credit societies, the government has made an "agri push" for a better tomorrow. These steps will help the farmers to go to the next level of farming."



*Kalyan Goswami,
Director General, Agro
Chem Federation of
India*

Echoing similar views, **Dr Kalyan Goswami**, Director General, **Agro Chem Federation of India** says, "It's a very much balanced budget. The proposed Agriculture Fund would encourage agri-startups by young people in the rural segment. Modernisation of over 63,000 primary

agricultural credit societies would also boost in rural development."

एग्रो केम फेडरेशन ऑफ इंडिया के महानिदेशक कल्याण गोस्वामी ने कहा, "यह बहुत संतुलित बजट है।"

इंडियन चैंबर ऑफ फूड एंड एग्रीकल्चर (आईसीएफए) के अध्यक्ष एम जे खान ने कहा, "कृषि और ग्रामीण विकास पर बजट में किए गए साहसिक प्रावधान कृषि को टिकाऊ बनाने की दिशा में महत्वपूर्ण योगदान देंगे और इस प्रक्रिया में किसानों के लिए आय के अधिक अवसर पैदा होंगे।"

नेशनल बल्क हैंडलिंग कॉरपोरेशन (एनबीएचसी) के प्रबंध निदेशक और सीईओ रमेश दोरईस्वामी ने कहा, कुल मिलाकर बजट कृषि क्षेत्र के लिए एक सकारात्मक दृष्टिकोण प्रस्तुत करता है और कृषि-प्रौद्योगिकी कंपनियों के विकास पर इसका सकारात्मक प्रभाव पड़ने की



*Kalyan Goswami,
Director General, Agro
Chem Federation of
India*

Echoing similar views, **Dr Kalyan Goswami**, Director General, **Agro Chem Federation of India** says, "It's a very much balanced budget. The proposed Agriculture Fund would encourage agri-startups by young people in the rural segment. Modernisation of over 63,000 primary

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*Kalyan
Goswami,
Director
General, Agro
Chem
Federation of
India*

"As per the Economic Survey, the agriculture sector grew 4.6 per cent annually in the last 6 years. It is a very good sign. Key factors boosting the sector include higher **MSP** extended by the

government. It is also attributed to growing agri-related credit, income support schemes, and insurance. We urge for the agri-related credit and income schemes to continue in

Dr. Kalyan Goswami, Director General, Agro Chem Federation of India (ACFI) said, "As per the Economic Survey, the agriculture sector grew 4.6% annually in the last 6 years. It is a very good sign. Key factors boosting the sector include higher MSP extended by the government. It is also attributed to growing agri-related credit, income support schemes, and insurances. We urge for the agri related credit and income schemes to continue in the future too."

Export prospects for 2023 remain bleak as key markets face downturn

2022 marked turning point in Indian trade, despite late slowdown

BANIKINKAR PATTANAYAK
NEW DELHI, JANUARY 1

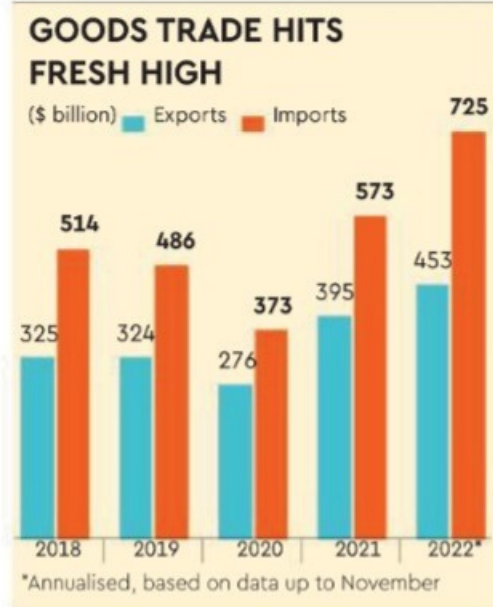
A DEMAND SLOWDOWN looms over global trade in the new year, and India is unlikely to remain unscathed. New Delhi's export competitiveness and market diversification attempts will be put to rigorous test in 2023 as its top buyers — the US and the EU — face an extended period of growth deceleration, while China, its fourth-largest export destination, is bruised by the pandemic. India's export performance, which remained robust until the first half of 2022, started losing momentum in the second half, as external circumstances increasingly turned unfavourable.

Nevertheless, in many ways, 2022 proved to be a turning point for Indian trade. Goods exports are estimated to have breached the \$400-billion mark for the first time and hit \$440-450 billion in calendar year 2022, against \$395 billion in 2021. Services exports may have touched a record \$295-300 billion in 2022 from \$254 billion last year.

More importantly, shedding inhibitions over trade deals that were long blamed for exacerbating its trade deficit, India signed a free trade agreement (FTA) with the UAE in February, the first with any economy in a decade.

Two months later, it hammered out an interim trade deal with Australia and is expected to start talks for a broader FTA with Canberra in January. New Delhi is now engaged in FTA negotiations with key economies — including the UK, the EU and Canada — and expects at least two of these pacts to fructify in 2023.

The government expects duty-free access under the FTAs, in addition to its renewed push for market diversification and product basket expansion, to help exporters turn the tide. But that will be easier said



Share in world exports still meagre



than done, at least in the short run. The World Trade Organization (WTO) recently warned of a darkened 2023 and projected that global trade growth will drop to only 1% next year from 3.5% in 2022. It also cautioned about a contraction if the Ukraine conflict escalates. This means export prospects for countries, including India, could remain far more subdued in 2023 than this year.

In fact, according to an earlier HSBC report, global economic growth deceleration explains for roughly a third of India's trade slowdown. Moreover, economies like the EU have proposed to slap carbon border adjustment measures, which typically aim to tax imported goods, including steel and cement, from countries with less strict climate policies.

"India's exports outlook for 2023 depends considerably on the oil price movement and the recovery in global demand," said Ajay Sahai, director general and chief executive at the Federation of Indian Exports Organisation.

"If oil prices remain around \$75-80 per barrel, the global economy and trade may recover

fast. The indications so far that prices of oil prices will come down. But we have to be watchful," he added.

Global Trade Research Initiative co-founder Ajay Srivastava said the weak global trade growth forecast is currently influenced by a number of factors — elevated US inflation leading to fears of multiple events of interest rate hikes; Europe reeling under high energy prices; China's Covid problems and the impact of US sanctions on high tech products; and the Ukraine war. What is also worrying is that, at 2%, India's share in world trade is lower than its 3.5% share in world GDP.

"But the outlook may look up dramatically with the end of the Ukraine war, and China controlling Covid. Both are distinct possibilities," he said.

However, there are silver linings, too. The rollout of 14 production-linked incentive (PLI) schemes in the aftermath of the pandemic will start boosting domestic manufacturing and ultimately prop up exports. Srivastava expected a "steep boost" to India's electronics exports, as the PLI-supported production goes to market next year.

This could somewhat offset the weak growth in traditional sectors like engineering and textiles.

Moreover, India's services sector is expected to defy the sharp growth slowdown in the US and the EU better than the merchandise sector. If anything, the slowdown or recession in advanced economies may brighten the prospects for Indian services exporters, as these countries tend to start diverting a larger number of orders to cheaper destinations to cut down on costs, according to Services Export Promotion Council chairman Sunil Talati. This is especially true of segments like accountancy and legal services.

For instance, until November this fiscal, services exports jumped almost 29% from a year before to an estimated \$204.4 billion. In contrast, goods exports rose by only 11% until November to \$295.3 billion.

Meanwhile, goods imports, too, are expected to shoot up to a record \$725 billion in 2022, against \$573 billion in 2021. Elevated imports inflated the current account deficit to about a decade high of 4.4% of GDP in the second quarter. Of course, the pressure has eased from the December quarter and may remain benign in 2023, as import growth falters.



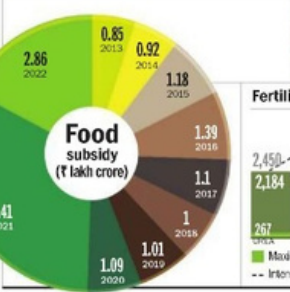
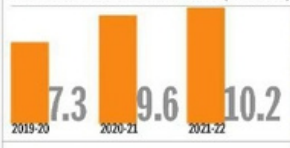
Prioritise welfare of small, marginal farmers

One way to enhance public investment and agricultural growth is to rationalise the burden of direct money transfer so that some money can be spent on investments. The money transfer should not be below ₹10,000 even for a marginal farmer with less than one acre and should not be above ₹30,000 each. The DMT schemes should be more focused on small & marginal farmers as the large ones are able to get crop loans, more fertiliser subsidy and other assistance at subsidised rates.

A. AMARENDER REDDY

WITH the advent of JAM (Jan Dhan-Aadhaar-Mobile) trinity and the provision of linking bank accounts with phone numbers and Aadhaar, Direct Money Transfer (DMT) schemes are replacing in-kind subsidy schemes. Digitisation of land records further paved the way for DMT to farmers; it invariably increased targeting and efficiency and reduced leakage. The Central government is implementing PM-KISAN (Pradhan Mantri Kisan Samman Nidhi) since 2019, transferring Rs 6,000 per year per farm household in three equal instalments; it is exclusively for landowner-farmers. The intended purpose of this money transfer is to help farmers purchase farm inputs such as seeds, fertilisers and pesticides. Some state governments also have DMT schemes for farmers. Telangana has its Rythu Bandhu scheme, under which Rs 10,000 per acre is transferred to landowning farmers. The Andhra Pradesh government is implementing Rythu Bandhu by transferring Rs 7,500 per farmer irrespective of the farm size. Together with PM-KISAN, each farmer is getting Rs 13,500 per year in AP. In West Bengal, under Krishok Bandhu scheme, farmers with one acre or more of cultivable land are entitled to assistance of Rs 10,000 per annum; farmers with less than one acre are getting Rs 4,000. Thanks to state assistance and PM-KISAN, a marginal farmer with less than one acre is getting Rs 10,000, while a small farmer is getting

PM-KISAN beneficiaries in India (in crores)



