piNcer

Profiler and Information on Crop Exposure and Risk

Agriculture in India covers nearly 180 million hectares, and the organized sector lends more than $100 billion to farmers each year. For a sector so large, the need for timely, comprehensive and organized data and analytics remains strong. PInCER at its heart is a live crop map that presents the geo-location of standing crops across the country. Using satellite imagery to classify crops, PInCER makes the crop map actionable by overlaying useful data on it, including village boundaries, farm sizes, crop health, weather forecasts, yield estimates and land ownership. This allows for data-based decision-making on the development of loan products, manpower deployment, collection strategy and crop risk.

ANALYTICS BUILT ON THE CROP MAP PLATFORM

Village Classification
Helps lenders classify villages based on crop acreage, health, yield forecast, and scores of other parameters

Farmer Credit Rating and loan application verification
Using the farmer's geo-location, remote images and land records to verify the farming history, ownership and acreage.

Farmer Decision Support System
Mobile app that supports farmer enrollment, geolocation, tracking and advisory for crop risk mitigation.

Field Management System
A portal for allocation of territories and farmers to extension teams, tracking actual visits and supporting navigation to enrolled farms. A useful tool to manage FPOs.

In-season Tracking
Using remote sensing to track areas and crops of interest, monitoring crop health, making yield estimates and harvest updates.

Portfolio Risk Analysis
Assess crop risk progressively; using stochastic models at the pre-sowing stage and deterministic models using remote-sensing for standing crops. Estimate share of the portfolio at NPA risk and likely insurance recovery.
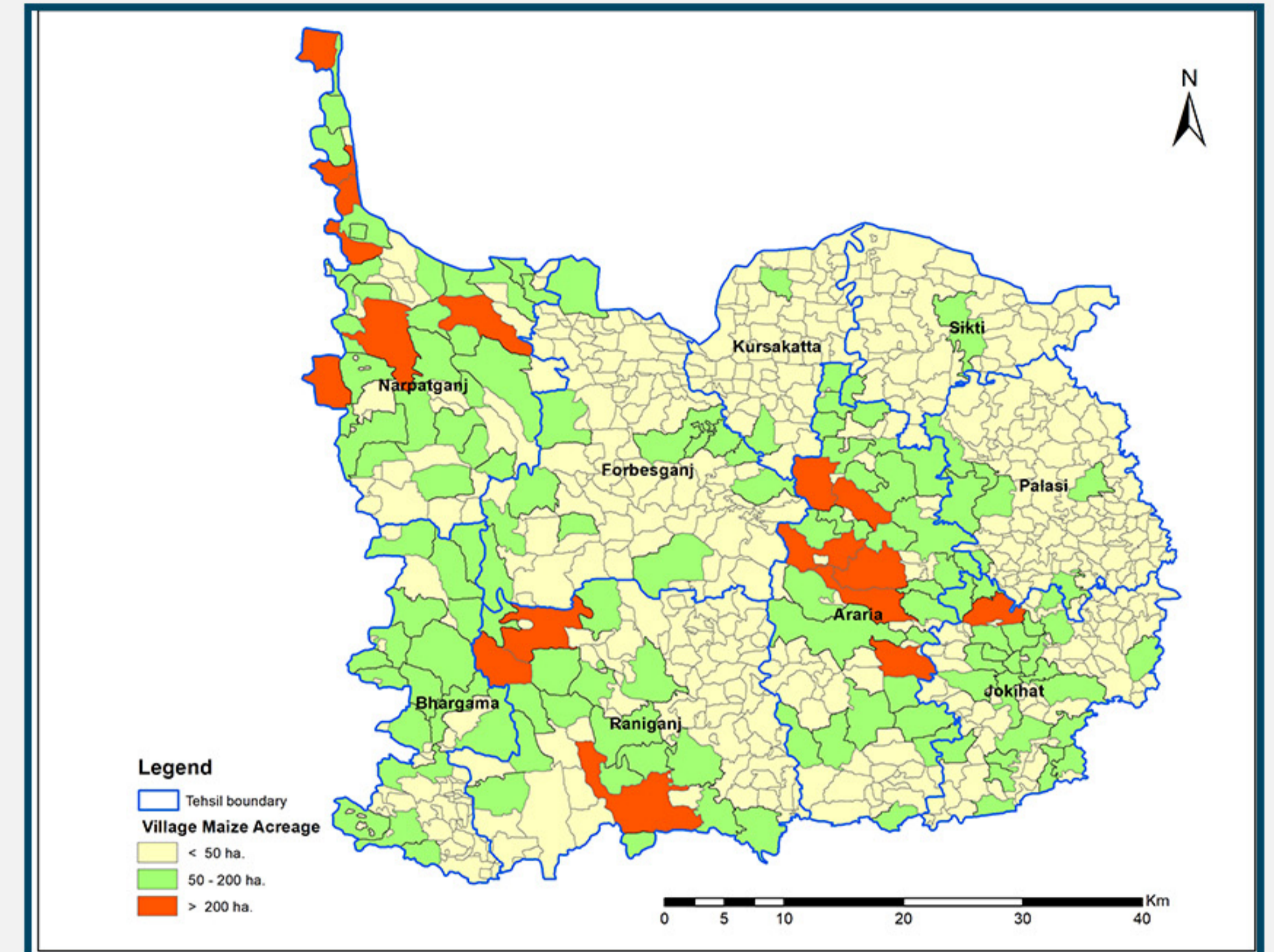
Live Crop Map

