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

RAJYA SABHA
UNSTARRED QUESTION NO. 807
TO BE ANSWERED ON THE 06/02/2026

TECHNOLOGY ADOPTION AMONG SMALL LAND MARGINAL FARMERS

807. SHRI RATANJIT PRATAP NARAIN SINGH:

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

(a) the manner in which the creation of the Digital Agriculture Mission (DAM) has accelerated technology adoption among small and marginal farmers, the details thereof;
(b) whether States have reported improved crop planning due to digital farm registries, if so, the details thereof and if not, the reasons therefor;
(c) to what extent satellite-based monitoring has assisted Government in accurate crop estimation and disaster assessment, the details thereof; and
(d) the progress achieved in integrating agri-startups with the national digital agriculture ecosystem, the details thereof?

ANSWER

THE MINISTER OF STATE FOR AGRICULTURE AND FARMERS WELFARE
(SHRI RAMNATH THAKUR)

(a) to (d): The Government has approved the Digital Agriculture Mission in September 2024. The Mission envisages the creation of a Digital Public Infrastructure (DPI) for Agriculture, vig. AgriStack, Krishi Decision Support System, a Comprehensive Soil Fertility & Profile Map and other IT initiatives undertaken by the Central Government/State Government to enable a robust digital agriculture ecosystem in the country under NeGPA. This, in turn, would drive innovative farmer-centric digital solutions and make them reliable. Crop-related information is available to all farmers on time. The AgriStack DPI consists of three foundational registries or databases associated with the agriculture sector, i.e., Geo-Referenced Village Maps, Crop Sown Registry, and the Farmers Registry; all created and maintained by the State Governments/ Union Territories.

The State Farmers Registry under the Digital Agriculture Mission covers all the landholding farmers, including women farmers. The Farmers Registry application also has the provision to onboard the tenant and lessee farmers. A State can decide to include such farmers in the Farmers Registry as per the State policy on tenants and lessee farmers. As of 04.02.2026, more than 8.48 Crore Farmer IDs have been generated. Further, during Kharif 2025, the Digital Crop Survey (DCS) has been conducted in 604 Districts covering more than 28.5 crores plots.

These registries together establish AgriStack as a single source of truth for farmer identity, land, and crops. Farmer ID enables seamless integration of Direct Benefit Transfer (DBT) based schemes, Minimum Support Price (MSP) based procurement, crop insurance, credit delivery, input distribution, and disaster relief. At the Central level, Government has mandated use of Farmer ID in Pradhan Mantri Kisan Samman Nidhi Yojana (PM KISAN) for registration of new farmers in 19 States, enrolment of farmers under Pradhan Mantri Fasal Bima Yojna (PMFBY) in 8 States and also for issuance of Soil Health Cards.

The registries have enabled plot-level visibility of crops and better estimation of sowing patterns across seasons, which in turn supports evidence-based planning for procurement, input supply and logistics. These data-driven insights have strengthened decision-making at the State level and improved coordination across departments involved in agricultural planning and implementation.

Maharashtra has successfully leveraged AgriStack for scheme delivery, disaster relief, AI-based advisory, and credit access, including the transfer of over ₹14,000 crore to 89 lakh farmers during Kharif 2025 crop losses within a 5-day period. Chhattisgarh has institutionalized Farmer ID and Digital Crop Survey for MSP-based paddy procurement, covering over 32 lakh farmers in a single season, significantly improving transparency, crop verification, and timeliness of MSP payments.

The Mahalanobis National Crop Forecast Centre (MNCFC) carries out satellite imagery-based monitoring of crop acreage and impact of disaster hazards. MNCFC generates pre-harvest production forecasts for major crops using multispectral and Synthetic Aperture Radar (SAR) satellite data. MNCFC has also carried out the pilots for the integration of satellite-based crop maps in the Digital Crop Survey (DCS) system of AgriStack to reduce the burden on the manual surveys and generation of crop statistics. MNCFC regularly provides remote satellite imagery-based inputs which include drought, flood and hailstorm-affected areas. The drought indicators are based on rainfall, dry spells, satellite image-based soil moisture and crop conditions for early detection of drought-impacted areas. Further, YES-TECH (Yield Estimation System based on Technology), an initiative under PMFBY, uses technology-based models (including satellite indices) to estimate yields at the Gram Panchayat level, reducing the need for manual Crop Cutting Experiments (CCEs) for estimation of crop yields.

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