Rs 16,000 in West Bengal. Experience of the past few years shows that thanks to these schemes, farmers are able to cover a significant portion of cash expenses incurred by them and reduced dependence on high interest-bearing loans from moneylenders and input dealers for the purchase of seeds and fertilisers. As per the Commission for Costs and Prices (CACP), expenses on seeds, fertilisers and pesticides together were Rs 7,894 per acre for cotton, Rs 7,054 for maize, Rs 6,150 for paddy and Rs 2,970 for arbor in 2020-21. It indicates that DMT of Rs 6,000 under PM-KISAN is reasonably covering the cost of these inputs for a major-

ity of the marginal farmers (who possess less than one acre) and partially covering expenses of small and medium farmers. Another positive aspect of these direct money transfer schemes is easy implementation and no exclusion/inclusion errors; they are now reaching 100% of the targeted farmers; other schemes, such as procurement at the Minimum Support Price (MSP), are covering less than 20% of the farmers, that too highly concentrated in developed states and for irrigated crops, with gross negligence of dryland growers of millets, pulses and oilseeds. Even fertiliser subsidies are also highly skewed, with

more benefits reaching already rich farmers as they are able to use fertilisers in large quantities, with negligible benefits reaching farmers growing millets and pulses. However, a negative aspect of the popularisation of DMT is that most of the other productivity-enhancing schemes are starved of funds. In a recent visit to agricultural offices in Telangana, I noticed that because of the diversion of a major share of the agricultural budget to Rythu Bandhu, schemes related to increasing technology adoption and productivity enhancement, such as the development of new high-yielding varieties, farm machinery like drip and sprin-

gled about 14.3% of the agricultural GDP. Overall investment in agriculture was below 10% of the agricultural GDP in 2019-20, which is not sufficient for doubling farmers' income. To achieve 4% annual agricultural growth with the current Incremental Capital Output Ratio of 4.1%, investments should be increased to more than 16.4% of the agricultural GDP. One way to enhance public investment and agricultural growth is to rationalise the burden of direct money transfer so that some money can be spent on investments. The money transfer should not be below Rs 10,000 even for a marginal farmer with less than one acre and should not be above Rs 30,000 each to make these schemes more egalitarian and progressive. The DMT schemes should be more focused on small and marginal farmers as large ones are able to get crop loans, more fertiliser subsidy and other assistance at subsidised rates and earn more income from MSP operations to reinvestment in agriculture. In the long run, expenditure under all these schemes needs to be bundled as a package and given to farmers as DMT so that the amount transferred per acre or per farmer will be significantly increased and they adopt new technology and rationalise the use of agricultural inputs for maximum profitability with no harmful effect on market prices and environment. Thus, farmers will be able to use this money as per their choice to maximise their welfare.

The author is Principal Scientist (Agricultural Economics) ICAR-Central Research Institute for Dryland Agriculture, Hyderabad. Views are personal

Safex set to invest ₹100 cr in agri-tech

Agrochemicals maker Safex Chemicals Ltd on Tuesday said it plans to invest ₹100 crore in its new agri-tech arm, AgCare Technologies, in the next 3-4 years for launching an interactive tech platform and for setting up a manufacturing unit.

The company's group director Piyush Jindal said, "We are investing ₹100 crore from our own kitty. We are not raising any funds. The investment is planned for the next 3-4 years." The plan is to launch an interactive technology platform to integrate the entire value chain in the agri-economy. Key stakeholders, especially farmers, can buy quality crop protection products and get services like weather updates, experts' help and mandi rates on this platform, he said.

"A pilot study of this interactive tech platform will be conducted in January-March. We plan to go live in the next fiscal year," Jindal said. **PTI**

Govt aims to cut food, fertiliser subsidy to ₹3.7trn

The government aims to cut spending on food and fertiliser subsidies to ₹3.7 trillion (\$4.6 billion) in the fiscal year from April, down 26 per cent from this year, two government officials said, to rein in a fiscal deficit that ballooned during the pandemic. Food and fertiliser subsidies alone account for about one-eighth of total Budget spending of ₹39.45 trillion this fiscal year, but reductions in food subsidies in particular may prove politically sensitive with elections looming on the horizon.

The government expects to Budget around ₹2.3 trillion for food subsidies in the coming fiscal year, compared with ₹2.7 trillion for the current year to March 31, the two officials said. Spending on fertiliser subsidies will likely fall to about ₹1.4 trillion, according to one of the officials and a third government official. That compares with nearly

₹2.3 trillion this year, the third official added. The officials declined to be named because the information was not public. The finance ministry declined to comment, while the food and fertiliser ministries did not immediately reply to requests for comment.

A large part of the savings will come from the end of a Covid-19 era free food scheme, which will be replaced with a lower-spending programme, the first two officials said. That will effectively halve the free rations available to the poor in a year with a series of elections till 2024. The government is eager to tame its fiscal deficit, which is targeted at 6.4 per cent of GDP for the current fiscal year. That is far above the average of 4 per cent to 4.5 per cent over the past decade, excluding the pandemic years when spending surged and the ratio peaked at 9.3 per cent. **REUTERS**



REDUCING DEPENDENCE ON IMPORTS

National Fert Policy in Works to Boost Local Manufacturing

ON CARDS Incentives to set up units, lower import duty on raw materials, focus on organic

Anuradha.Shukla
@timesgroup.com

New Delhi: The government is working on a national policy to boost local manufacturing of fertilisers and reduce dependency on imports. The roadmap of the scheme is likely to be announced during the upcoming budget and it will consist of special incentives to set up fertiliser units and reduced import duty on raw materials with a focus on organic fertilisers, people aware of the discussions said.

"Work is in progress over a draft national fertiliser policy and the budget may provide a roadmap regarding this," an official told ET.

A duty reduction on imported phosphoric acid and ammonia to improve the competitiveness of the domestic fertiliser manufacturers has been a long-pending demand of the industry.

This was one of the suggestions during the pre-budget meeting of the finance ministers with representatives from the agri sector and agriculture economists.

"Another proposal is to give an in-

Booster Plan

National Fert Policy to consist of special incentives to set up units



Lower import duty on raw materials with a focus on organic fertilisers



Fertiliser subsidy bill has gone up to ₹1.62 lakh cr in 2021-22 from ₹83,000 cr in 2019-20



Budget likely to provide a roadmap on the scheme

Niti Aayog working to promote organic fertiliser production



Centre planning campaign to increase use of organic fertilisers



SUBSIDY BURDEN

India is among top fertiliser users and, despite the demand, relies heavily on imports, pushing import bills & subsidy burden

centive for the promotion of the organic fertiliser industry, as India already has the potential to become the hub of organic fertiliser

ORGANIC FOCUS

Niti Aayog is already working to promote organic fert production and has set up a task force to assess the status

production and this will be in accordance with the long-term food security strategy," the official said. The Niti Aayog is already working

to promote organic fertiliser production and has set up a task force under its member Ramesh Chand to assess the status of local production and devise ways and policies to promote the cattle economy, converting them into economic assets.

The Centre is also considering running a campaign to increase the use of organic fertilisers.

India is among the top fertiliser users and, despite the demand, it relies heavily on imports, pushing both import bills and the subsidy burden. The high cost of natural gas, along with the disruption of exports from Russia and Ukraine, caused prices for chemical fertilisers to more than double in the last two years. This is increasing the financial burden on the Centre, which is funding a large portion of the price hike through subsidies to safeguard farmers' interest.

The fertiliser subsidy bill has gone up in the last few years, going up to ₹1.62 lakh crore in 2021-22 from ₹83,000 crore in 2019-20.

As per estimation by economists, the subsidy requirement for fertilisers is expected to be ₹2.5 lakh crore in the ongoing 2022-23.

'Impact of diseases on chilli crop lower this year in Karnataka'

Subramani Ra Mancombu
Chennai

The impact of diseases on the chilli crop, particularly the Byadgi variety, is less than last year, though arrivals have been affected due to late sowing in Karnataka, the third-highest grower in the country.

According to Spiceextra.in website, incidents of wilt disease, which increase in the event of continuous rainfall, is less compared to last year, while incidents of western black thrips disease, which crops up due to cold weather conditions

resulting in pests multiplying manifold, is also less.

"Major arrivals were 30 per cent less than last year when the inflow of very low medium varieties made up 50 per cent. This year, arrivals of such inferior quality are less than 10 per cent," the website said.

Also, arrivals of medium and best quality were 20 per cent higher than last year. This year, sowing was delayed by 10-15 days since the South-West monsoon arrived on July 1 only in Karnataka.

PRICE CORRECTION

However, the area under the



spice crop is higher, mainly due to farmers' interest in Byadgi. Record high prices for chilli last year also influenced farmers' decision to go for the crop.

On the other hand, rains in October affected 25-35 per cent of the crop and delayed arrivals to the third and fourth week of December, it said.

The website said farmers are looking for better prices and it will take some time for the price correction to set in. But in December prices decreased by 20-25 per cent with prices of Byadgi being quoted at ₹38,000 a quintal.

Heavy rains under the impact of a formation of a cyclone in the Bay of Bengal affected arrivals in Karnataka by 7-10 days in December, Spiceextra.in said.

TN agro firm develops gluten-free, low GI rice

Subramani Ra Mancombu
Chennai

An agricultural firm, Udaya Agro Farm, based in Kumbakonam in Tamil Nadu's Thanjavur district, has come up with a novel, unique and patented rice that is gluten-free and has a low glycaemic index.

The produce — branded as Village Rice — has been cultivated using good agricultural practices, however, has no genetically modified organism in it, says the company's CEO G Paranjothi.

ORGANIC BREEDING

A special feature claimed by Village Rice is that it has high dietary fibre that has health benefits such as lowering cholesterol levels, preventing bowel syndrome and controlling glycaemic response.

It has a lower Glycaemic Index which is less than 49 per cent, which means it release glucose more slowly and en-

sure healthy blood sugar levels.

Paranjothi told *businessline* that Village Rice has been tested by the Indian Institute of Food Processing and Technology and has been found to have 14.01 per cent of protein. The company has got the Food Safety and Standards Authority of India certification too. "The rice has the highest dietary fibre level of over 13.8 per cent per 100 gram compared to other rice varieties," he said.

Udaya Agro Farm organically breeds a selection of crops to enhance their nutritional value. Thousands of varieties of rice plants were screened before the company picked those with high dietary fibre and protein content with slow start digestion capability. Thus, the rice has a comparatively slow sugar level after a meal, the company's CEO said.

"We use the classical hybrid methods such as mutation



Village Rice claims to have a low GI of less than 49 per cent

breeding, hybridisation and selection coupled with intense biochemical screening methods to ensure nutritional values are enhanced amidst a stable yield," Paranjothi said, adding that modern biotechnology comes into play when his firm selects the best of the characteristics during the hybridisation process.

BIOCHEMICAL TESTING

Udaya Farm, which markets its rice through e-commerce portals, ensures genetic purity through the production of

nucleus seeds by genotyping every single plant with purity DNA markets that are associated with high dietary fibre expression. "The genotyping of breeder seed is planned scientifically but in a random fashion. The grain production is from the foundation seeds and not from any certified seed to ensure better genetic purity," Paranjothi said.

Every single grain is tested biochemically for dietary fibre and protein contents and the company uses its own harvesters and personnel to harvest the crop. "The processing of rice is done with innovative technology to yield high value-addition in every grain. We have a well and hygienically maintained processing plant that is free from moisture, insects, pests and physical impurities," he said.

