

CROPIC: ECONOMY

NEWS: New scheme to study crops using AI: What is CROPIC

WHAT'S IN THE NEWS?

The Ministry of Agriculture has introduced *CROPIC*, a digital initiative using AI and geo-tagged field images to improve real-time crop monitoring and automate crop loss assessments for faster insurance payouts. This aims to enhance the effectiveness of the *Pradhan Mantri Fasal Bima Yojana (PMFBY)* and build a national crop image database.

Context and Launch

- The Ministry of Agriculture and Farmers Welfare is set to launch **CROPIC (Collection of Real-time Observations & Photo of Crops)**.
- It will be a **technology-driven initiative** using field photographs, Artificial Intelligence (AI), and crowdsourcing to enhance crop information collection and crop insurance implementation.
- Initially proposed as a **pilot project for Kharif 2025 and Rabi 2025-26**, the nationwide rollout is expected to begin in 2026.

Key Features of CROPIC

- **Real-time Field Data Collection:**
 - Farmers and designated field officials will take **geo-tagged photographs** of crops multiple times during their growth cycle (4–5 times per season).
 - These images will capture various stages of crop development and provide location-specific agricultural data.
- **Crowdsourcing Model:**
 - CROPIC leverages a **crowdsourcing approach** to collect large volumes of images directly from the field.
 - This ensures **wide coverage, real-time input**, and participation from the farming community.
- **AI-Based Analysis:**
 - The photographs are uploaded to a **cloud-based platform** where **AI algorithms** process and interpret the images.
 - AI analysis will determine:
 - Type of crop.
 - Growth stage of the crop.

- Crop health indicators.
- Evidence of **damage or stress** (due to drought, pests, etc.).
- **Web-Based Visualization Dashboard:**
 - The analyzed results will be displayed on a **user-friendly web dashboard**.
 - Stakeholders, including agricultural officers and policy-makers, can **visualize and interpret crop data efficiently**.

Significance and Objectives

- **Support to Crop Insurance (PMFBY):**
 - CROPIC is designed to **enhance the implementation of the Pradhan Mantri Fasal Bima Yojana (PMFBY)**.
 - Accurate and timely damage assessment is a major bottleneck in crop insurance payouts. CROPIC aims to **automate and speed up this process**.
- **Faster Insurance Claims:**
 - When a farmer reports crop loss, field officials can use the app to submit **photographic evidence**.
 - The AI will immediately analyze the extent of damage, **reducing verification delays** and ensuring **faster compensation**.
- **Transparency and Efficiency:**
 - Minimizes manual inspection errors and subjectivity in crop loss assessment.
 - Promotes **transparency** in the functioning of crop insurance schemes.
- **Creation of a Digital Crop Image Library:**
 - CROPIC will help develop a **centralized database of crop images** across different states, regions, crop varieties, and seasons.
 - This “**crop signature**” archive will aid in:
 - Long-term agricultural research.
 - Machine learning model improvement.
 - Weather and yield prediction.
 - Policy formulation and disaster planning.

Broader Impact

- Improves farmer trust in government schemes by reducing delays in compensation.

- Encourages **digital adoption** among farmers and field officials.
- Builds capacity for **smart agriculture** using data, AI, and digital tools.
- Can serve as a model for integrating **AI into governance and welfare delivery systems** in rural India.

Source: <https://indianexpress.com/article/explained/new-scheme-to-study-crops-using-ai-what-is-cropic-10060949/>