Making Indian Agriculture Future-Ready

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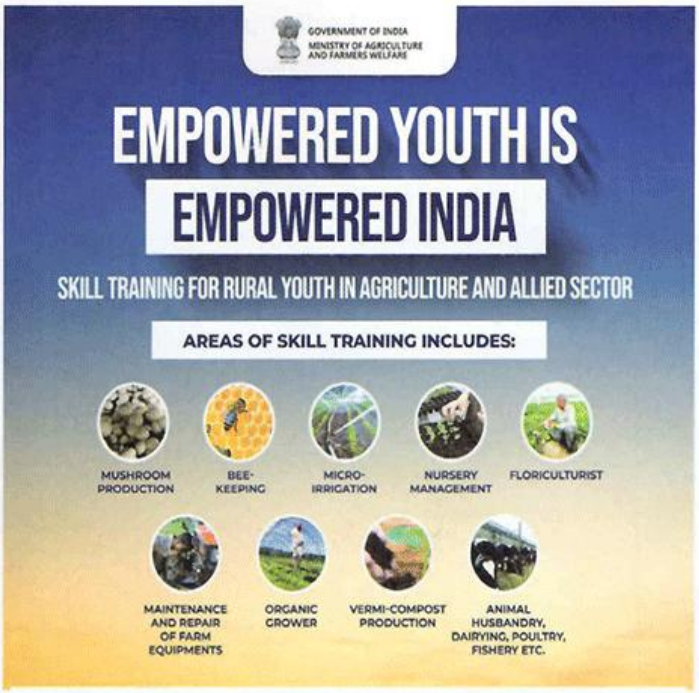
This year has been remarkable for the agriculture sector marked by several milestone achievements, such as record food production, the highest-ever MSP of crops, historic budget allocation, and, of course, a favourable monsoon. Building on this momentum, the Government of India launched several schemes and initiatives to accelerate productivity, profitability and sustainability in agriculture and allied sectors.

A six-point strategy was also unveiled for inclusive development of agriculture and welfare of farmers. Ongoing schemes were further reinforced with frontier technologies to make Indian agriculture future-ready and globally competitive. Scientific research, followed by extension, has been one of the major thrust areas to push up nutritional security and address/mitigate climate change-related challenges. Small and marginal farmers, women and youth remained in focus across all verticals of agriculture for their financial inclusion and empowerment.

Resources and Records

Budget allocation (2024-25) scaled a historic high of Rs 1.52 lakh crore to support ongoing schemes and futuristic initiatives proposed in the budget, and it focused on enhancing productivity and resilience in the agriculture sector. Allocation was raised to Rs 9,941.09 crore to strengthen the



agricultural research ecosystem and develop competent human resources. To support allied sectors of agriculture, Rs 4,521 crore was allocated to the animal husbandry and dairy sector whereas the fisheries sector received a grant of Rs 2,616 crore. Higher allocations are primarily meant to boost dairy, livestock and fisheries processing by facilitating infrastructure development. On the output side, a record foodgrain production of 3322.98 LMT (Lakh Metric Tonnes) was achieved this year (2023-24), which is higher by 26.11 LMT compared to the previous year. The significant increase is mainly contributed by higher production of rice (1378.25 LMT), wheat (1132.92 LMT) and *Shree Anna* (175.72 LMT). In oilseeds, a record production of rapeseed and mustard was achieved due to special initiatives in mission mode. As per third advance estimates, national production of pulses has increased from 163.23 lakh tonnes (2015-16) to 244.93 lakh tonnes during 2023-24. Production of fruits in 2023-24 is expected to increase by 2.29 per cent over 2022-23, that is, to 112.73 million tonne. In the horticulture sector, other than fruits, higher production was also registered in honey, flowers, plantation crops, spices and aromatic and medicinal plants (final estimates). Overall, higher production of vegetables is envisaged to be around 205.80 million tonnes mainly due to the expected increase in production of tomato, cabbage, cauliflower, carrot, tapioca, okra, etc.