Paranjothi claimed the rice helps control diabetes, manage weight issues, ensures healthy heart and has paediatric and pregnancy benefits.

'Govt to decide on lifting wheat export ban in March-April'

'Country's wheat production likely to set a new record of over 112 mn tonnes in 2022-23 crop year (July-June)'

OUR CORRESPONDENT

INDORE: Director General of Foreign Trade Santosh Kumar Sarangi on Thursday said the government will take an appropriate decision on the demand to lift the ban on wheat exports at the time of crop harvest around March-April.

Before this decision, a review will be done of the gap between the demand and supply of wheat in the country, he said.

The head of the Directorate General of Foreign Trade (DGFT) was in Indore to participate in the Global Investors Summit 'Invest Madhya Pradesh' organised by the MP government.

India banned wheat exports in May 2022 with immediate effect as part of measures to control rising domestic prices.

Asked about the demand for lifting the ban, Sarangi said, "The wheat crop is harvested in the country generally in March-April. Around that period, the government would take an appropriate decision on this subject."

"At the time when it will be felt that there is an equilibrium in the demand and supply of wheat, arrangements will be made to allow the export of this food grain," he said on the sidelines of the investors summit.

Sarangi also said special attention should be paid to



India banned wheat exports in May 2022 with immediate effect as part of measures to control rising domestic prices

promote exports from Madhya Pradesh in the area of textile production as there is a huge availability of cotton as the raw material for this industry in the state.

He also said along with wheat, rice, fruits, vegetables and spices, there is a scope of increasing the export of organic and non-organic chemicals and engineering products from the state.

To a question, Sarangi said the government's Production Linked Incentive (PLI) scheme is currently being run for 14 sectors and could be expanded to some more areas.

Meanwhile, the country's wheat production is likely to set

a new record of more than 112 million tonnes in the 2022-23 crop year (July-June), according to official sources.

Wheat production had declined to 106.84 million tonnes due to heat wave in key growing states in 2021-22 crop year, as per the agriculture ministry data.

In 2020-21, the country had achieved record wheat output of 109.59 million tonnes.

"The crop prospect of wheat is better due to current weather conditions and slightly higher acreage. The total production is estimated to be more than 112 million tonnes this year," sources said.

Sowing of wheat, the main rabi (winter) crop, had begun from October onwards, while harvesting will start from March/April.

According to the latest data, farmers have sown wheat in 332.16 lakh ha till January 6 of the current rabi season of the 2022-23 crop year (July-June), against 329.88 lakh ha during the same period last year.

Higher coverage was reported from Rajasthan (2.52 lakh ha), Uttar Pradesh (1.69 lakh ha), Maharashtra (1.20 lakh ha), Gujarat (0.70 lakh ha), Chhattisgarh (0.63 lakh ha), Bihar (0.44 lakh ha), West Bengal (0.10 lakh ha), Jammu & Kashmir (0.06 lakh ha) and Assam (0.03 lakh ha), according to the data.

3 businessmen held for smuggling insecticides

Mumbai: Directorate Revenue of Intelligence (DRI) officials arrested three businessmen who used to smuggle restricted insecticides from China by misdeclaring them and evading Customs duties to the tune of Rs100 crore.

Mumbai zonal office arrested Praveen Patidar from Ratlam in Madhya Pradesh, and Rajesh Vasoya and Suresh Vasoya from Surat under sections of the Customs Act.

The officials received information that a consignment had arrived from China at Nhava Sheva in which Ying Tat Investment Group had restricted insecticides. DRI carried a search of a bill of entry

and consignment that had arrived from China in the guise of import of Vinyl Acetate Ethylene Copolymer and in the past too the same firm had imported consignments of insecticides by misdeclaring and diverted them in the local market by fraudulent means resulting in massive evasion of Customs duty.

Officials carried out searches of Patidar's office and residences and arrested him.

During investigations it transpired that he was the director of Vyom Fertilizers, Agrochem Private Ltd, Vedant Agrochem and Vaishnavi Finechem, all in Ratlam. — S Ahmed Ali

'GM mustard won't solve India's edible oil import problem'

The Centre needs to spend much more on agriculture research and development than on farm subsidies to ensure sustainability and productivity of the food systems in the country, agriculture economist and Infosys Chair Professor for Agriculture at the Indian Council for Research on International Economic Relations (ICRIER) **ASHOK GULATI** tells Sanjeeb Mukherjee in an interview ahead of the Budget. Edited excerpts:

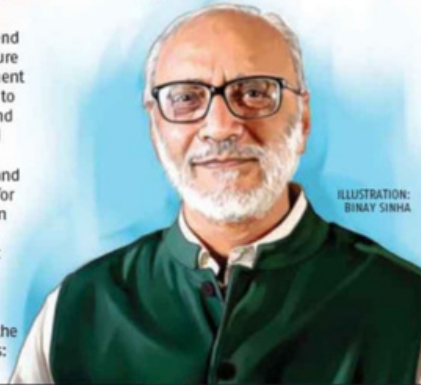


ILLUSTRATION: BINAY SINHA

A big challenge India faced last year was food inflation. We had high inflation in cereals and also in edible oils. Do you think inflation will remain a concern in FY24 as well, particularly in cereals?

The RBI said a few weeks back that, hopefully, the worst of inflation is behind us. It was not just some demand-supply issue or disruption due to climate change. It was the high energy costs and lack of supplies from Russia and Ukraine that pushed up food prices. Now, that type of unknown in the system we don't know. But, to the extent, at present, it is not as bad as it was before. It has not come totally under control. The energy prices are gradually coming down and unless there is a major flashpoint within the Russia-Ukraine war or any other geopolitical crisis or the heatwave again hits us very badly in March last year, we could lose something. So, in a nutshell, I feel given the business as usual, under normal circumstances, we should have inflation reasonably under control. It is still not the best but better than earlier.

Does this also call for a rethink on the numerous curbs and bans that India had imposed to control inflation in the past few months?

I would never recommend anything like stock limits or export controls but some filtration can be done. We should move gradually, in a calibrated manner, towards opening up. The good thing is the big increase in fertiliser costs has not been transmitted to the farmers. That was absorbed by the government. In that way, the government can say to farmers — we are not hurting you on fertiliser prices but you also make some sacrifices by not getting the best possible benefit of the international price.

One big thing that struck the agriculture sector this fiscal year was GEAC giving 'environmental

“ UNDER NORMAL CIRCUMSTANCES, WE SHOULD HAVE INFLATION REASONABLY UNDER CONTROL. IT IS STILL NOT THE BEST BUT BETTER THAN EARLIER”

approval' to GM mustard (DMH-11). It has said FMH-11 is the answer to India's problem of rising edible oil imports. Do you think the time has come to move decisively on a technology path for agriculture? As far as GM mustard is concerned, as long as Genetic Engineering Appraisal Committee (GEAC) has given some clearance, I'm in support of that. But it is a political call finally because some people are opposing it which is perfectly fine as in democratic countries you have these checks and balances. I'm in support of new tech

and GM mustard should go ahead. Will it solve India's problem of edible oil imports? No way. This is because we are importing 55-60 per cent of our annual edible consumption and mustard oil can never be competitive with palm oil. Palm oil gives four tonnes of oil per hectare while mustard gives about 400 kg. It will go up due to these technological innovations but it can never match palm oil. Palm oil is by far the cheapest edible oil available.

Coming to the forthcoming Budget, what according to you should be the big concerns for the government?

In agriculture and food space, there are three big items — food and fertiliser subsidies; and PM-Kisan disbursals. The Centre should rationalise them all. We are spending much less on agriculture investment than on subsidies. Look at the Budget allocation for the Indian Council of Agriculture Research. It is around ₹8,000 crore per year. And we are spending lakhs of crores annually on subsidies. This does not gel well with the sustainability and productivity of the food systems, which will come through investments in agriculture R&D which have a very high rate of return, irrigation and now investment in environmental protection within agriculture and not just adaptation. We need to find



ASHOK GULATI
Infosys Chair Professor
for Agriculture, ICRIER



PANEL DISCUSSION -ACFI

Crop Protection Chemical Federation 'Agro Chem Federation of India' organised a civil society panel discussion on the topic 'Crop Protection Chemicals: Myths V/s Facts' recently at Hotel Shangri-La, New Delhi.

SR INITIATIVES, APP

India among top three nations to expand organic farming in 2020

Prabhudatta Mishra
New Delhi

India has emerged as one of the top three countries in the world where the area under organic agriculture expanded the maximum in 2020, according to latest data.

The total increase under organic cultivation globally in 2020 was 3 million hectares (mh), out of which Argentina accounted for 7,81,000 hectares (up by 21 per cent), followed by Uruguay at 5,89,000 hectares (28 per cent) and India at 3,59,000 hectares (16 per cent), according to IFOAM -Organics International data.

Of the world's total 74.9 mh under organic farming, Australia has the highest at 35.7 mh, whereas India has 2.8 mh. In contrast, out of total 34 lakh organic producers in the world, 16 lakh farmers in India are into certified organic farming.

Experts said unless and until the government takes concrete steps, the growth in organic agriculture may not see any significant improvement.



GOOD PROGRESS

As much as 3,59,000 hectares were brought under organic cultivation

Issues such as the certification process and its costs are key to the growth and there is no one particular department or agency for it. Works are fragmented and span across several organisations and ministries, experts said.

AID FOR FARMERS

As reported by *businessline* in December 2022, the Cabinet is yet to approve Agriculture Ministry's ₹2,481-crore proposal to launch the National Mission on Natural Farming (NMNF).

The mission is supposed to be implemented from the current fiscal until 2025-26, with a target to bring on fold 7.5 lakh farmers to practice non-chemical natural farming on 7.5 lakh hectares.

Under the scheme, farmers will get a maximum of ₹15,000/hectare (until 2025-26) depending on loss in income, if any, after switching over to natural farming.

The target realisation of enrolling 7.5 lakh farmers will take at least four years since the entire process of capacity building of farmers through formation of clusters, their certification and also organising them as FPOs is very slow, officials said.

Since certification will also be there for these farmers, experts wonder how these products would get exported unless they are labelled as 'organic'.

For the export purpose, the government needs to take a call on branding under either organic or natural farming or some other name so that no one gets confused and the crops receive better prices in the market, said an expert.



SCAN THE CODE TO WATCH THE INTERVIEW

Organic farming gets renewed push



PM-PRANAM scheme announced to incentivise states and UTs to promote alternative fertilisers and balanced use of chemical fertilisers

AJITH ATHRADY
NEW DELHI, DHNS

Union Finance Minister Nirmala Sitharaman in Union Budget 2023-24 on Wednesday made a slew of announcements including new scheme PM-PRANAM for farmers and the agricultural sector particularly in promoting organic farming and reducing consumption of chemical fertilisers.