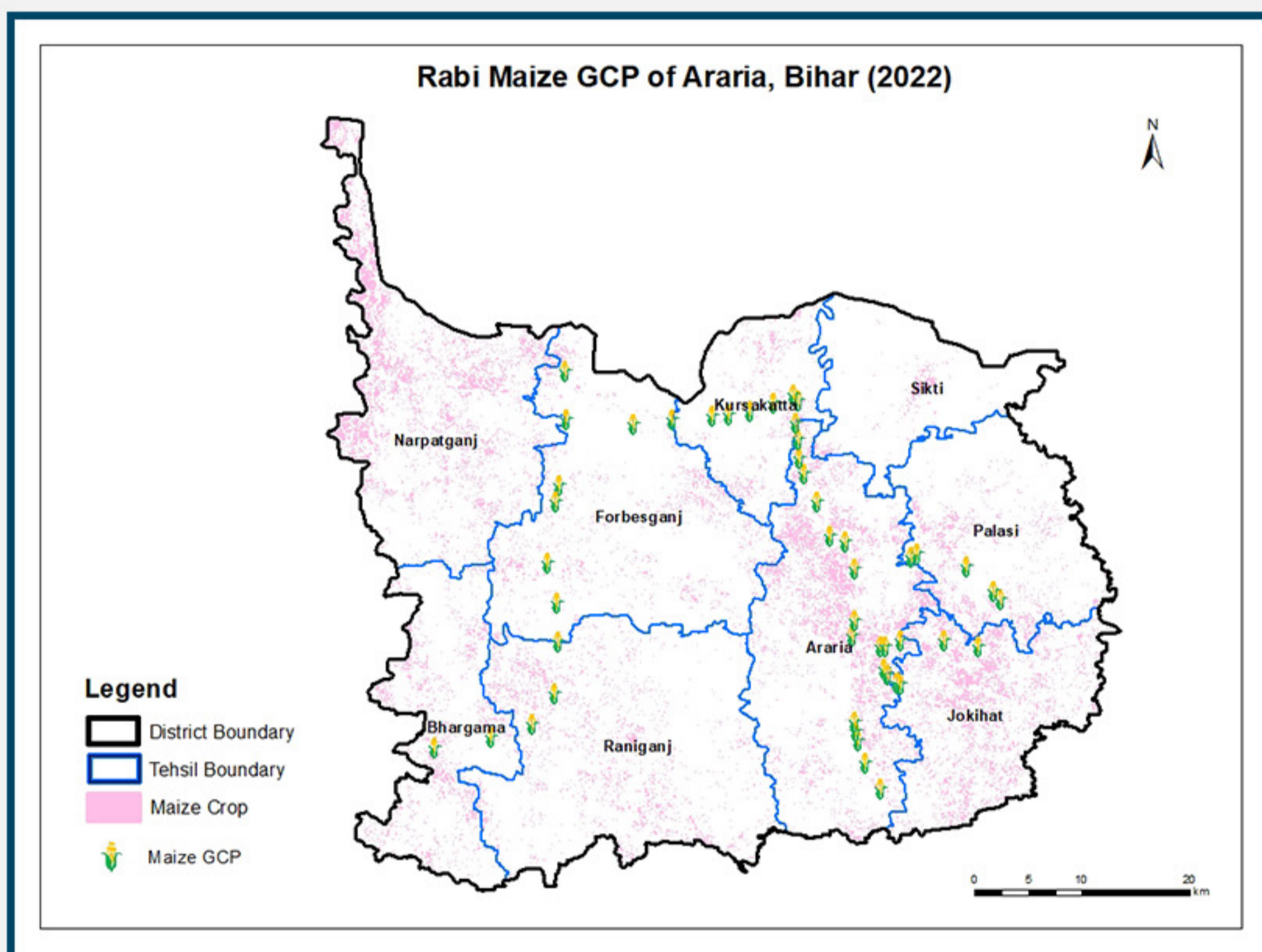**PInCER is a first-of-its-kind, live crop map of India.**

