BE-AgSmart

BE-AgSmart: Al-Powered FPO Automation & Decision Support System

What is an FPO?

A Farmer Producer Organization (FPO) is a collective that helps farmers improve procurement, production, and marketing for better profitability.

About BE-AaSmart:

An Al-driven platform (Web & Android) designed to automate FPO operations and enhance efficiency.

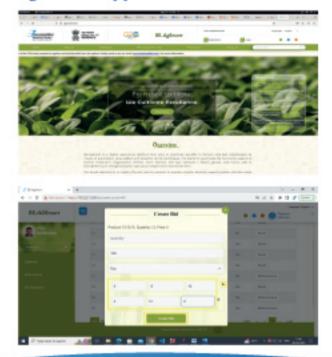
Key Users:

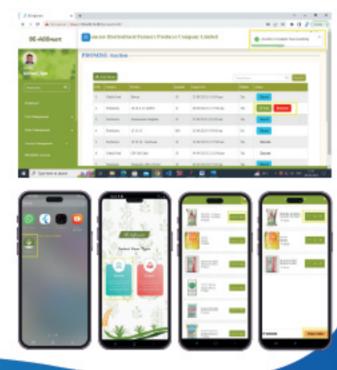
Primary: Visitor, FPO, Seller, Expert, Farm, FPO Admin Managed by FPO: Office Users, Farmers

Unique Features:

- PROMISE Module (Al-Powered Procurement System)
- Uses Deep Learning & Game Theory for efficient input procurement
- Aggregates farmer demands to optimize supply chain efficiency
- © Ensures cost-effective & streamlined procurement through FPOs

BE-AgSMART Application





Impact & Benefits of the Solution

- improved Market Access and Fair Pricing
- © Enhanced Operational Efficiency
- increased Transparency and Trust

- © Economic Benefits
- Scalability and Sustainability





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"A Digital Revolution for Smart Farming"

The eKrishi platform creates a digital ecosystem to support farmers with smart agriculture tools like IoT sensors, weather data, and GIS services. It helps improve decision-making, mitigate climate impacts, and promote sustainable growth.



BHARAT ELECTRONICS LIMITED (BEL) is Navratna PSU under the Ministry of Defence, Government of India, It manufactures state of the art electronics products and systems for Defence and Non defence Domains. Software solutions for these systems are realised using cutting edge tools and technologies at Software Strategic Business Unit.

SOFTWARE SBU with technically competent resources has been developing Digital Agriculture solutions for challenging operational environments. Software SBU is diversified into latest technology domains and also provides Software Assurance Services.

Key Features of the Platform Centralized Platform: A generic platform designed to cater to all Farmer Producer Organizations (FPOs). Mobile Application: Available on Android and iOS, this app connects

- Farmer Registration: Automated process for farmer registration within FPOs.
- Order Management: Farmers can place agricultural input orders directly from the app.
- Supplier Logins: FPO suppliers can log in to manage inventory and orders.
- Auction Mechanism: Game theory-based auction process to minimize procurement costs and maximize profit.
- **Inventory Management:** Automated system for managing agricultural inputs, assets, and hiring processes.
- Weather Forecasting: Real-time weather updates to help farmers plan.
- Farm Management System: Integrated tools to help farmers manage their farms more effectively.
- Advertising Produce: Advertise farm produce to widen market reach.
- Interactive Dashboard: Dashboard for easy data visualization and report generation.
- Integration with Existing Software: Integration with platforms like Tally for seamless operations.
- Expert Advisory Integration: Al-based analytics for disease identification, crop yield prediction, and crop suggestions based on soil and weather parameters.
- Network of FPOs: Facilitating a network for collaboration between FPOs.

Project Partners:

Stakeholders:

farmers and experts.

- © FPOs
- G Government Horticulture Departments

Research Partners:

- Indian Institute of Sciences
- Agricultural Universities

Objectives



Crop Health & Acreage Assessment

Evaluating crop health and acreage using satellite imagery. eKrishi

AI/ML-Based Crop Classification

Classifying crops using advanced AI/ML algorithms.

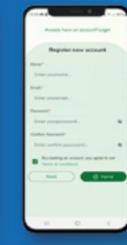
Damage Assessment

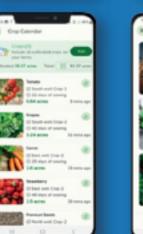
Assessing crop damage on a district or village basis using satellite imagery. Yield Estimation

Estimating crop yield at the village, tehsil, district, or grid level using satellite imagery.



Card Chart Street









Centre (ICCC) that integrates key smart agriculture infrastructure components, including Agriculture IoT Sensors, weather data systems, soil data integrations, and GIS-based remote sensing services.

This will improve the decision support system, leading to better service delivery for farmers, agricultural scientists, and government agencies in the agriculture sector. Additionally, the platform will provide advisory support to help farmers mitigate climate impacts and achieve sustainable growth and income.

The eKrishi Digital Agriculture Platform is a transformative initiative that leverages technology to improve agricultural productivity, ensure sustainable farming practices, and increase the income of farmers.

By facilitating better data-driven decisions and providing crucial services, the platform supports farmers in achieving their goals while strengthening the agricultural ecosystem.