Minimum Support Prices (MSP) for all mandated *kharif* and *rabi* crops were raised for marketing season 2024-25 and 2025-26 respectively. In all crops, the increase is in line with the government's policy of fixing the MSP at least 1.5 times of the all-India weighted average cost of production. However, in the declared MSP of *kharif* crops, the expected margin over the average cost of production was highest in the case of pearlmillet (77 per cent), followed by *tur* (59 per cent), maize (54 per cent) and *urad* (52 per cent). In the case of declared MSP of *rabi* crops, the expected margin over the average cost of production was highest for wheat (105 per cent), followed by rapeseed and mustard (98 per cent), lentil (89 per cent), gram (60 per cent) and barley (60 per cent). The absolute highest increase in MSP has been for rapeseed and mustard (Rs 300 per quintal), followed by lentil at Rs 275 per quintal. The increased MSPs ensure remunerative prices to farmers and also promote crop diversification. In recent years, cultivation of crops other than cereals has been pushed up by offering a higher MSP for pulses, oilseeds and nutri-cereals (*Shree Anna*).

When the south-west monsoon started receding in late September, it recorded 5 per cent surplus rains on all-India basis. However, it was a slow start, which gained momentum in the later half, helping farmers in sowing. Consequently, paddy, oilseeds and pulses gained 2.2 per cent, 1.5 per cent and 7.8 per cent increases in area, respectively, over and above the last year (upto September 2024). Due to late and surplus rains, current storage of reservoirs is nearly 123 per cent of the last year and 118 per cent of normal storage of last 10 years. Soil moisture has also improved and is better than or similar to the nine-year average in most of the southern and northern states. It will benefit winter crops like wheat and chickpea. Good monsoon has raised hopes for better overall farm productivity.

Initiatives and interventions

Taking a quantum leap towards overall agriculture development, the Union Government approved seven major schemes to improve farmers' lives and increase their income. The total outlay of schemes is Rs 14,235.30 crore. 'Digitial Agriculture Mission' is the foremost initiative that aims for digital transformation in agriculture sector by providing farmer-centric digital solutions. Initially, three types of Digital Public Infrastructure (DPI)

will be built under the mission, viz., Agristack, Krishi Decision Support System (KDSS), and Soil Profile Mapping. Agristack will enable efficient, easier, and faster services and scheme delivery to farmers. Similar to *'Aadhaar'*, a digital identity for each farmer will be created for linking with various farmer-based databases, such as land records, livestock ownership, crops sown, family details, schemes and benefits availed etc. KDSS is designed to create a comprehensive geospatial system to unify remote sensing-based information on parameters such as crops, soil, weather, water resources, etc. Another digital platform is designed to make accurate estimates of agricultural production. The mission is expected to provide employment opportunities to about 2.5 lakh trained local youth and *Krishi Sakhis*, and will ensure that our farmers get timely guidance and services related to various farming practices. The total outlay of the mission is Rs 2,817 crore, including the central share of Rs 1,940 crore.

A special initiative was approved with a total outlay of Rs 3,979 crore to prepare farmers for

climate resilience and maintain sustainable food and nutritional security. Efficient management of plant genetic resources and genetic improvement of crops are the major pathways identified to achieve the target. Amid various

Agriculture Import and Export - Key Decisions

Onion: Earlier, the minimum export price of US$ 550 per metric tonne and the export duty of 40 per cent were restricting exports. Foreign importers were reluctant to buy onions from India due to very high prices. The government has taken a decision to remove the restriction on the minimum export price altogether and to cut the export duty from 40 per cent to 20 per cent. This will surely add significant income to the purse of onion growers.

Basmati Rice: This is a major item of India's agricultural export with a significant place in the global market. But Basmati exporters faced a setback due to export restrictions on Basmati rice varieties costing between US$ 800 and US$ 950 per metric tonne. This restriction prevented our producers from realising their potential in the global market. Taking a decision in favour of Basmati rice exporters, this restriction has now been removed. This move will now enable the Basmati rice farmers to recover the foreign market for their premium produce.

Edible Oil: India depends heavily on the import of edible oils to meet domestic demand. However, low international prices of palm and soya oil, and zero basic custom duty on imports of palm, soya and sunflower oil had been negatively impacting their domestic prices. The government took a historic decision to increase the effective import duty on crude edible oil (as in palm, soya and sunflowers) from 5.5 per cent to 27.5 per cent and on refined oil from 13.75 per cent to 35.75 per cent. This is expected to enhance prices of domestically produced edible oils in favour of oilseed farmers.

