

GOVERNMENT OF INDIA  
MINISTRY OF AGRICULTURE AND FARMERS WELFARE  
DEPARTMENT OF AGRICULTURE AND FARMERS WELFARE

**LOK SABHA**  
**UNSTARRED QUESTION No. 2702**  
TO BE ANSWERED ON 04<sup>th</sup> August, 2026

**FARMER WELFARE INITIATIVES**

2702. SHRI VIJAYAKUMAR ALIAS VIJAY VASANTH:

Will the Minister of AGRICULTURE AND FARMERS WELFARE कृषि एवं किसान कल्याण मंत्री be pleased to state:

- (a) whether the Government has initiated collaborations between farmers and agri-industries for skill development and market linkage, if so, the details thereof and outcomes achieved so far;
- (b) whether soil degradation and declining fertility are major contributors to reduced crop productivity among small landholders, if so, the details thereof and studies conducted ;
- (c) whether the Government has implemented soil health management programs such as Soil Health Card Scheme effectively, if so, the details of coverage and impact assessment in this regard;
- (d) whether climate change and erratic weather patterns are further compounding challenges faced by small farmers, if so, the details thereof and mitigation measures taken; and
- (e) whether the Government proposes to provide financial assistance or subsidies for adoption of modern technologies like precision farming and micro-irrigation and if so, the details thereof ?

**ANSWER**

THE MINISTER OF STATE FOR AGRICULTURE AND FARMERS WELFARE  
कृषि एवं किसान कल्याण राज्य मंत्री (SHRI RAMNATH THAKUR)

(a): The Government has initiated collaborations between farmers and agri industries for skill development and market linkage. The details are given below.

(i) A Centrally Sponsored Scheme "Support to State Extension Programs for Extension Reforms" (ATMA) is being implemented in 734 districts of 28 states & 5 UTs in the country. The scheme promotes decentralized and farmer-friendly extension system in the country. The objective of the Scheme is to support State Government's efforts and to make available latest agricultural technologies and good agricultural practices in different thematic areas of agriculture and allied areas to farmers through different extension activities viz; Farmers Training, Demonstrations, Exposure Visits, Kisan Mela, Mobilization of Farmers Groups and organizing Farm Schools etc. Skill training is also one among the components under the ATMA cafeteria. A total of 17,366 farmers have been trained during 2025-26 through DA&FW skill training programme under ATMA.

(ii) Agriculture Skill Council of India (ASCI) through Centres of Excellence for Agriculture Skills in India (CEASI) has collaborated with multiple agri-industry partners for the skill development and capacity building of farmers, Wage workers, Farmer Producer Organizations (FPOs), and rural youth through CSR-funded and Industry-funded initiatives with industry partners. The training covers governance of FPOs, farm mechanization, financial management, business planning, price risk management, and market linkages, thereby strengthening the institutional capacity of FPOs and enhancing their preparedness for market engagement. These capacity – building programmes are aimed at strengthening the capacities of farmers, FPOs and Rural Youth through Industry-aligned skilling on business planning, financial management, price risk management, and market oriented practices.

(b) & (c): Crop productivity is reduced due to several factors like seeds, package of practices, climate change, soil degradation, etc. Ministry of Agriculture and Farmers Welfare addresses these challenges through soil test-based balanced and integrated nutrient management, Soil Test Crop Response (STCR)-based district general fertilizer recommendations, conservation agriculture, organic resource recycling, biofertilizers and reclamation of degraded lands. These technologies improve soil health, enhance nutrient use efficiency and sustain crop productivity. During the Khet Bachao Abhiyan, farmers training were organized under Agricultural Technology Management Agency Scheme (ATMA).

Government promotes judicious use of fertilizer through Soil Health & Fertility scheme. The scheme is being implemented since 2014-15 to provide Soil Health Cards (SHCs) for all farm holdings, to promote balanced and integrated nutrient management for improving productivity and soil fertility. Soil samples are processed as per standard procedures and analysed for parameters such as pH, Electrical Conductivity, Organic Carbon, available Nitrogen, Phosphorus, Potassium, Sulphur, and micronutrients (Zinc, Copper, Iron, Manganese & Boron). The diagnostic soil health assessment of farmer fields is taken up periodically so as to issue SHCs at least once in 3 years.

Since 2014-15, 26.10 crore Soil Health Cards have been generated/ distributed as on date across the country. Total 8313 Soil Testing Labs (1267 Static Soil Testing Labs, 168 Mobile Soil Testing Labs, 6197 Mini Soil Testing Labs and 681 Village Level Soil Testing Labs) have been established across the country. In addition to state soil labs above, 1020 school mini soil labs are also established in the country under school soil health programme. 93781 farmer's trainings, 6.80 lakh demonstrations, 7425 farmer's melas/campaigns on soil health card recommendations have been organized across the country. 1351166 ha area also covered under Promotion & Distribution of Micronutrients in the scheme.

The National Food Security & Nutrition Mission (NFSNM) (formerly NFSM) helps reduce soil degradation by promoting sustainable crop and nutrient management rather than focusing only on increasing production. The mission explicitly supports integrated nutrient management, conservation of land resources, and improved farming practices.

The National Mission on Natural Farming (NMNF) was launched as a Centrally Sponsored Scheme in November 2024 to promote chemical-free, nature-based farming. One of its core objectives is to improve soil health and reverse soil degradation by reducing dependence on synthetic fertilizers and pesticides.

Paramparagat Krishi Vikas Yojana (PKVY) is a Government of India scheme launched in 2015 to promote organic farming. It was initially a component of Soil Health Management (SHM) under the National Mission for Sustainable Agriculture (NMSA) and is now implemented under Pradhan Mantri Rashtriya Krishi Vikas Yojana (PM-RKVY). Its primary objective is to improve soil health, conserve natural resources, and reduce dependence on chemical inputs.

