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NBSS & LUP Soil Database Crucial for Crop Improvement

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The Indian Council of Agricultural Research (ICAR) has highlighted the importance of the soil database and information system developed by the National Bureau of Soil Survey and Land Use Planning (NBSS & LUP) for crop improvement, agricultural development and decision-support systems. The remarks were made by ICAR Director General Dr. M. L. Jat at the 50th Foundation Day of NBSS & LUP in Nagpur, Maharashtra.

Key Highlights

NBSS & LUP has made significant contributions to soil resource mapping, soil information generation and land-use planning in India.

The Bureau has recently developed India's first soil texture map using remote sensing and satellite data.

The map provides hectare-level information, which can help farmers and agricultural planners identify suitable crops for specific areas.

NBSS & LUP is also developing high-resolution water-retention maps, particularly for Maharashtra and southern states.

What is Soil Texture?

Soil texture refers to the relative proportion of sand, silt and clay particles in soil. It influences important characteristics such as water retention, drainage, aeration and nutrient availability.

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Therefore, detailed soil-texture information can support crop selection, irrigation planning and efficient land-use management.

Significance

Crop Improvement: Soil characteristics provide an important basis for selecting and developing crops suited to particular agro-ecological conditions.

Precision Agriculture: Satellite-based soil information can support location-specific agricultural decisions.

Resource Management: Soil and water data can help improve the efficient use of scarce natural resources.

Climate Resilience: Better understanding of soil properties can contribute to climate-smart agricultural planning.

Exam Focus Points:

Organisation: National Bureau of Soil Survey and Land Use Planning (NBSS & LUP)

Parent organisation: Indian Council of Agricultural Research (ICAR)

Headquarters: Nagpur, Maharashtra

Foundation: 1976

2026: 50th Foundation Day

New initiative: India's first soil texture map

Technology used: Remote sensing and satellite data

Map resolution: Hectare-level insights

Upcoming work: High-resolution water-retention maps