Announcing the new scheme-PM-PRANAM, she said the "PM programme for restoration, awareness, nourishment and amelioration of mother earth" will be launched to incentivise states and Union Territories to promote alternative fertilisers and balanced use of chemical fertilisers.

The minister also announced GOBARdhan (Galvanising Organic Bio-Agro Resources Dhan) scheme under which 500 new 'waste to wealth' plants will be established for promoting a circular economy. These will include 200 compressed biogas (CBG) plants, including 75 plants in urban areas, and 300 community or cluster based plants at a total investment of Rs 10,000 crore.

In due course, a 5% CBG mandate will be introduced for all organisations marketing natural and bio gas. For collection of bio-mass and distribution of bio-mannure, appropriate fiscal support will be provided.

She also said over the next 3 years, the government will

facilitate 1 crore farmers to adopt natural farming under Bhartiya Prakratik Krishi Paddhati (BPKP). For this, 10,000 Bio-Input Resource Centres will be set up, creating a national-level distributed micro-fertiliser and pesticide manufacturing network, she said.

Bhartiya Prakratik Krishi Paddhati (BPKP) was launched in 2019-20 to promote natural farming and to assist farmers in adopting traditional indigenous practices. Under the BPKP, 4.09 lakh ha of land have been brought under natural farming in 8 states - Andhra Pradesh, Chhattisgarh, Kerala, Himachal Pradesh, Jharkhand, Odisha, Madhya Pradesh and Tamil Nadu.

According to Economic Survey 2022-23, India has 44.3 lakh organic farmers, the highest in the world, and about 59.1 lakh hectares area, was brought under organic farming by 2021-22.

Sikkim voluntarily adopted going organic, and the process of getting the total cultivable land of 58,168 hectares under organic farming commenced at ground level in 2010.



Farm sector to be 2nd largest user of drones in 5 yrs: VC

PALAMPUR, JANUARY 22

Prof HK Chaudhary, Vice-Chancellor, Himachal Pradesh Agriculture University (HPAU), presided over a seminar on the Application of Drone Technology in Agriculture and the inaugural ceremony of the India Agri Progress Expo at Ludhiana yesterday.

The Vice-Chancellor highlighted the importance of drone technology in agriculture. "The farm sector is likely to be the second largest user of drones in the world in the next five years," he added.

He said the technology could help in increasing efficiency in soil and field analysis, crop monitoring and surveillance, spraying for pest and disease control, nutrient application, etc. Chaudhary also spoke about future technologies in agriculture and detailed plans of the university to popularise millets during the International Year of Millets.

The Agricultural Technolo-



gy Application Research Institute (ATARI) of the Indian Council of Agricultural Research (ICAR) and Punjab Agricultural University jointly organised the seminar. The Punjab State Agricultural Implements Association and the Agricultural Machinery Manufacturers Association organised the exhibition.

Dr Nachiket Kotwaliwale, Director, ICAR-Central Institute of Post-Harvest Engineering and Technology (CIPHET) was the guest of honour at the inaugural function. Dr Rajbir Singh, Director, ATARI, said a large number of scientists, extension agencies, policy makers, machine manufacturers and farmers were attending the two-day expo. — OC

Tamil Nadu to standardise tests on pesticide in food

TIMES NEWS NETWORK

Chennai: Farm products in Tamil Nadu have high levels of pesticides acephate and chlorpyrifos which can cause respiratory and nervous problems in people. These are preliminary results of tests done by food safety teams on samples of fruits, vegetables, spices, curry leaves, rice, wheat, pulses, milk, tea, fish, meat, and egg from farmers, wholesalers and retailers.

The tests were done as a prelude to standardising tests to check for more than 200 pesticides in food produced or sold in TN, said officials on the sidelines of the launch of mobile food testing labs by health minister Ma Subramanian. Analysts are making a list of non-approved pesticides such as ethion, carbendazim, acetamiprid, bifenthrin and imidacloprid used in crops. "In 18 months, we will bring out a report on the most common chemicals used, level of toxicity



Tests found farm produce in Tamil Nadu with high levels of pesticides acephate and chlorpyrifos which can cause respiratory and nervous problems in people

and the product that has the highest level of pesticide residue," said an official.

The Food Safety and Standards Authority of India (FSSAI) has fixed the maximum residue limit for various pesticides and antibiotic residues in food commodities under the Food Safety and Standards (contaminants, toxins, and Residues) regulations 2011, which are reviewed from time to time. While the state is yet to make a list of vegetables that have high levels of pesticides, a study by the centre in 2019 showed that high residue of pesticides in brinjal, tomato, okra, cabbage, cauliflower, and cu-

cumber, besides cardamom and cumin. As per food safety rules, action can be initiated against people growing and selling food which is unsafe. The punishment, in case of a criminal complaint, can be imprisonment with or without fine.

The health minister said the state has collected more than ₹8 crore as fine for various violations under the Food Safety Act. The food safety department filed more than 6,000 civil cases. The department has filed 1,264 criminal cases. "The new mobile units will help officials test more samples and create awareness," Subramanian said.

Farm credit target raised by 11% to ₹20 lakh-cr

Govt to launch new sub-scheme of PM Matsya Sampada Yojana with an investment of ₹6,000 crore

New Delhi, Feb. 1: The government on Wednesday announced an 11 per cent hike in agriculture credit target to ₹20 lakh crore for the next fiscal year with focus on animal husbandry, dairy and fisheries, a move aimed at providing higher farm loans at a subsidised rates to the farming community. Among other big ticket announcements for agriculture and allied sector, finance minister Nirmala Sitharaman — in her budget speech — said the government will launch a new sub-scheme of Pradhan Mantri Matsya Sampada Yojana with an investment of ₹6,000 crore to improve value chain efficiencies and expand the fishery market.

Customs duty on key inputs for domestic manufacturing of shrimp feed will also be reduced to promote export of marine products, she said.

BIG PUSH FOR ANNADATA

₹20 lakh crore agricultural credit for animal husbandry, dairy, and fisheries
₹6,000 crore targeted investment for new sub-scheme of PM Matsya Sampada Yojana to help fishermen, fish vendors to improve value chain and expand the market.

₹2,516 crore investments for computerisation of 63,000 Primary Agricultural Credit Societies (PACS)

Agriculture accelerator fund to nurture start-ups in rural areas and build an open-source, digital public agriculture infrastructure
Indian Institute of Millet Research in Hyderabad to be upgraded as a centre of excellence, terming millets as “Shree Anna”

Massive decentralised storage capacity to be set up to help farmers store their produce.



For adoption of natural farming, the FM said the government will facilitate 1 crore farmers for this purpose and will also set up 10,000 Bio-Input Resource Centres for creat-

ing a national-level distributed micro-fertiliser and pesticide manufacturing network. That apart, the government will launch an Atmanirbhar Clean Plant

Program to boost availability of disease-free, quality planting material for high value horticultural crops with an outlay of ₹2,200 crore, she said. To encourage agri-start-

ups by young entrepreneurs in rural areas, the FM said the government will set up an agriculture accelerator fund (AAF). A digital public infrastructure for agriculture will also be built to enable inclusive, farmer-centric solutions.

To make India a global hub for millets, also called “Shree Anna”, the FM said, Hyderabad-based Indian Institute of Millet Research will be supported as the Centre of Excellence for sharing best practices, research and technologies at the international level.

India is the largest producer and second largest exporter of millets in the world. The country grows several types of millets such as jowar, ragi, bajra, kuttu, ramdana, kangni, kutki, kodo, cheena, and sama. These have a number of health benefits, and have been an integral part

of our food for centuries. I acknowledge with pride the huge service done by small farmers in contributing to the health of fellow citizens by growing these ‘Shree Anna’, she added.

Ms Sitharaman said: “The agriculture credit target will be increased to ₹20 lakh crore with focus on animal husbandry, dairy and fisheries.” The agricultural credit target is Rs 18 lakh crore for the current 2022-23 fiscal. The government has been increasing the credit target for the farm sector every year.

Commenting on the budget, Agriculture Minister Narendra Singh Tomar said small farmers across the country will benefit from the Budget 2023-24 in which the emphasis has been laid on promoting modern agricultural technologies. —PTI

Green focus to benefit chemicals industries

Sai Prabhakar Yadavalli
bl. research bureau

The Budget has indicated that green, sustainable and circular economic development will be strategic pillars for the government. From fuel to mobility, farming to building equipment, green solutions will be leveraged for the benefit of environment and job creation.

From the chemicals industry perspective, an economic transition from fossil fuel to sustainable energy has translated to a new revenue opportunity in the past and may most likely continue to support the industry.

AREAS OF CONCERN

At the same time, there are some areas of concern in agro-chemical applications,

but the threat is not significant.

Chemicals’ applications in the green transition will be widely similar to a fossil-based economy. Electrolytes in batteries, solar films used in panels, waste treatment in biogas and biomass, efficient catalysts replacing older chemicals and environment compliant refrigerants — chemicals are used in most green solutions. This should be beneficial for companies which have or are developing solutions in such space. Tatva Chintan for environment compliant chemicals and Gujarat Fluorochemicals for green energy solutions are the companies to monitor. SRF, Atul and Navin Fluorine which are exploring possibilities should be in the next league of players entering



ALLURING ALCHEMY. An economic transition from fossil fuel to sustainable energy has translated to a new revenue opportunity

the space with a portion of the upcoming capacities earmarked for the same.

Customs duty for fluorospar, a raw material for fluorochemicals which is used in pharma, agro-chem and new age energy solutions, has also been reduced from 5 per cent to 2.5 per

cent supporting emerging solutions. The Make-in-India push by the government in the electronics segment spells opportunity for chemicals manufacturers supplying to semiconductor industries as well. On a broader basis, net-zero carbon emission by 2070 will involve

solutions engineered by chemical industries to cap the emissions from industrial processes.

GREEN FERTILISERS

Chemical industries source a significant portion of revenues from agri-chemical companies and the current Budget speech mentioned a balanced use of chemical fertilisers and alternative fertilisers. The speech also mentioned facilitating one crore farmers to adopt natural farming. While this might appear negative to the agro-chemical sector, and hence chemical sector, there is unlikely to be any significant near term impact. The extent of implementation by the government and uptake of alternative chemicals by farmers even over a longer time frame are circumspect at the current juncture.

‘Mum on doubling farmers’ income, legal guarantee of MSP’

Hopeless Budget, No Mention Of Debt Waiver, Say Farmers

Neel Kamal & Yudhvir Rana | INSS

Bathinda/Amritsar: The farmers of Punjab have termed the Budget as hopeless, with no mention of government failure to double their income by 2022, of legal guarantee of minimum support price or other pending demands made during their Delhi agitation. Another thing they hoped for and haven't got is farm debt waiver.