Integrated Agri-Export Facility: The government has approved the creation of India's first Integrated Agri-Export Facility at Jawaharlal Nehru Port, Mumbai. This is a PPP project worth Rs 284.19 crore to revolutionise agri-logistics and reduce wastage. This facility will address inefficiencies in logistics, reduce multiple handlings, and extend the shelf life of agricultural products. Further, it will empower farmers, boost job opportunities and enhance export capacity. ❑

emerging challenges, a scheme was approved to prepare agriculture students and researchers for taming natural adversities by using cutting-edge technologies. The Indian Council of Agricultural Research is the designated lead agency to operationalise it with a total outlay of Rs 2,291 crore. In addition to research, agri-education will also be modernised in line with the New Education Policy 2020. In addition to core agriculture, an initiative has been taken to increase farmers' income from livestock and dairy enterprises. It comprises various components of livestock and dairy management, including improvements in animal genetic resources. Approved with a total outlay of Rs 1,702 crore, the scheme also aims at modernising veterinary education. A new scheme on sustainable horticulture aims to make it more profitable and livelihood-oriented to attract youth in this sector. Besides, in addition to traditional horticultural crops, the initiative will also focus on increasing farmers' income from plantation crops, spices and medicinal and aromatic plants. The scheme was approved with a total outlay of Rs 1,129.30 crore. A scheme on natural resource management, with an outlay of Rs 1,115 crore, was approved for efficient and sustainable management of water, soil and other natural resources. Activities under 'Lab-to-Land' will be further refined and strengthened through a scheme aiming at modernisation of '*Krishi Vigyan Kendras*' (KVKs). These district-level units offer last mile connectivity of researchers with farmers for extension and expansion of new technologies in fields through various innovative modules.

The Ministry of Agriculture and Farmers Welfare operates a good number of centrally sponsored schemes in collaboration with various state governments. To avoid duplication, ensure convergence and provide flexibility to states, the union cabinet has approved rationalisation of all such schemes into two unmbrella schemes, viz., *Pradhan Mantri Rashtriya Krishi Vikas Yojana* (PM-RKVY) and *Krishonnati Yojana* (KY). Both schemes have many and diversified objectives, but broadly, PM-RKVY will promote sustainable agriculture, whereas KY will address food security and agricultural self-sufficiency. Approved with a total proposed expenditure of Rs 1,01,321.61 crore, both the schemes will focus on emerging challenges of agriculture, nutritional security, sustainability, climate change, value chain development and participation of the private sector. Technology will be leveraged to ensure efficient and effective implementation of all components. Umbrella schemes have given flexibility to state governments for re-allocation of funds from one component to another based on their state-specific requirements. Now, states can prepare a comprehensive annual action plan for approval by the union ministry instead of sanctioning plans for each scheme. Individual schemes pertaining to soil health management, rainfed area development, natural farming, crop diversification, efficient water management, agri-startups, etc. have been clubbed under PM-RKVY.