- Updated every Kharif and every Rabi season, major crops are classified at high resolution across the country. Clients will access All-India acreage estimation on demand.

- Covers major crops such as Paddy, Soybean, Maize, Sugarcane and Wheat among others. New crops will be added each season.

- Built using RMSI's decades-old expertise in satellite imagery analysis and application of AI/ML

- High crop classification accuracy borne by years of experience classifying crops in India, Europe and Southeast Asia

Legend
Tehsil boundary
Village Maize Acreage
< 50 ha.
50 - 200 ha.
> 200 ha.

Rabi Maize GCP of Araria, Bihar (2022)

Legend
District Boundary
Tehsil Boundary
Maize Crop
Maize GCP

Village Classification

A unique bestseller application that builds analytics on top of the crop map to help prioritize villages.
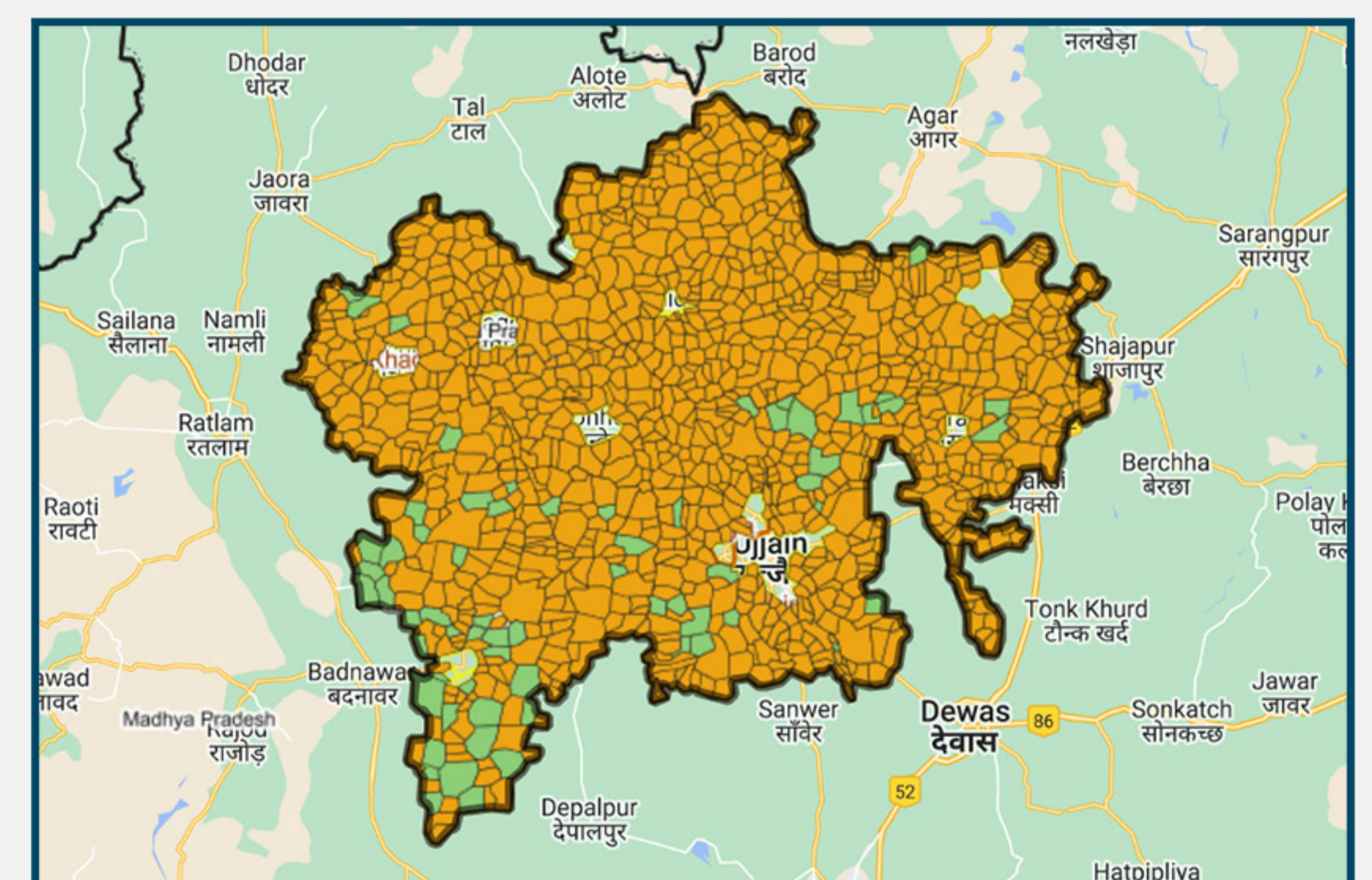
- Prioritization on **criteria of choice** such as crop acreage, crop health, soil moisture and crop yield among others.

- Ability to overlay village, sub-district and district boundaries for the entire country. When these boundaries are overlaid on the crop map, prioritization may be made at the **resolution of choice.**

- Supports optimization of branch location, loan shivir, loan origination costs and reduction of NPA.

- Clients may choose from a variety of criteria such as farm sizes, socio-economic parameters and distance from highway or mandi

Farmer Credit Rating and Loan Application Verification

Helps lenders bring greater efficiency to the loan approval process, supports the reduction of NPA and enables straight-through processing

- Using the farmer's geo-location, remote images and land records to verify the farming history, ownership and acreage.

- Farm geolocation may be picked up through mobile app enrollment or cadastral maps.