The farmers claim their income level to be close to 2016, when PM Narendra Modi promised to double their

income in six years, by the 75th anniversary of Independence. Farmer unionist Darsan Pal said: “The farmers had high hopes from the Budget, that it will fix the MSP by the C2-50% formula recommended by the Swaminathan Committee.”
BKU (Ekta Dakaunda) general secretary Jagmohan Singh said: “For the last six years, farmers have been hearing the promise but their income hasn't doubled. This government's last Budget didn't even give us a debt waiver.”
Punjab general secretary



A DAY'S HARD WORK: Farmers carry cauliflowers from their fields in a village near Amritsar, on the day of Union Budget 2023-24

of Border Area Sangharsh Committee, Rattan Singh Randhawa said, “We were ex-

pecting some announcement for border farmers, more subsidies in fertilizers, pesti-

Steady decline in allocation under flagship schemes: SKM

Bathinda: The Sanyukt Kisan Morcha (SKM) has termed the Budget as anti-farmer, saying total outlay for agriculture and allied sectors has come down from 3.84% in 2022-23 to 3.20% in 2023-24. Allocation for rural development has also been cut from 5.81% in 2022-23 to 5.29%, it added. “While it is universally known that farming and farmers have been economically neglected by the BJP-led Union government, the SKM had expected that after the sustained and determined protest of the farmers at Delhi, the party in power would appreciate the importance of the farm sector and the need to secure income and future of the rural farming community, who form the bulk of India's population,” it said in a statement

The Morcha claimed that the Budget is silent on the status of MSP on crops, according to recommendation of Swaminathan Commission while flagship schemes like PM Annadata Aay Sangrakshan Abhiyan have seen a steady decline in allocation. Price Support Scheme and Market Intervention Scheme has been reduced from Rs 1,500 crore in 2022 to Rs 10 lakh. PM Fasal Bima Yojana was supposed to protect farmers from crop losses due to natural calamities, but from allocation of Rs 15,500 crore last year, it is just Rs 13,625 crore this year. Even the MGNREGS and PM Kisan Samman Nidhi allocation has been cut to Rs 60,000 crore each. Similarly, fertiliser subsidy has been cut from Rs 2,25,000 crore in 2022 to Rs 1,75,000 crore in this Budget, it added. ❧

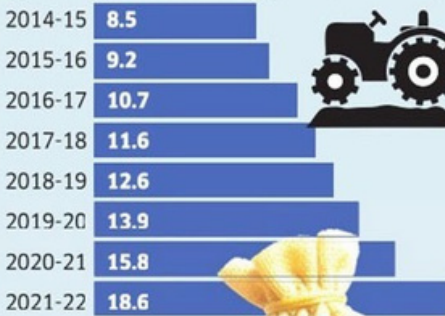
des, and weedkides among others, but all that did not happen,” he said.

State general secretary of Kisan Mazdur Sangarash Committee Sarwan Singh

Pandher said neither any specific announcement had been made to bring the farmers out

from the vicious wheat-paddy circle nor any announcement was made to implement the full recommendations of Swaminathan Commission. However, Punjab BJP core committee member Rajinder Mohan Singh Chhina hailed the Budget as growth-oriented and people-friendly as every sector, including agriculture, health, education, and defence, apart from employees have been taken care of. Gunbir Singh, former chairman, CII, Punjab, said, “By taking an aggressive and ambitious approach to this year's fiscal paper, the finance minister assuaged the hopes of industry and the services, although the agrarian sector is feeling let down.”

Agriculture Credit (In ₹ lakh crore)



Source: Economic Survey 2023



Agri Needs 'Re-orientation' to Combat Climate Change

TEAM ET

New Delhi | Pune: Indian agriculture needs "re-orientation" to combat adverse impacts of climate change, fragmented landholdings, sub-optimal farm mechanisation, low productivity, disguised unemployment and rising input costs, the Economic Survey 2023 said.

"We need to move to crops that have shorter growth periods so that we can take care of the challenges of climate change. Also need to have crops that are more suited in the context of changing weather conditions. This is an emerging challenge and we saw

that (a heat wave) happen in 2022 as well," Chandni Raina, adviser to the Department of Economic Affairs, said in a media interaction.

The survey suggested a greater focus on the development of the food processing sector with improved infrastructure, like cold storage and better logistics, to reduce wastage, improve value addition, ensure better farmers' returns, promote employment and increase export earnings.

It made a strong case for increasing farm mechanisation as it helps increase productivity through timely and efficient use of other inputs and natural resources while at the same time reducing the cost of cultivation. According to the survey, the agriculture sector has grown at an average annual rate of 4.6% in the last six years.

Agri sector has grown at an average annual rate of 4.6% in the last six years. It grew 3% in FY22 vs 3.3% the year before

Core Sector Growth Rises to 3-Month High of 7.4% in Dec

Surge in output of coal, steel, cement, fertiliser and electricity aid higher expansion

Our Bureau

New Delhi: India's core sector grew 7.4% in December as against 3.8% in the year-ago period as output in seven of the eight components of the infrastructure sectors rose, official data released on Tuesday showed.

A surge in the output of five segments — coal, steel, cement, fertiliser and electricity — aided higher growth in December.

The core sector had grown 5.7% in November

The data has been released a day before Finance Minister Nirmala Sitharaman is scheduled to present the Union Budget for 2023-24.

PMI manufacturing has remained in the expansion zone for 18 months since July 2021, and the Index of Industrial Production (IIP) grows at a healthy pace, the Economic Survey for 2022-23 said on Tuesday.

"Much in tune with the Economic Survey which has painted



an optimistic picture of the economy, core sector growth for December has come in at 7.4% thus taking the cumulative number to 8% for the first three quarters," said Madan Sabnavis, Chief Economist, Bank of Baroda.

As per the data released by the commerce and industry ministry, the production of coal rose

11.5%, electricity 10%, steel 9.2%, cement 9.1%, and fertilisers 7.3% in December.

Growth in steel and cement output signal strong infrastructure activity and private construction.

Crude oil output shrank 1.2%, hit by volatile prices and limited investment in new fields. Natural gas and refinery products

output grew 2.6% and 3.7%, respectively.

In April-December FY23, the core sector cumulatively grew 8%, lower than 12.6% growth seen in the same period a year ago.

Core sector or key infrastructure industries, which have a 40.27% weight in the overall IIP. The IIP is expected to increase 4-5% in December.

Farm equipment makers seek duty cuts, PLI in Budget to boost domestic manufacturing

Our Bureau
Bengaluru

Agricultural machinery makers have sought rationalisation of customs duty and GST to make domestic manufacturing more competitive in the upcoming Union Budget, besides making a pitch for production-linked incentive for the sector.

“Even after achieving more than 50% indigenisation through in-house manufacturing, we still need to import several critical parts, including special steel. Unfortunately, the current duty/tax structure makes Indian manufacturers uncompetitive. Therefore, we request the Finance Minister to reduce customs duty on spare parts. Also the non-automotive engines should be treated as spare parts as they are critical for farm mechan-

isation and increase in efficiency. All spare parts should be at a lower customs duty and GST slab to help indigenise,” said Ravindra Agrawal, Chairman, KisanKraft Ltd.

Mrityunjaya Singh, Managing Director, CLASS India Pvt Ltd, said the domestic manufacturing of combine harvesters should be promoted under the Make in India programme. The combine harvester executes a key farming operation for the farmer and they are being short-changed by cheap, poor quality imports from countries like China and Thailand, that do not have a proper warranty or after-market support.

DISBURSAL OF SUBSIDIES
Randhir Chauhan, MD, Netafim India and SVP Netafim, said policymakers should push for drip irrigation usage in water-guzzling crops such

Mrityunjaya Singh said the domestic manufacturing of combine harvesters should be promoted under the Make In India programme

as rice, wheat, and sugarcane. He said providing infrastructure status would help the micro-irrigation manufacturer (95 per cent of which comes under MSME) to reduce operating costs, thereby accelerating the industry growth, and bringing the equipment cost down for the farmer community.

Making farmers energy-sufficient would also reduce the burden on the govern-

ment’s energy subsidy bills.

Shekar Sivasubramanian, CEO, Wadhvani AI, said, “In the upcoming Budget, a continued focus on building sustainable AI capacities to support large-scale deployment of AI solutions will go a long way in creating a material impact on the lives of the underserved people of India.”

KC Ravi, Chief Sustainability Officer, Syngenta India Pvt Ltd, said the Budget should consider reducing GST on crop protection products, farm equipment, seeds and other inputs. An enhanced outlay for PM-KISAN will also ensure farmers get more liquidity to buy inputs.

The industry is also expecting that the government devise a special PLI scheme for the agro-chemical sector which will have a spiralling effect on boosting manufacturing in India.

CM

Need to make agri-food systems climate-smart

With a sizeable population of India and the rest of the world directly dependent on agriculture, it is time to make agri-food systems more efficient, inclusive, sustainable and climate-smart. We need to harness the power of innovation and digitalisation to build adaptation capacity and resilience, while reducing greenhouse gas emissions from agriculture at a faster rate. Finance flows in the farm sector need to reflect the importance that developing countries assign to climate adaptation in this sector.

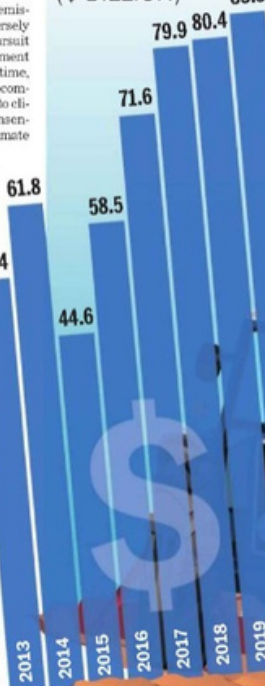
BISHWA BHASKAR CHOUHARY

LAND use and food production systems are a major source of greenhouse gas (GHG) emissions across the world, adversely affecting climate and the pursuit of all Sustainable Development Goals (SDGs). At the same time, the agriculture sector is becoming increasingly vulnerable to climate change. Scientific consensus on the threat of climate change to food security is growing worldwide and the evidence is more prominent in developing countries: rising temperatures, heatwaves, droughts and floods, changes in rainfall patterns and other extreme events affect agriculture more than any other sector.

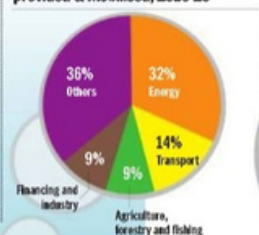
A UN climate change report claims that while the emissions are reducing, they are not going down fast enough to limit the global temperature rise to 1.5°C by the end of the century in line with the 2015 Paris Agreement goal. And if the world is unable to achieve this, the impact of climate change will only get worse and more frequent.