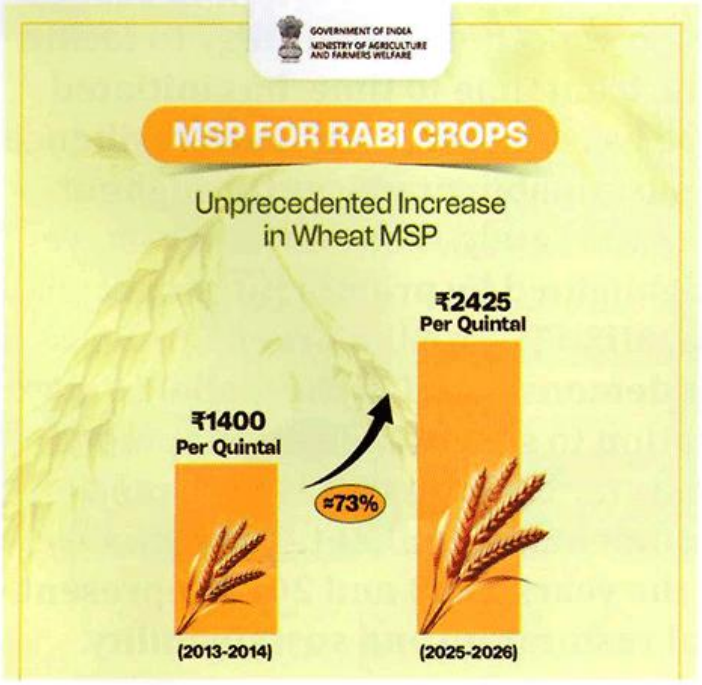
Strategies and Steps

The Government renewed its thrust on the holistic development of agriculture and the social welfare of farmers by adopting a six-point strategy. Increase in production, reduction in the cost of production, fair prices to farmers for their produce, compensation for losses incurred by natural disasters, diversification of agriculture and value-addition, and natural farming are key thrust areas of the strategy. Under digital initiatives, a National Pest Surveillance System (NPSS) was launched to enhance agricultural pest surveillance and pest management across the country. Operable through a mobile app and web portal, the system includes a pest identification module for 61 crops and a surveillance module for 15 crops for issuing timely advisories. Since its launch on 15 August

2024, within a month or so, over 16,000 farmers downloaded the NPSS App and identified pests for over 61 crops. More than 22,300 surveys have also been done over the NPSS App.

In a specific move to enhance field productivity, the Prime Minister released 109 varieties of 61 crops, including 34 field crops and 27 horticultural crops. The new varieties encompass a wide range of crops, including cereals, millets, pulses, oilseeds, vegetables, fruits, spices, medicinal plants, etc. These varieties have been developed by the ICAR (Indian Council of Agricultural Research) to address new challenges such as climate change, vagaries of nature, pest attacks, nutritional deficiencies, etc. ICAR, agricultural universities, and states have together prepared a framework to deliver the seeds of these varieties to farmers at the earliest. In addition, the agriculture ministry has onboarded 266 breeder seed-producing centres on the SATHI (Seed Authentication, Traceability and Holistic Inventory) portal to help farmers get quality seeds at affordable prices.

The Government has decided to launch a new TV and radio program, '*Krishi Chaupal*', to strengthen communication and outreach with farmers. This program seeks to empower farmers to enhance productivity and profitability by promoting best agricultural practices and strategies including efficient use of agri-inputs. As a key feature, '*Krishi Chaupal*' will allow farmers to engage directly with agricultural experts through interactive sessions in their own language. A unique Farmers Grievance Redressal System (FGRS) will soon come up as a multi-channel support to farmers in registering their queries or grievances on various issues, such as subsidies, input supplies, services, programs, schemes, etc. It will be multilingual support with real-time tracking of grievance status and automated updates on the programme.



This year, to further enhance the coverage of *Pradhan Mantri Fasal Bima Yojana* (PMFBY), a special campaign was launched to saturate KCC (Kisan Credit Card) account holder farmers through respective bank branches. Jharkhand was also onboarded under the scheme. As a result of these initiatives, for *Kharif* 2024 the total number of farmers insured is expected to reach an all-time high of 293 lakhs (2.93 cr) and the total insured area is expected to reach 365 lakh hectares, registering a growth of more than 12 per cent. Under the continuing scheme of the Agriculture Infrastructure Fund, the agriculture ministry set an ambitious target under its 100-day action plan to create over 7,000 infrastructure units, a total loan amount of Rs 5,500 crores, and mobilisation of an investment of Rs 7,500 crores for various projects and assets. The target was surpassed with over 10,000 units, over Rs 6,500 crores of loan sanctioned, and attracting over Rs 10,000 crores project investments. The government launched a saturation drive under the *PM-KISAN* scheme to add over 25 lakh new farmers. Thus, the total number of beneficiaries has risen to a record high of 9.51 crore farmers.

As a prime component of sustainable agriculture, the government has proposed a special drive to rope in one crore farmers into natural farming in the next two years. To support the initiative, 10,000 need-based bio-input resource centres will be established across the country to facilitate the supply of specific inputs directly to farmers. A 'National Mission on Natural Farming' is already underway as a separate and independent scheme since 2023-24. Farmer Producer Organisations, agri-cooperatives and start-ups are also being promoted to push up natural faming, organic farming, value addition and supply chain management. Overall, the year 2024 witnessed the restructuring and building up of an agri-ecosystem that strives to make Indian agriculture future-ready while ensuring the well-being of farmers of all classes and categories. ❑