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

LOK SABHA
UNSTARRED QUESTION NO. 609
TO BE ANSWERED ON 3RD FEBRUARY, 2026

INDIGENOUS TRADITIONAL KNOWLEDGE BASED CLIMATE-RESILIENT AGRICULTURAL PRACTICES

609. SHRI SRIBHARAT MATHUKUMILLI:

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

(a) whether the Government maintains and documents Indigenous Traditional Knowledge (ITK)-based climate-resilient agricultural practices and if so, the details thereof, State-wise;

(b) whether the Indian Council of Agricultural Research (ICAR) collaborates with civil society organisations and private sector entities for the identification, validation and promotion of such ITK-based practices and if so, the details thereof;

(c) whether the Government has assessed capacity gaps at the State levels in delivering large-scale climate-resilient agriculture extension services, including training in machinery operation and maintenance and if so, the findings thereof; and

(d) whether farmers adopting or developing climate-resilient practices are provided any financial or institutional incentives to scale up such innovations and if so, the details thereof?

ANSWER

THE MINISTER OF STATE FOR AGRICULTURE AND FARMERS WELFARE
कृषि और किसान कल्याण राज्य मंत्री (SHRI BHAGIRATH CHOUDHARY)

(a) & (b): Indian Council of Agricultural Research (ICAR), under its National Agricultural Technology Project (NATP), collected about 5000 Indigenous Technical Knowledge (ITK) including climate-resilient agricultural practices from different regions of the country and documented in 4 volumes titled "Inventory of Indigenous Technical Knowledge (ITK) in Agriculture"*(https://icar.org.in/sites/default/files/202510/ICAR%20Insights%20Outcomes%20Booklet%20%28English%29.pdf).* These ITKs have been collected from the primary sources through voluntary disclosure; and available literature, like books, journals, thesis, etc. so as to make them accessible at one place. Some of the crop based ITKs includes cultural practices for

minimizing the risk, dry seeding of rice, traditional rainfed farming for soil conservation by cultivating close growing crops, Pagadi planting in finger millet, sowing of rabi sorghum after first three days of Lokhandi Charan of Hasta Nakshatra to avoid seedling damage due to high intensity rain, establishment of crop stand under rainfed conditions by early seeding, dry seeding and transplanting, Khakhra mulching in maize for moisture conservation, addition of organic matter and termite control. Recently, ICAR documented 110 farmer led innovations, identified and collected during Viksit Krishi Sankalp Abhiyaan (VKSA), organized in collaboration with progressive farmers, innovators, agri-preneurs, FPOs, SHGs, state departments and agricultural universities from May 29 to June 12, 2025. Some of the innovations captured includes urban roof tops farming for growing organic food, soil pulverizing roller adaptation for dryland fields, solar automated hydroponic system, innovative community-based fodder banking system for drought preparedness, 'Amulya amrit': a farmer-innovated organic pest and disease control formulation, zero tillage cultivation of garden pea & cole crops in rice fallow, water-saving and weed-control through indigenous mulching in vegetables etc. (https://atarijabalpur.org/Publication.html).

ICAR through its network centres of KVKs, some of which are managed by civil society organizations undertook validation and promotion of such ITK based practices.

(c): Under ICAR flagship project National Innovations in Climate Resilient Agriculture (NICRA), risk and vulnerability assessment of Indian agriculture to climate change was conducted using IPCC protocol and identified 301 districts with very and high risk. NICRA is operational in 151 risk prone districts across the country through Krishi Vigyan Kendras (KVKs). The KVKs in each village assessed the gaps in technology needs through participatory rural appraisal, and prioritized the climate resilient location specific technology interventions for implementation. Over the past 15 years, about 25000 trainings were conducted on various aspects of climate resilient agriculture, including operational and maintenance of farm machinery through farmer participatory approach in NICRA adopted villages benefitting 7.5 lakh farmers and stakeholders.

(d): To help farmers in adoption and scaling up of climate resilient practices, the Government of India implements National Mission for Sustainable Agriculture (NMSA), which is one of the Missions within the National Action Plan on Climate Change (NAPCC). NMSA has three major components i.e. Rainfed Area Development (RAD); On Farm Water Management (OFWM); and Soil Health Management (SHM). The Government of India provides financial assistance to the states through the NMSA to cope with the adverse impacts of climate change.

In the NICRA adopted villages, institutional interventions such as custom hiring centres, seed and fodder banks, community paddy nurseries, village climate risk management committees have been established with the financial and technical support from NICRA project to enable upscaling of resilient practices in the village.

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