- Enables the development of specialized products for different classes of farmers.
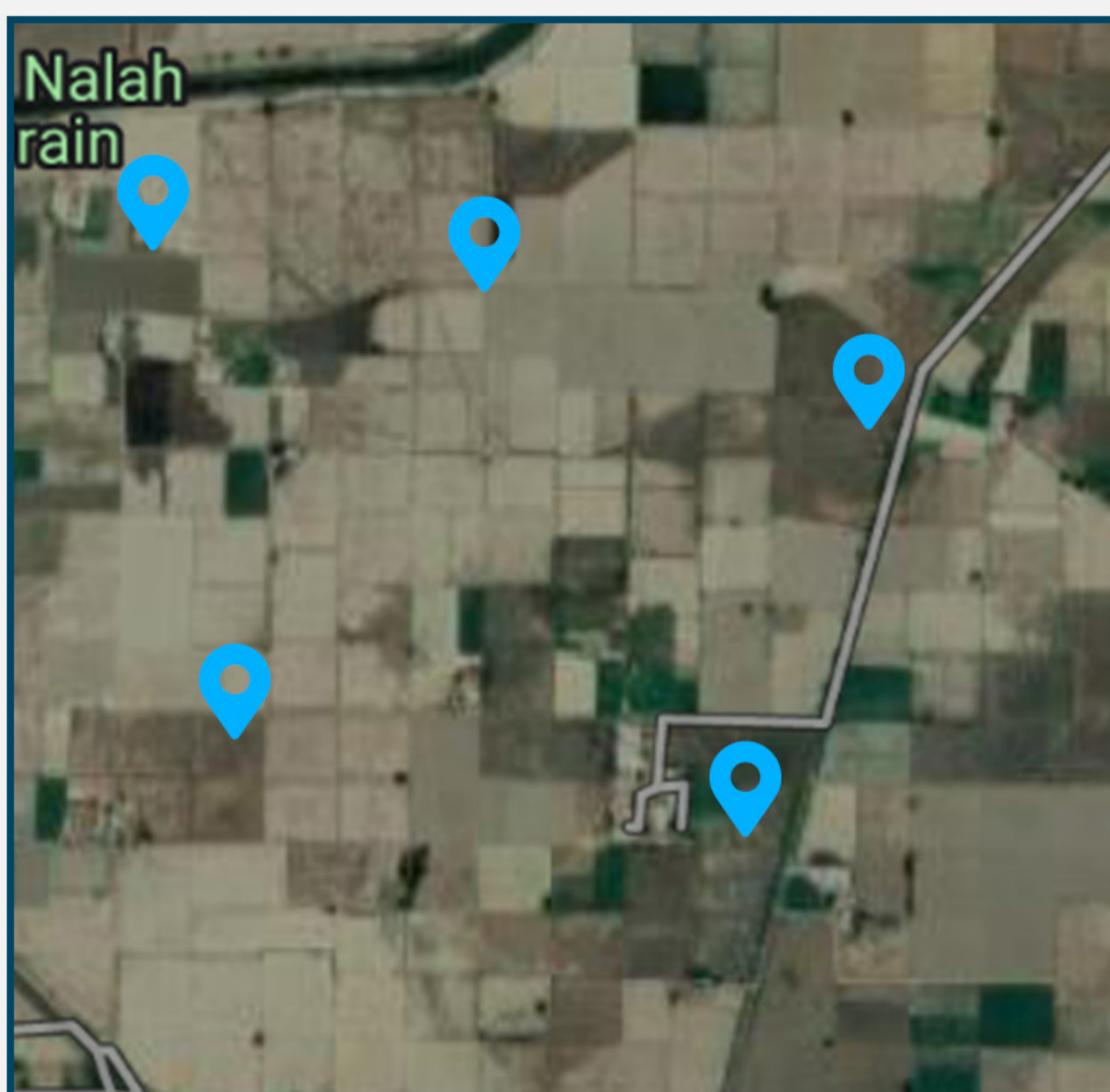