



Krishi Integrated Command and Control Centre

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Why in News?

The Union Agriculture Minister recently launched the **Krishi Integrated Command and Control Centre (ICCC)** at Krishi Bhavan in New Delhi, marking a major stride forward in the field of agricultural technology.

What is Krishi Integrated Command and Control Centre (ICCC)?

▪ About:

- The Krishi ICCC is a state-of-the-art tech-based solution housed in the **Ministry of Agriculture & Farmers' Welfare**, designed to aid in making informed decisions using multiple IT applications and platforms such as weather data from the [India Meteorological Department \(IMD\)](#); sowing data from **Digital Crop Survey**; farmer-and farm-related data from **Krishi Mapper** (an application for geo-fencing and geo-tagging of land); market intelligence information from the [Unified Portal for Agricultural Statistics \(UPAg\)](#); and yield estimation data from the [General Crop Estimation Survey \(GCES\)](#).
- It leverages technologies such as [artificial intelligence](#), [remote sensing](#), and [Geographic Information Systems \(GIS\)](#) to collect and process granular agricultural data.
- The ICCC gives information on crop yields, production, drought situation, cropping patterns, relevant trends, outliers, and Key Performance Indicators (KPIs).
 - It also provides insights, alerts, and feedback on agriculture schemes, programs, projects, and initiatives.
- It includes map, timeline, and drill-down views, offering a comprehensive macro picture through the **Krishi Decision Support System (DSS)**.
- This integrated visualisation facilitates quick and efficient decision-making and can be linked with the PM-Kisan chatbot in the future.

▪ Practical Applications:

- **Farmer's Advisory:**
 - The ICCC allows visualisation of GIS-based **soil carbon mapping** and [soil health card data](#), enabling the generation of customised advisories for farmers regarding suitable crops and their water and fertiliser requirements.
- **Drought Actions:**
 - The ICCC correlates yield data with weather and rainfall information, facilitating proactive decision-making in response to changes in yield from specific regions.
- **Crop Diversification:**
 - Analysis of [crop diversification](#) maps and field variability for paddy assists in identifying regions with potential for diversified cropping, enabling tailored advice for farmers.
- **Farm Data Repository:**
 - The **Krishi Decision Support System (K-DSS)** acts as an agriculture data repository, supporting evidence-based decision-making and the preparation of customised advisories for farmers.
- **Validation of Yield:**

- The ICCC validates yield data captured through Krishi Mapper with data generated through the General Crop Estimation Survey (GCES) application for a plot, ensuring accuracy and reliability.

▪ **Way Forward:**

- ICCC can create an **ecosystem for generating individual farmer-level advisories** through apps like **Kisan e-mitra and a chatbot** developed for PM-Kisan beneficiaries.
- The **Machine Learning and Artificial Intelligence** based system will identify a farmer through their **mobile number or Aadhaar**, match it with their field information from land records, historical crop sowing information, and weather data from IMD, and generate a customised advisory in the local language using the **Bhashini platform** for translation into several Indian languages.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims

Q. In the context of India's preparation for Climate -Smart Agriculture, consider the following statements:

1. The 'Climate-Smart Village' approach in India is a part of a project led by the Climate Change, Agriculture and Food Security (CCAFS), an international research programme.
2. The project of CCAFS is carried out under Consultative Group on International Agricultural Research (CGIAR) headquartered in France.
3. The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in India is one of the CGIAR's research centres.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Ans: (d)

Q. Consider the following statements: (2017)

The nation-wide 'Soil Health Card Scheme' aims at

1. expanding the cultivable area under irrigation.
2. enabling the banks to assess the quantum of loans to be granted to farmers on the basis of soil quality.
3. checking the overuse of fertilizers in farmlands.

Which of the above statements is/are correct?

- (a) 1 and 2 only
- (b) 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

Ans: (b)

