

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

LOK SABHA
UNSTARRED QUESTION NO. 349

TO BE ANSWERED ON 2ND DECEMBER , 2025

SATELLITE-BASED CROP MONITORING AND DATA INTEGRATION

349. SHRI Y S AVINASH REDDY:

Will the Minister of Agriculture and Farmers Welfare कृषि एवं किसान कल्याण मंत्री be pleased to state;

(a) whether the Government has initiated satellite-based crop surveys under the FASAL programme to assess crop health and yield and, if so, the details thereof;

(b) the number of districts covered so far under these satellite surveys, State-wise;

(c) whether the system has been integrated with the PM Fasal Bima Yojana or MSP determination for crop loss assessment; and

(d) whether any coordination mechanism exists between ISRO, MNCFC and State Agriculture Departments for real-time data sharing and farmer advisories?

ANSWER

THE MINISTER OF STATE FOR AGRICULTURE AND FARMERS WELFARE

कृषि एवं किसान कल्याण राज्य मंत्री (SHRI RAMNATH THAKUR)

(a): Under FASAL programme, the Mahalanobis National Crop Forecast Centre (MNCFC) generates satellite-based pre-harvest crop production estimates for 11 major crops of the country (Paddy, Wheat, Jute, Cotton, Sugarcane, Soybean, Tur, Gram, Mustard, Lentil and Rabi Sorghum). Multispectral and microwave satellite data are used for crop mapping, and satellite-based indices along with weather data are utilized for crop yield estimation through Weather-based and Remote Sensing models.

(b): The coverage of FASAL includes 20 states/557 districts. The state-wise number of districts are-Andhra Pradesh 26; Assam 33; Bihar -38; Chhattisgarh -33; Gujarat-29; Haryana-22; Himachal Pradesh-7; Jharkhand-24; Karnataka 22; Kerala 02; Madhya Pradesh-52; Maharashtra 29; Odisha 30; Punjab 22; Rajasthan 32; Tamil Nadu 21; Telangana 32; Uttar Pradesh 75; Uttarakhand 7; West Bengal -21.

(c): Space based inputs are being utilized under PMFBY scheme which include planning of Crop Cutting Experiment (CCE's), yield estimation at Gram Panchayat level for Paddy, Wheat and Soybean under the YESTech (Yield Estimation System using Technology) and for addressing yield and area discrepancies issues.

(d): DA&FW, along with MNCFC, is collaborating with ISRO for generation of operational crop yield estimates based on Semi-Physical model. ISRO centres also support in R&D activities for inclusion of new crops for assessment.

The State Agriculture departments are providing support for collection of Ground data required for training the model for crop mapping purpose under FASAL programme.