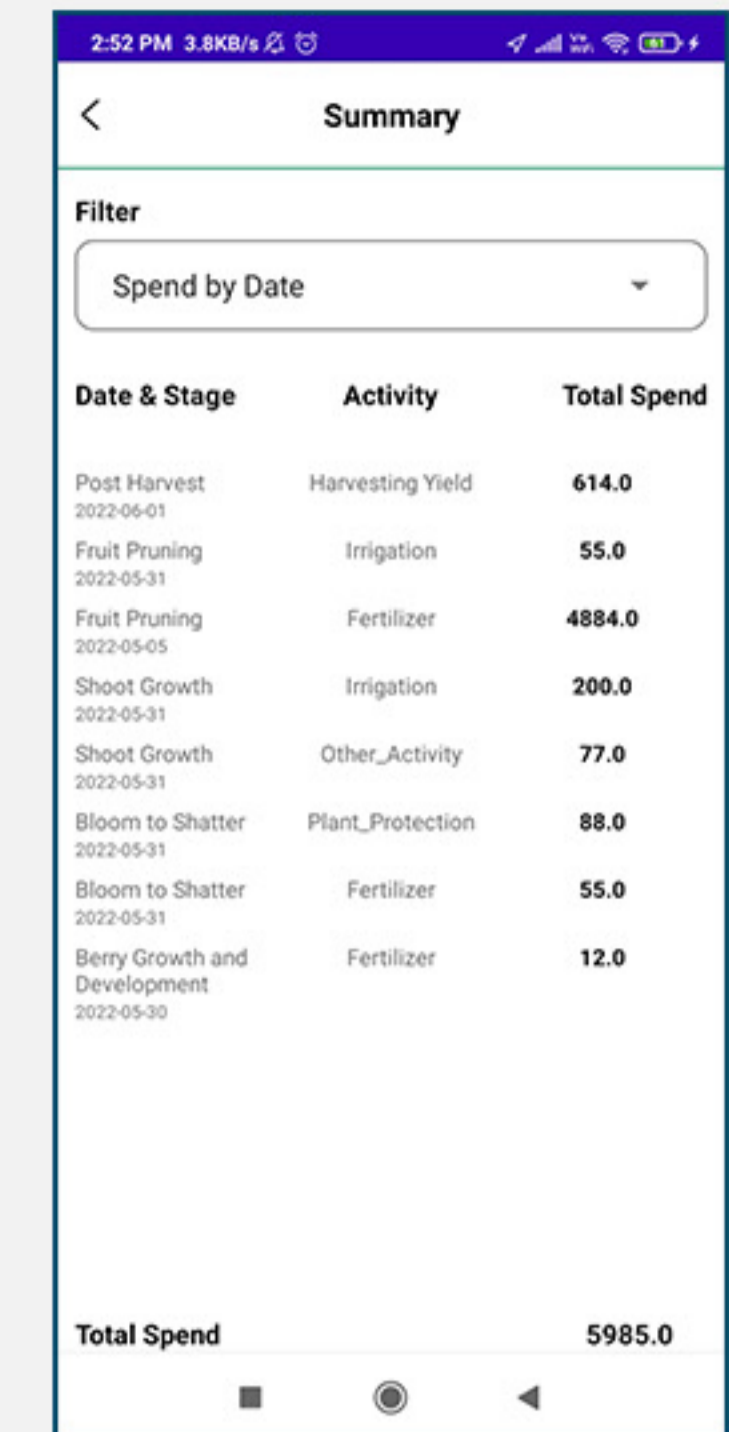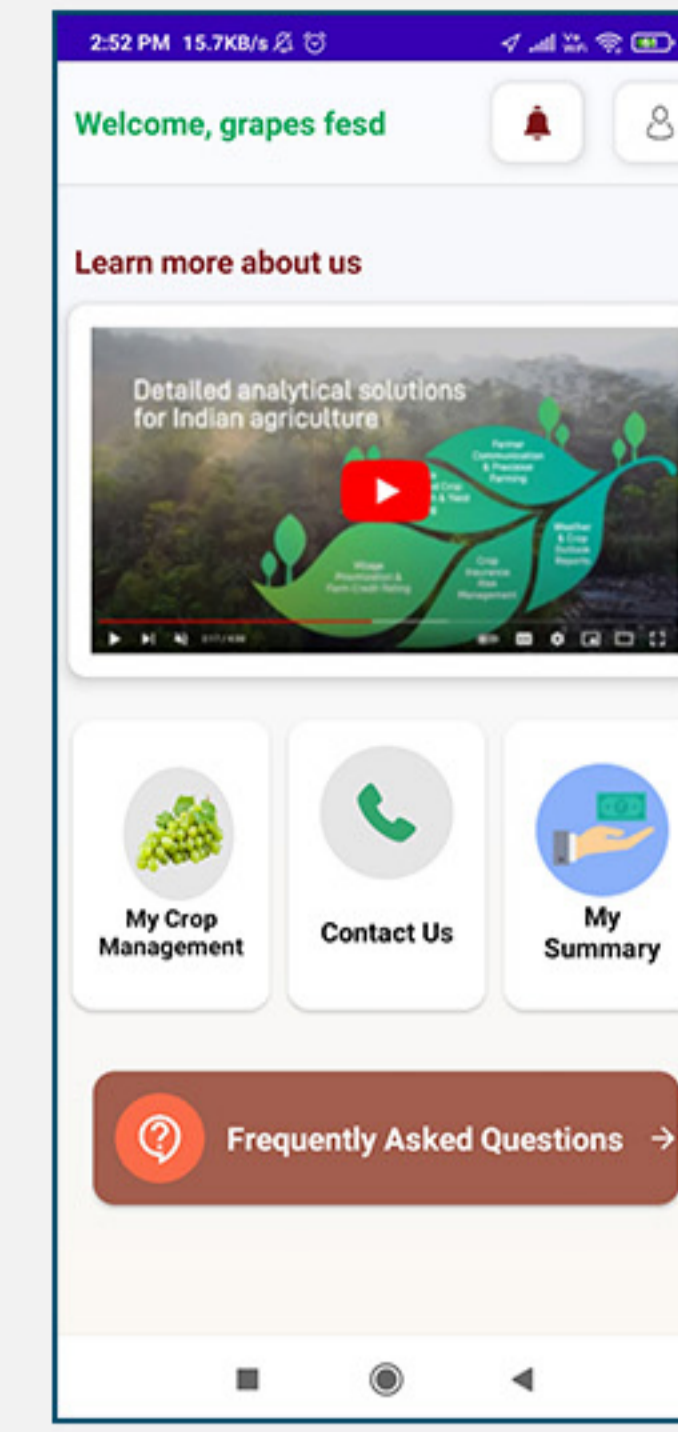