While agri-food systems contribute to and are affected by the impact of the climate crisis, they are also part of the solution. Agriculture and food security issues featured prominently in the 27th Conference of Parties (COP27) of the UN Framework Convention on Climate Change in

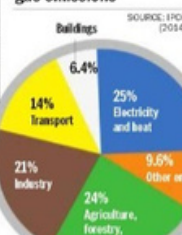
CLIMATE FINANCE PROVIDED AND MOBILISED (2013-20)
(\$ BILLION)



Global sectoral split of climate finance provided & mobilised, 2016-20



Sources of greenhouse gas emissions



this fund, particularly in agriculture, would not be easy.

The foremost question is: Will the rich countries fulfil their climate financing promises? We should not forget that 12 years ago, at COP15, rich nations made a significant pledge to channel \$100 billion a year to other nations by 2020 to help them adapt to climate change and mitigate further rises in temperature. That promise has not yet been met.

Egypt in November last year. A new initiative, Food and Agriculture for Sustainable Transformation (FAST), was launched. FAST is a multi-stakeholder programme that aims to step up finance to transform agriculture as well as contribute to adaptation efforts and pursue the Paris Agreement’s 1.5°C global warming limit while supporting economic and food security.

The creation of the Loss and Damage Fund (LDF) at COP27 is being seen as a hard-fought win for the world’s developing countries, including India. The purpose of LDF is to provide immediate financial support to vulnerable countries hit hard by climate disasters. The establishment of LDF has met a long-running demand by developing countries. However, the path ahead to activate

As per a report of the Organisation for Economic Co-operation and Development (OECD), in 2020, the initial target year of the \$100-billion goal, total climate finance provided and mobilised by developed countries amounted to \$83.3 billion. Some analysts claim that the OECD’s numbers are inflated. International aid charity Oxfam estimated public climate financing at only \$19-22.5 billion in 2017-18, around one-third of the OECD’s estimate. In 2015, India’s Finance Ministry disputed the OECD’s estimate of \$62 billion of climate finance in 2014, saying that the real figure was \$1 billion. Multiple analyses of a notional fair share for these payments reach the same conclusion: the US has not paid enough in climate finance to developing nations and always fallen well short, considering the size of its economy. The recent report from World Resources Institute reckoned that the US should

contribute 40-47% of the \$100 billion, but its average annual contribution from 2016 to 2018 was only around \$7.6 billion.

The agriculture sector continues to receive only a modest share of international climate finance, and it has proportionally decreased. Current flows of public international climate finance do not coincide with the priorities that developing countries have specified in their Nationally Determined Contributions. From an average of 45 per cent at the beginning of the millennium, the total finance flows in the agriculture and land-use sector reduced to 24 per cent in 2013. Between 2016 and 2020, the share of global climate finance in agriculture, forestry and fishing was only 9 per cent.

With a sizeable population of the world directly dependent on agriculture, it is time to make agri-food systems more efficient, inclusive, sustainable and climate-smart. We need to harness the power of innovation and digitalisation to build adaptation capacity and resilience, while reducing GHG emissions from agriculture at a faster rate. Therefore, there is a need to invest more in adaptation and nature, including in ecosystem conservation and restoration. Finance flows in the agriculture sector need to reflect the importance that developing countries assign to climate adaptation in this sector.

The G20 presidency is expected to enable India to convince the world to step up climate finance flows from LDF towards the agriculture sector, which is both a sufferer and a cause of climate change.

The author is an agricultural economist at ICAR-Indian Grassland and Fodder Research Institute, Bikaner. Views are personal

SOURCE: ORGANISATION FOR ECONOMIC CO-OPERATION & DEVELOPMENT (OECD)

Send your feedback to letters@tribunemail.com

State to set up 100 solar dryers for farmers to use

TIMES NEWS NETWORK

Panaji: The state government has decided to set up 100 solar dryers on a turnkey basis to dry chillies, breadfruit, fish and jackfruit, among others. The solar dryers, which will be set up in three phases, are expected to improve both the drying process and the final product.

A senior officer said that in the first phase site visits will be conducted for a feasibility study. In the second phase, a pilot demonstration and field study will be carried out which will include two units for each drying application.

The officer said that after the first two phases, the state will invite bidders to supply, install, and monitor the solar dryers.

NISE has designed and developed an innovative solar dryer cum space heating system with a thermal storage system that can be used

NISE has designed and developed an innovative solar dryer cum space heating system with a thermal storage system that can be used for drying a variety of agricultural and horticultural products

for drying a variety of agricultural and horticultural products.

"The solar dryer can heat incoming air up to 60°C above ambient (up to 120°C), making it ideally suited for many agriculture and horticulture drying applications. The solar air heating system may provide all of the heat on a sunny day or act as a pre-heat in cloudy conditions. It can either act in a standalone capacity via our modular system or as a pre-heat to traditional mechanical operations," the officer said.

SC DIRECTS CENTRE

'Submit status report on steps taken for regulating ban on hazardous pesticides'

NEW DELHI: The Supreme Court on Monday directed the Centre to submit a report on the steps taken to regulate the ban on hazardous pesticides.

A bench comprising Chief Justice D Y Chandrachud and justices V Ramasubramanian and J B Pardiwala asked Additional Solicitor General (ASG) Vikramjit Banerjee to place on record a note.

"The ASG shall file an updated status report in respect of regulatory measures which have been taken by the Union of India for regulating ban on hazardous pesticides," the bench said.

The top court was hearing a



batch of pleas seeking a ban on nearly 85 pesticides on grounds that they pose health hazard.

The pleas filed in 2017 had sought empowering of state governments to take decisions at their level for prohibition and restriction related to pesticides.

Advocate Prashant Bhushan, appearing for the petitioners, had said these pesticides have been banned in other countries but in India they are being allowed to be used and they could pose serious health hazards to farmers.

AGENCIES

11-member expert panel to draft state's new agri policy

First Govt-Farmer Meeting At PAU On February 12

TIMES NEWS NETWORK

Chandigarh: The Punjab government has constituted an 11-member committee of agricultural experts to draft the new agriculture policy of the state. A notification in this regard has been issued and the policy will be ready by March 31, according to Punjab agriculture minister Kuldeep Singh Dhaliwal on Tuesday.

He said that the Punjab government had been working on the new agricultural policy keeping in mind concern about groundwater, soil health and geographical conditions. The policy would also include a proposal to adopt basmati as a substitute for parmal paddy and promote basmati exports.

The panel will include Punjab State Farmers' Commission chairman Sukhpal Singh

and Animal Sciences University, Ludhiana vice-chancellor Inderjit Singh, economist Sucha Singh Gill, former VC of Punjabi University BS Ghuman, former horticulture director Guranwal Singh, Punjab Water Control and Development Authority adviser Rajesh Vashisht, former Punjab agriculture director Balwinder Singh Sidhu, PAU Kisan Club president Amarinder Singh and Punseed chairman Mahinder Singh Sidhu, as members.

Dhaliwal said the first government-farmer meeting would be held on February 12 at Punjab Agricultural University (PAU), Ludhiana, and chief minister Bhagwant Mann will be the chief guest. He said that more than 2,500 progressive farmers from the state would participate in this meeting. He

APP FOR APPROVED SEEDS

Dhaliwal also launched a portal and app that will provide farmers information about approved varieties of seeds. He said that through the app, farmers of the state will be able to get online information about the availability and varieties of seeds. He said that the purpose of the app was to make the Punjab State Seed Certification Organisation online and paperless and to implement the annual calendar for seed certification. He said through the app, seed tracking, quality authentication, information regarding the production, certification and sampling will be available.

'Centre alone can't decide on GM Mustard'

Replying to a question about PAU holding trials of genetically modified (GM) mustard, Dhaliwal said any decision to introduce a seed variety will be taken by the state government and the Centre cannot impose any decision. "Holding trials doesn't mean that the

Developers, including MLA Kulwant, agreed to pay for panchayat land

Asks about LOP Partap Singh Bajwa's allegation that Dhaliwal had scuttled the move at the 11th hour to reclaim panchayat land lying in the possession of builders and developers for over 10 years in Mohali, Dhaliwal said seven developers in question, including AAP MLA Kulwant Singh, had agreed to pay for the land at market rates. "There are 52 such colonies around Mohali which have some parts of panchayat land. We asked them to clear the land or pay for it. Before we launched the campaign, they agreed

In 5 years, Godrej Agrovet to double oil palm acreage to 1.25 lh

KV Kurmanath
Hyderabad

With the situation turning favourable for oil palm in the country, Godrej Agrovet Limited (GAVL) has decided to expand its acreage to 1.25 lakh hectares from the existing 65,000 acres.

“We are going to add 12,000 hectares a year over the next five years to complete the target to expand the area by 60,000 hectares,” Sougata Niyogi, Head (Oil Palm Plantations Business) of GAVL, told *businessline*.

HIKING PRODUCTION

About one-third of the additional acreage that is planned will be in Telangana, which has announced an ambitious plan to grow oil palm in 8 lakh hectares.

The company is planning an investment of about ₹600 crore to expand its processing capacities

As it expands the area, the company will also work on increasing its production capacity. “The total production capacity is to go up to 350 tonnes an hour from the existing 205 tonnes an hour from the six plants we have in Andhra Pradesh, Tamil Nadu, Goa and Mizoram,” he said.

The company is pegging an investment of about ₹600 crore to expand its processing capacities. The bulk of GAVL’s oil palm area is in Andhra Pradesh with about 45,000 ha.

“The situation is favourable for oil palm cultivation in the country. The National Oil Palm Mission is driving the growth,” he said.

The GAVL’s oil palm business earned a revenue of ₹1,300 crore in 2022-23. “We are targeting a 10 per cent growth in the current financial year,” he said.

He said the company is recommending the farmers to go for maize as an intercrop. “We will procure the produce without the involvement of any middlemen. The produce will go to our feed business,” he said.

HUGE SCOPE

Citing a huge bill of \$20 billion that the country spends on the import of edible oil, he said the country’s domestic requirements promise an assured market.

Agriculture to get a lift as state farmers take to drones

25% of India's drone startups located in Karnataka

VARSHA GOWDA
BENGALURU, DHNS

From nutrients to pesticides and crop surveys, drones are set to change the landscape of agriculture in the state. With an estimated 50 Unmanned Aerial Vehicle (UAV) companies operating in

the farming sector, Karnataka is on the brink of a technological revolution. Over 25% of India’s drone startups are located in the state.

The emerging technology has been embraced by farmers across the state. Ganesh Katte, an arecanut farmer from Shivamogga, for instance, hired a drone company to spray pesticides. “I was informed about targeted spraying to control arecanut leaf spot disease,” he says. To spray his 10-acre farm, Katte spent Rs 26,000.

Shivakumar HG, who heads a drone company, quantifies just how fast the demand for

such services has increased in Karnataka. “In 2021, we sprayed about 2,600 acres of land with pesticides. After word spread, demand quadrupled in 2022 and we ended up spraying close to 10,500 acres of land,” he says.

