GOVERNMENT OF INDIA
MINISTRY OF AGRICULTURE AND FARMERS WELFARE
DEPARTMENT OF AGRICULTURAL RESEARCH & EDUCATION

RAJYA SABHA
UNSTARRED QUESTION NO-3212
ANSWERED ON- 20/03/2026

SHIFT IN RESEARCH POLICY TO ADDRESS CHALLENGES IN AGRICULTURE

3212. SHRI SANJAY SETH:

Will the Minister of AGRICULTURE AND FARMERS WELFARE be pleased to state:

(a) whether Government has initiated a shift towards farmer-centric, practitioner-led agricultural research to address ground-level challenges, if so, the details thereof;

(b) the mechanisms adopted to incorporate direct feedback from farmers into research priorities and policy formulation;

(c) the manner in which such an approach is expected to improve crop yields, reduce input costs and promote sustainable practices for small and marginal farmers; and

(d) whether the outcomes of this research are being effectively disseminated to benefit the common farmer and ensure inclusive rural development, if so, the details thereof?

ANSWER

THE MINISTER OF STATE FOR AGRICULTURE AND FARMERS WELFARE
(SHRI BHAGIRATH CHOUDHARY)

(a): Yes. Indian Council of Agricultural Research (ICAR) is devoted to take up farmer-centric agricultural research and extension across the country through the network of 113 ICAR Institutes and 731 Krishi Vigyan Kendras (KVKs). Farmer-centric research approaches include Integrated Farming Systems (IFS), Natural Farming, agroforestry, organic farming, fish and livestock based farming system, and cluster-based implementation, along with the development of Packages of Practices and Good Agricultural Practices (GAP), small farm mechanization tailored for small and marginal farmers.

To validate and demonstrate technologies under real field conditions, during 2024-25, ICAR conducted 41,582 On-Farm Trials (OFTs) and 2,65,831 Frontline Demonstrations (FLDs), and organized 9,33,004 extension activities, covering about 394.57 lakh farmers.

In addition, research efforts have been aligned with farmers' needs, particularly in the context of climate resilience and nutritional security. During 2014-2025, a total of 3,236 field crop varieties have been notified, of which 2,996 are climate-resilient and 587 are tolerant to extreme climatic stresses such as drought, flood, salinity, heat, and cold. Further, 1,098 rainfed varieties, 185 bio fortified varieties, and 132 varieties developed through marker assisted breeding have been released.

Further, ICAR has been actively promoting participatory and demand driven research by strengthening the farmer-scientist interface. In this direction, it has implemented the "Farmer FIRST Programme", which focuses on enhancing direct interaction between farmers and scientists for technology development, refinement, and application under real farm conditions. The programme adopts a multi-stakeholder and multi-disciplinary approach, emphasising innovation, farmer feedback, and livelihood oriented interventions.

Under this initiative, 2,170 teams comprising scientists, officials, and agricultural experts have visited over 1.42 lakh villages, interacting with more than 1.34 crore farmers, and providing location specific technical guidance based on regional climatic conditions and farmers' needs.

These initiatives collectively reflect a systematic shift towards farmer centric, need based, and field oriented agricultural research aimed at effectively addressing the challenges faced by farmers at the grass root level.

(b): The Krishi Vigyan Kendras (KVKs) serve as a crucial interface between farmers and the agricultural research system. KVKs regularly organise Farmer-Scientist Interactions, group meetings, field days, and training programmes, wherein farmers share their field experiences, problems, and technological requirements. The feedback gathered through these platforms is systematically communicated to the Indian Council of Agricultural Research (ICAR) institutes, Agricultural Universities, and concerned line departments for appropriate research interventions and policy inputs.

In addition, field level issues are identified through participatory farmer scientist interactions, focused group discussions, on-field observations, and inputs from extension personnel, ensuring that farmers' voices are directly reflected in research planning.

Further, under the Viksit Krishi Sankalp Abhiyan (VKSA) from 29 May to 12 June 2025 across the country, extensive farmer engagement was undertaken. During this initiative, over 500 researchable, extension, and policy related issues were identified to promote demand driven research and prioritize farmers' concerns. The programme also documented over 300 farmer-led innovations, which are being taken up for validation, refinement, and scaling up by research institutions to benefit the wider farming community.

These mechanisms collectively ensure a structured and continuous flow of feedback from farmers into the agricultural research system, thereby aligning research priorities and policy formulation with ground-level realities.

(c): A farmer centric, practitioner led approach to agricultural research improves outcomes for small and marginal farmers by ensuring that technologies are developed based on farmers' feedback, making them more practical, easily adoptable, and effective under field conditions, thereby enhancing crop yields and ensuring sustained benefits. The approach promotes sustainable farming by integrating research across crops, horticulture, fisheries, livestock, and natural resource management, along with capacity building and entrepreneurship based modules, leading to efficient resource use and reduced input costs. In this direction, the Indian Council of Agricultural Research (ICAR), in collaboration with State Agricultural Universities, has developed location specific, climate adapted, high yielding, and disease pest resistant varieties/hybrids of about 85 field crops for country's varied agro climatic zones, in close collaborations with the local (state) agricultural universities. So far, this AICRP system has given a total of 7205 high yielding climate resilient

and disease pest resistant and biofortified varieties/hybrids of different field crops, which have been centrally notified for commercial cultivation in the country. During the last eleven years (2014-2025) a total of 3236 field crop varieties have been notified comprising 1576 of Cereals, 444 of Oilseeds, 473 of Pulses, 205 of Forages, 408 of Fibre Crops, 96 of Sugarcane and 34 of Others Crops. Overall, this approach ensures that agricultural development is demand driven, resource efficient, and sustainable, leading to improved yields and livelihoods for small and marginal farmers.

(d): The Government of India, under the aegis of the Indian Council of Agricultural Research (ICAR), has established 731 Krishi Vigyan Kendras (KVKs) across various districts to disseminate research outcomes in agriculture and allied sectors. The KVKs undertake on farm testing to assess location specific suitability of technologies, frontline demonstrations to showcase their production potential on farmers' fields, and capacity development programmes for farmers' knowledge and skill upgradation. They also provide farm advisories through ICT and other media, and ensure availability of quality seeds and planting materials, along with organizing large scale extension activities for awareness generation.

During 2024-25, these efforts have been further strengthened through 41,582 On Farm Trials (OFTs), 2,65,831 Frontline Demonstrations (FLDs), and 9,33,004 extension activities, covering about 394.57 lakh farmers, thereby ensuring wide scale dissemination of improved technologies at the grass root level.

In addition, the Government implements the Centrally Sponsored Scheme "Support to State Extension Programmes for Extension Reforms (ATMA Scheme)", which supports State Governments in disseminating the latest agricultural technologies through farmer trainings, demonstrations, exposure visits, Kisan Melas, mobilization of farmer groups, and organization of Farm Schools.

These coordinated mechanisms ensure effective transfer of research outcomes to farmers, leading to enhanced productivity, improved adoption of technologies, and inclusive rural development.

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