National Productivity Council (NPC), New Delhi carried out a study 'Soil Testing Infrastructure for Faster Delivery of SHC in India' in 76 districts of 19 States covering 170 soil testing labs and 1700 farmers. As a result of application of fertilizer and micronutrients as per SHC recommendations, there has been a decrease of use of chemical fertilizer application in the range of 8-10% was found. Overall 5-6% increase in the yield of crops was reported, due to application of fertilizer and micronutrients as per SHC. An impact study of Soil Health & Fertility Scheme was conducted by National Institute of Agricultural Extension Management (MANAGE), Hyderabad. As per report, about 62.8% of the farmers use fertilizers according to the recommendations on the SHC. The cost per acre reduced by 4 to 10 % due to low fertilizer use. Crop yields increased for majority of the crops, although moderately. Overall, paddy farmers reduced use of urea by 9%, Diammonium Phosphate (DAP)/Single Super Phosphate by 7%. There was substantial decline in fertilizer use especially urea and DAP in paddy and cotton resulted in decreased cost of cultivation per unit area.

(d): Indian Council of Agricultural Research (ICAR) is implementing a project-National Innovations in Climate Resilient Agriculture (NICRA) that studies the impact of climate change on agriculture, conducts district level risk and vulnerability assessment of agriculture to future climate change and integrated simulation modelling studies for estimating the future projections of climate change. Under the project, risk and vulnerability assessment of agriculture to climate change has been carried out at district-level for 651 predominantly agricultural districts as per Intergovernmental Panel on Climate Change (IPCC) protocols. 310 districts were identified as vulnerable out of which 109 districts have been categorized as 'very high' and 201 districts as 'highly' vulnerable. District Agriculture Contingency Plans (DACPs) for these 651 districts have also been prepared to address weather aberrations and recommending location specific climate resilient crops and varieties and management practices. To enhance resilience to climate variability, location-specific climate-resilient technologies, including the System of Rice Intensification (SRI), aerobic rice, direct-seeded rice, zero-till wheat, climate-resilient crop varieties, and in-situ crop residue management, are being demonstrated for adoption by farmers. Under NICRA, climate-resilient technologies are being demonstrated in 448 Climate Resilient Villages across 151 vulnerable districts in 28 States/UTs, supported by village-level seed banks and community nurseries to enhance farmers' resilience and ensure timely availability of quality seeds.

Climate change and erratic weather patterns impact agriculture. Government is promoting resilience in agriculture through sustainable agricultural practices under various schemes, such as Per Drop More Crop (PDMC) for improving water-use efficiency through micro-irrigation; Rainfed Area Development (RAD) for promoting Integrated Farming Systems; Paramparagat Krishi Vikas Yojana (PKVY) for organic farming; National Mission on Natural Farming (NMNF) for natural farming; Mission for Aatmanirbharta in Pulses, National Mission on Edible Oils–Oilseeds (NMEO-OS) and National Food Security & Nutrition Mission (NFSNM) that also promote crop diversification; Mission for Integrated Development of Horticulture (MIDH) for horticulture development; Agroforestry for farmland ecology etc.

DA&FW is leveraging satellite-based monitoring and Artificial Intelligence (AI)-based analytical systems for forecasting agricultural risks and supporting timely crop management interventions across the country. The Krishi Decision Support System (DSS) that integrates and standardizes geospatial and non-geospatial data, including satellite, weather, soil, crop signatures, reservoir and ground water data, enables monitoring of drought conditions, adverse weather events and flood inundation to provide near real-time risk alerts and support crop management interventions to reduce risk of crop loss across States/UTs.

The India Meteorological Department (IMD) provides AI-based monsoon and weather advisories across the country to support informed agricultural decision-making. The advisories enable farmers to plan agricultural operations based on timely and location-specific weather forecasts.

The Government has also introduced yield-based Pradhan Mantri Fasal Bima Yojana (PMFBY) and weather index based Restructured Weather Based Crop Insurance Scheme (RWBCIS) from Kharif 2016 to provide financial support to the farmers opting for crop insurance against crop loss/damage arising out of natural calamities, adverse weather incidence and to stabilize the income of farmers etc. Comprehensive risk insurance is provided under the scheme from pre-sowing to post-harvest losses. Further, with effect from Kharif 2023, Government has rolled out Yield Estimation System based on Technology (YES-TECH) wherein yield estimation is done using satellite imagery and remote sensing data.

(e): Support for micro-irrigations provided under the Pradhan Mantri Krishi Sinchayee Yojana–Per Drop More Crop (PMKSY-PDMC) in accordance with the prescribed scheme norms. The Government provides financial assistance @ 55% for small and marginal farmers and @ 45% for other farmers for installation of Drip and Sprinkler systems under the PDMC. The Assistance for installation of Micro Irrigation systems is limited to 5 hectares per beneficiary.

Under the Mission for Integrated Development of Horticulture (MIDH), government provides financial assistance for adoption of modern technologies in horticulture, including precision farming, protected cultivation and efficient water management practices. Under the scheme, assistance is available for establishment of Protected Cultivation structures such as Poly houses, Shade-net Houses and Plastic Tunnels, which facilitate precision cultivation through controlled growing conditions. Financial assistance is generally provided at 50% for these structures, subject to the norms and ceilings prescribed under the MIDH guidelines. Support is provided for add-on components under protected cultivation, including hydroponics, aeroponics, circulation fans (in polyhouses), sensor-based automation systems for fertigation, and support systems for vegetable crops, as per the approved norms under the scheme. The scheme also supports the establishment of Hi-tech Nurseries.

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