As drones are highly customisable, they can be used in spraying nutrients and pesticides for both field and horticulture crops, explains Dr Anand B A, assistant professor at the Department of Farm Machineries and Power Engineering at Gandhi Krishi Vigyan Kendra, Bengaluru. “Currently agricultural

universities in the state have been authorised to determine the concentration of pesticides to be used for different crops,” says Dr Anand. In the past four months, drone trials have been under way for ragi, paddy, tur dal, plantation and horticulture crops in various agricultural institutes in Karnataka.

An official from the department of agriculture explains that regulating drones in agriculture is particularly important as the dispersal of pesticides in different wind speeds and climatic conditions needs to be studied.

► Drones, Page 4

How they help

Drones can be used in spraying nutrients and pesticides

■ Use of drones reduces human exposure to harsh chemicals

The technology could be used to assess the extent of crop damage to help determine compensation

■ They drastically reduce the time spent on crop surveys and help to monitor plant health

■ Moisture levels and soil health can also be monitored through UAVs

The challenges

■ Risks of aerial spraying of agrochemicals yet to be assessed

■ Since landholdings are small, pesticide drift is possible



PRE-IMPORT CLAUSE

SC: Give specifics of notices to exporters seeking GST relief

SHRIMI CHOUDHARY

New Delhi, 17 January

The Supreme Court on Tuesday asked the revenue department to provide details of the total number of show-cause notices issued for availing of the goods and services tax (GST) exemption in instances where exports had preceded imports, and where high courts (HCs) granted interim orders.

The apex court sought details, while reserving the order on the central government's plea against a Gujarat HC order.

The HC had in 2019 held that the "pre-import" condition is ultra vires the advance authorisation scheme under the foreign trade policy.

The government had moved a special leave petition (SLP), challenging the HC order the same year.

While agreeing to hear the revenue department's plea, the apex court also stayed the HC order.

In the SLP, the revenue department holds the view that a pre-import condition would mean goods have to be imported first and final products manu-



The SC seeks details from revenue department as it reserves final order

factured from such imported goods have to be exported.

Exporters, however, resisted the pre-import condition rule.

"The imposition of a pre-import condition defeats the objectives of the advance authorisation scheme that aims at providing working capital benefit to Indian exporters," argued Abhishek Rastogi, counsel on behalf of exporters.

The revenue department is of the view that a pre-import clause requires

the imported material to be used for the manufacture of finished goods, which, in turn, are required to be exported towards the discharge of an export obligation. The same is possible only when exports happen after the commencement of imports, thereby allowing reasonable time for the manufacture of finished goods.

Therefore, when the law demands a pre-import condition on the input material to be imported, the same cannot simultaneously enjoy the benefit of export in anticipation of authorisation.

The revenue department in the SLP also pointed out that importers/exporters have been availing of the benefit of the said provision without exception and that export goods are made out of domestically or otherwise procured materials and the duty-free import goods used for a purpose other than the manufacture of export goods.

"There is a lack of intelligible differential to deny the benefit of exemption to that class of exporters, which had already exported the goods and received the authorisation after exporting such goods," observed Rastogi.

Law to curb duplicate pesticides, fertilizers, seeds

FROWNING at the agricultural malpractices that hinder the progress of farming and impact the health of the consumers, Chief Minister Bhagwant Mann is determined to introduce best practices in agriculture and stop misuse by unscrupulous parties.

To save agriculture, and stop malpractices, the Punjab government will bring a law to prevent the sale of duplicate and substandard pesticides, fertilizers, and seeds.

Announcing the new law in the office, the state Agriculture Minister Dhaliwal said that it will be mandatory for the shopkeepers to issue a bill on purchase of seeds, pesticides and fertilizers to the farmers. "If anyone is found violating, strict action

paper.tribuneindia.com



will be taken," he said. The agriculture minister also warned the officers of the department and said that if any officer is found involved in any malpractices, then he will not be spared.

Spurious pesticide manufacturers warned

CM BhagwantMann is repeatedly underlining the state commitment towards saving sinking agriculture returns for farmers in Punjab. He is offering them a definite path for progress but without spurious pesticides impacting the produce of crop and health. He is working on a roadmap to honour his commitment towards saving future generations of the state where agriculture is num-

ber one on its way of living.

The government, in strong words, has communicated to the representatives of pesticide manufacturers that previous governments had been unbothered and chose to be silent while allowing the sale of fake and non-standard pesticides, fertilizers, and seeds in the state. This has led to a major decline in the quality of agricultural products of Punjab.

The state will not allow the sale of duplicate and substandard pesticides, fertilizers, and seeds at any cost and many tough decisions are expected to be taken in the coming days to stop such ill practices, the government has said.

Farm sector's pesticide dilemma

ECO MATTERS. Greater pesticide use may boost short-term farm output. But sustainability demands more regulation

Kushankur Dey
Sukriti Tripathi

The government recently made a bold decision to allow online sales of insecticides. This decision harnessing the benefits of digitalisation in agriculture would perhaps inspire policymakers' confidence in zeroing in on priorities in agri-policy making — productivity, food security, or sustainability.

What impact will online pesticide sales have on the food ecology, farmers, and pesticide manufacturing firms? Will e-marketplace-driven pesticide sales jeopardise the natural farming objective for 7.5 lakh farmers? Will the commercial motive of agrochemical firms subside the organic farming landscape?

The pesticide market in India is expected to touch ₹316 billion in 2024, growing at 8.1 per cent a year between 2019 and 2024. Its consumption per hectare is reported at 0.25 kg, and insecticides among fungicides and herbicides account for a maximum market share with 292 registered pesticides.

There is a silver lining: chemical pesticide consumption growth has contracted (-0.6 per cent), while bio-pesticide consumption grew 6.12 per cent a year between 2016-17 and 2020-21. However, bio-pesticide consumption accounts for 8-11 per cent of India's total pesticide consumption during the reported periods (see Chart).

THE CONSEQUENCES

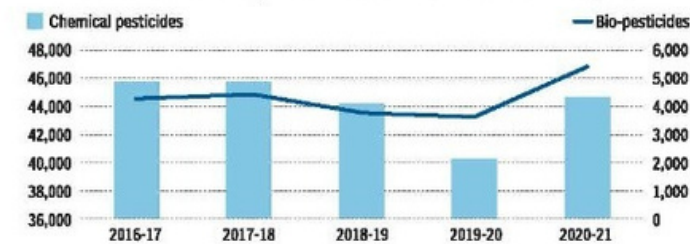
The government's decision has some positives. Farmer producer organisations (FPOs) through online buying can cut transaction cost and share their feedback to improve user experience with the multi-stored brands and compare the price points of available pesticide brands. As a result, spurious or fake pesticide sales will be arrested significantly.

Agri-tech start-ups and pesticide firms can strengthen their upstream marketplace model by leveraging digital platforms' direct and indirect network effects. Investors may be attracted to invest in new pesticide technical, and agrochemical firms can take the IPO route to mop up funds.

However, there are some pitfalls. First, online pesticide sales can impact bio-pesticide consumption as chemical



Pesticide consumption in India (metric tonnes technical grade)



Source: IndiaStat "pesticide consumption data", 2022

pesticides produce "quick results" for farmers. About one-third of agricultural products depend on the application of pesticides. Studies have shown that there would be a 78 per cent loss of fruit output, 54 per cent loss of vegetable and 32 per cent loss of cereal production.

Despite short-term productivity gains, the toxicity associated with applying "excessive" dosage harms the soil, water, air, flora, fauna, and so on. For example, pesticide residues accumulate in the plant, enter the soil, and contaminate groundwater due to

leaching, vapourisation, and spray drifts. These particles make the air toxic and enter the food chains, posing a threat to consumers.

Second, the Insecticides Act 1968 and Insecticides Rules 1971 regulate the end-to-end supply chain of insecticides (pesticides) to prevent hazards and exposure, including human and animal lives. However, this legislation does not have adequate regulatory provisions to avoid deaths, minimise farm workers' health hazards, or prevent environmental and food contamination. There is no mechanism for periodic checks on the registered pesticides as per toxicology guidelines.

Third, e-marketplace-driven pesticide sales would increase the tolerance of maximum residue limits supported by a cartel of technology and pesticide manufacturing firms in an oligopolistic agrochemicals market. A participatory guarantee system may be ineffective in

recognising contaminated food products without a robust traceability system.

POLICY SUGGESTIONS

First, agri-policies should consider ESG dimensions embracing circular initiatives in food and biomass. For this, the Pesticide Management Bill 2020 should be implemented to address the existing shortcomings of existing laws concerning pesticide registration, worker and end users' protection, and immunity to pesticide business and promotion.

As the Bill emphasised banning extremely and highly hazardous, especially Class 1a & 1b chemical pesticides, the government should promote non-hazardous formulations of pesticides. It is worth noting that the Ministry of Agriculture and Farmers' Welfare banned 18 pesticides following Verma Committee's recommendation in 2018. However, two heavily used Class 1 pesticides, Monocrotophos and Carbofuran, are yet to be banned. Also, the pesticide industry should follow a responsible business protocol by examining the long-term impact of active ingredients of pesticides on the environment.

Second, social and economic dimensions are also key to sustainability. The government can broaden and deepen integrated pest and weed management technologies and practices in line with the national mission on natural farming.

States can augment the sales of bio-pesticide and plant growth regulators for organic farming, extend grants and concessional loans to MSMEs and cooperatives/producer companies, and agri-business incubators for innovative circular initiatives in agri-risk management, and promote evidence-based research on pesticides impact on farming communities and public health, nutrition.

In sum, ICAR-funded agri-research institutions need to provide an enabling environment for scientists or researchers to invent and register patents of products enabling climate-smart sustainable farming. Demonstrating their efficacy in the farmer field is critical for farmer adoption and scaling up the commercialisation of such technologies and products.

Dey is faculty member of Agribusiness Management, and Tripathi is an EFPM Scholar, IIM Ludknow. Views are personal

Drone adoption in farming to spur growth of water-soluble nutrients, say experts

Vishwanath Kulkarni
Bengaluru

The Union government's thrust on nano fertilisers coupled with the usage of drones in agriculture is set to spur the growth of the country's liquid or water-soluble nutrients category. Water soluble fertilisers currently account for a small fraction of the overall crop nutrient market and are estimated to be at around ₹3,000 crore.

"Liquid fertiliser category is currently small and will become big going forward. The use of drones will create a separate category of crop nutrients," said Madan Pandey, Managing Director, Zuari Farmhub Ltd, the agri-tech arm of fertiliser major Zuari Agro Chemicals Ltd.

Zuari Farmhub proposes to invest in having its own fleet of 30-40 drones this year to spray crop protection and nutrients, offering it as a service through its Jai Kisaan Junctions, and its offline stores.

NOW VIA DRIP, SPRINKLERS
Water soluble nutrients are cur-



A FRESH MARKET. Water soluble fertilisers account for a fraction of the overall crop nutrient market and are estimated at around ₹3,000 crore

rently being applied through drip irrigation and sprinklers and the deployment of drones will be going to drive liquid fertiliser category. While nano urea has already been launched by IFFCO, the nano DAP is expected to be launched soon. "Nano, as a category, is going to grow and farmers after realising the benefits will go from generic to specific nutrients," Pandey said.

As precision farming takes off, the use of drones will promote the balanced application of nutrients while minimising

the use of pesticides. "This is an entirely new product line and the manner in which it is getting sprayed itself is far more in uniform manner compared to the manual spraying. The amount of pesticide is far lesser when compared to the manual spraying," said Agnishwar Jayaprakash, Founder and CEO, Garuda Aerospace.

"We are working with 350 senior scientists of Indian Council of Agricultural Research, whose job is to understand crops, what needs to be

done and what dilution ratio for what geographical locations, etc. All of these things are loaded on to the software that Garuda Aerospace is building to make drones more autonomous," he said.

FORMULATION CHANGES

Hemendra Mathur, an agri investor and industry expert, said with the application medium changing from manual to drone, products will be formulated on the basis of medium and people have started creating a new category of products for water soluble fertilisers.

Durgesh C Sharma, Secretary General, CropLife India, said, "The Government has granted interim approval of all registered insecticides and fungicides formulations (except herbicides) as the registered agrochemicals are effective even while being used via Kisan Drones. Drones are an alternate mode of spray and their enhanced adoption will be guided by reduction of contact with humans, cost and efficiency to spray crop protection chemicals with low water usage."

Prioritise resource efficiency over production

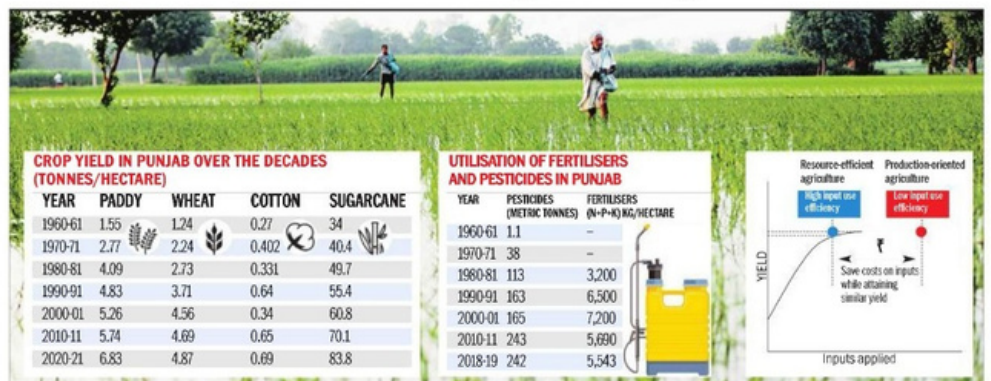
Major transitional steps are required to reorient our agricultural production. It is essential that various stakeholder groups change their mindset from mere production to production coupled with conservation. However, it is critical that an extreme approach that eliminates chemical input use to pursue an organic production model on a major scale is discouraged. There are risks associated with dissociation from chemical inputs that largely emerge from insufficient trialling & research. Overall, we need to curb excessive use of inputs.

SURINDER KOKAL

NATURAL resources, especially water, soil and air, together constitute a biosphere, which makes agriculture possible. Thus, any depletion and/or degradation of these resources can have a direct negative impact on the survival of humans and animals. In Punjab, agricultural policies have chronically ignored resource cycling, resulting in unsustainable depletion and degradation of these resources. Such a state of affairs has been brought about by subscribing to a tunnel vision-like production-oriented model about five decades ago. The overall outcomes of agriculture cannot be the same as what they were decades ago.

A production-oriented standpoint came into being when ensuring food security and eliminating starvation was prioritised by policy. The intention was to maximise agricultural output without much concern about resource consumption, making farmers' profitability the sole function of the yield. Free electricity for irrigation water, subsidised fertiliser inputs, technological advances and incentives for adoption of high-yielding varieties along with assured procurement at the minimum support price in the late 1960s ushered in the Green Revolution in Punjab, Haryana and western UP. These incentives culminated in a tremendous growth in rice and wheat productivity and a cropping intensity of 200%. While this approach may be justified in the short term, it is being allowed to continue long after the negative impact on natural resources became evident.

A key shift that policymakers can lead and farmers can follow is to prioritise efficiency over production. A



SOURCE: DEPARTMENT OF AGRICULTURE & FARMERS WELFARE, PUNJAB

resource-efficient model of agriculture seeks to produce the maximum amount of food (or fibre) using the least or optimum quantity of resources, such as water, nutrients, chemicals and fossil fuels. Under this shift, the profitability of the farmers will be governed not only by the yield, but by the input costs as well. Improvements in resource use efficiency can be achieved by relying on integrated Input Management based on the '3-1's'.
Integrated water management: An effective irrigation strategy would account for precisely meeting crop water requirements and avoiding nutrient losses. A cropping system-view that accounts for water tradeoffs between different crops is required to achieve optimum water use. An irrigation strategy that seeks to maximise water use efficiency rather than crop

yield will always be more profitable in conditions where water and its extraction are monetised for individuals or the state. Thus, to sustain water availability, an integrated approach needs to be adopted for the cropping system as a whole. For paddy-wheat, best practices such as laser land leveling, optimum puddling intensity and irrigation plot size, short-duration varieties, optimum depth and timing of irrigation, intermittent irrigation, stoppage of irrigation at the scheduled time before crop harvest, need-based pre-sowing irrigation for wheat, recycling of paddy straw into the soil through mulching or incorporation, accounting for rainfall between irrigations, etc. need to be practised for optimum use of irrigation water. Moreover, crop-selective breeding needs to focus on water-

efficient crop cultivars rather than on higher-yielding cultivars.
Integrated nutrient management: Punjab has the highest per unit consumption of chemical fertilisers in the country. In terms of nutrients (N-nitrogen, P-phosphorus and K-potassium), it consumed 254 kg/hectare (ha) in 2021-22 compared to 215 kg/ha five years ago (2017-18). Higher use of chemical fertilisers has led to water quality degradation and loss of soil micro-biodiversity. It is the need of the hour to focus on integrating the use of farmyard manure, green manure and recycling of crop residue to reduce dependence on chemical fertilisers for plant nutrition. Fertilisers and water should be managed together so as to maximise their uptake by the plant and avoid risk of loss to the environment. The integrated nutrient

management modules need to be developed holistically so that they account for the complete cropping system rather than individual crops. Policymakers should incentivise building an environment where farmers can comfortably adopt recommended nutrient and irrigation application rates.
Integrated pest management: Pest management modules for individual crops have been successfully developed by Punjab Agricultural University and have stood the test of time. However, these modules need to be revisited for the entire cropping system, including the intervening periods between the two crops. In addition, these modules should also take into consideration the water and nutrient management practices for the crops as pest development and population are

influenced by water and nutrients being applied to the crops. Thus, major transitional steps are required to reorient our agricultural production. It is essential that various stakeholder groups change their mindset from mere production to production-cum-conservation. While doing this, however, it is critical that an extreme approach that eliminates chemical input use to pursue an organic production model on a major scale is discouraged. There are risks associated with such dissociation from chemical inputs that largely emerge from insufficient trialling and research. Overall, we need to curb excessive use of inputs to get the most bang for our buck.

The author is Member, Punjab Water Regulation & Development Authority, Chandigarh.

Centre to revamp agricultural education with emphasis on skill development

Our Bureau
Kochi

Agricultural education will be revamped in line with the National Education Policy by giving emphasis on skill development, Seema Jaggi, Additional Director General (HRD), Indian Council of Agricultural Research (ICAR) has said.

The course curriculum will be restructured in a way that helps open a wide array of opportunities in the agriculture sector, she added.

ANALYTICAL TOOLS

She was speaking after inaugurating a 21-day Winter School, a training programme for researchers and academicians, at the ICAR-

Central Marine Fisheries Research Institute (CM-FRI) on Wednesday.

With this, education and research in agriculture and allied areas will have greater opportunities in the future, she said, adding that setting up of initiatives like incubation centres would greatly support rural development.

Stressing the importance of analytical tools in social science research, Seema Jaggi said research would be incomplete without proper data analysis.

WINTER SCHOOL

It is essential to have a solid understanding of modern statistical, econometric and time series methods to make proper inferences in social sciences research, she



Seema Jaggi, Additional Director General (HRD) of the Indian Council of Agricultural Education and Research

added. Sponsored by the Agricultural Education Division of ICAR, the Winter School is aimed at providing an opportunity to update the analytical skills of social science researchers and make them more familiar

with advanced analytical tools and software.

As many as 25 participants from Rajasthan, New Delhi, Madhya Pradesh, Gujarat, Assam, Arunachal Pradesh, West Bengal, Maharashtra, Telangana, Bihar, Karnataka, Tamil Nadu and Kerala are attending.

CMFRI Director A Gopalakrishnan said the use of statistically valid judgments derived from research programmes is the foundation for the growth of the social sciences discipline.

The course is divided into several theme-based modules, including classroom lectures and hands-on exercises using statistical software.

Telangana sets new benchmarks in agriculture sector

HANS NEWS SERVICE
HYDERABAD

TELANGANA has turned into an agrarian state with the vision of Chief Minister K Chandrashekar Rao, who laid a special emphasis on the irrigation, power, and agriculture sector, which resulted in tremendous progress in the production of food grains.

Along with agriculture, the allied sectors such as cattle, poultry, and livestock production has also gone up in the state and has become an important sector for the food processing industry. According to the officials, because of the infrastructure provided by the government for attracting investments in the food processing sector, investments have increased in the state.

According to the data of the



According to the data of the Ministry of statistics and programme implementation, the fixed capital of food processing industries in Telangana during the formation of the State was Rs 4,436 Crore, which had increased by 53 per cent by 2021 with Rs 6,812 Crore

Ministry of statistics and programme implementation, the fixed capital of food processing industries in Telangana during the formation of the State was Rs 4,436 Crore, which had increased by 53 per cent by 2021 with Rs 6,812 Crore. Apart from the 2022-23 special processing zone of invest-

ments, Rs 2,396 Crore worth investments were under process in the food processing zones. Few mega projects were under implementation with over Rs 2,396 Crore, the officials said.

The official said that the government's aim was to provide youth employment opportunities and to strengthen the farmers by value addition in the agriculture products and formulated the food processing policy in 2021. The government established 21 food processing zones in 7,150 acres in the state with all the facilities.

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