pinCER

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Cropalytics

Farmer Decision Support System

PInCER mobile app is available on PlayStore that supports farmer enrollment, geolocation, tracking and advisory.

- The app captures farm details by growth stage including sowing date, multiple applications of agri-input and stress if any

- Allows sending of customized advisory and alerts.

- The backend portal allows farm-wise visibility and analytics

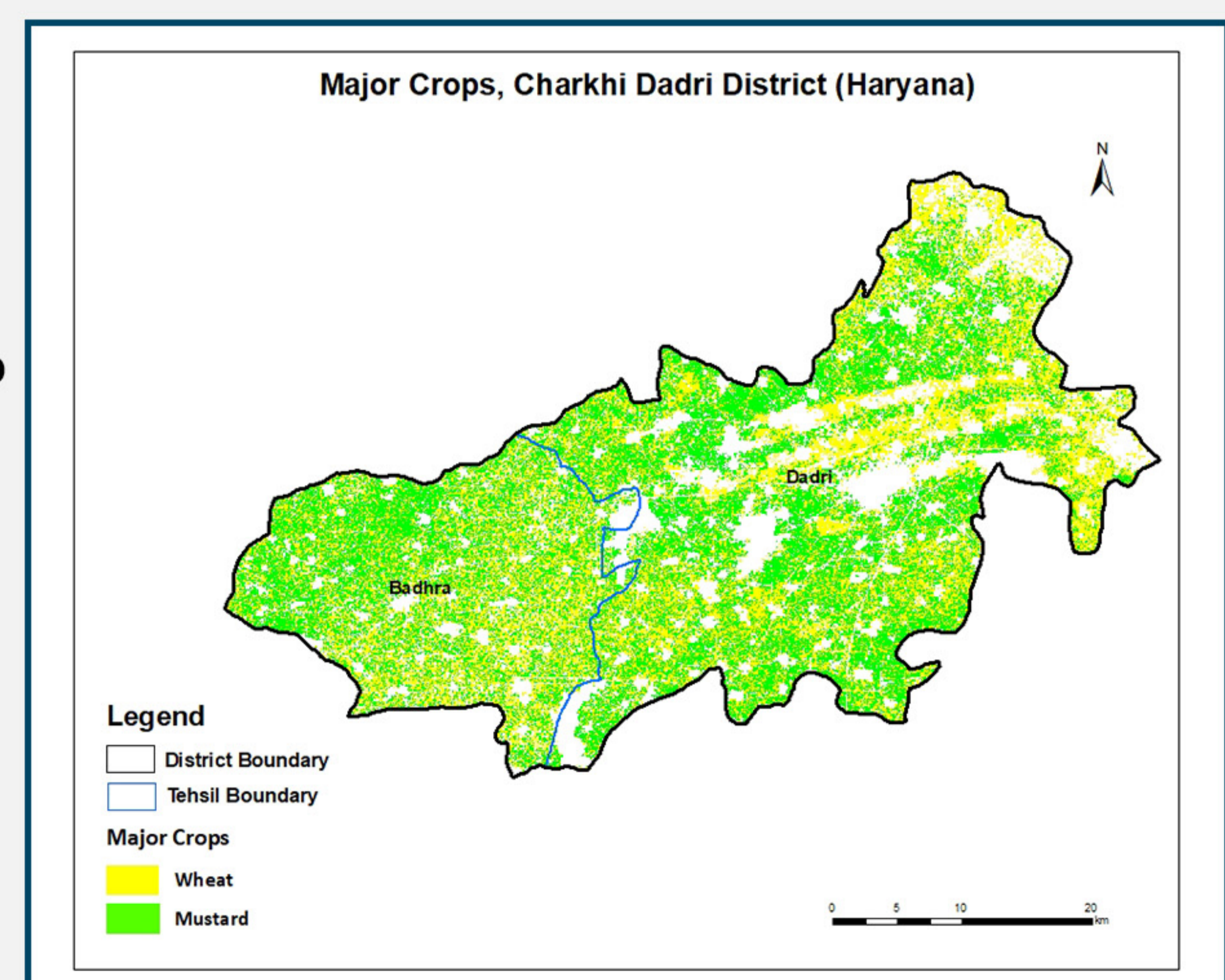| Enroll farmers	Track farm information	Navigate to the farm/ plot	Timely information on stress	Send advisories and alerts
Enroll the farmers & Geo-locate the plot	Capture information from each farm. Customized by growth stage, by crop.	Making it simpler for the field teams to reach the farm repeatedly	Enable farmers to upload information through data entry/ pictures of crop & pests	Send alerts, advisories or farm management inputs through in-app notification or SMS

Field Management System

A portal for assigning territories to field extension team members and tracking their activities

- All farmers enrolled through the PInCER mobile app by the respective field agronomists are visible on the portal along with complete data captured.

- Allows tracking of actual visits and supporting navigation to enrolled farms

- Companies can map sales territories, dealerships and other points of interest

- Hierarchy-based access

In-season Tracking

An efficient, technology-based solution to provide real-time updates of crop progress at the village or block or district level

- Tracking sown acreage, crop health and distress hotspots

- Estimation of yield from standing crop (remote-based guidance)

- Choice of ground-truthing, field survey, and CCE-measured yield estimation

- Choice of report frequency, resolution and data analytics

Portfolio Risk Analysis

This unique tool helps in the formulation of lending strategy: Portfolio allocation across crops and districts.

- At the pre-sowing stage, stochastic models based on likely portfolio combinations present different risk scenarios, supporting data-based strategy

- Post–lending tracking of loanee acreage allows for risk assessment using deterministic models.

- Model estimates the likely share of the portfolio at NPA risk and likely insurance recovery.

700	650K	180M	200M	20
Farming Districts	Village Boundries Coded	Farming Hectares Mapped	Farmers Ownership Data	Major Crops

About RMSI

RMSI is a global IT company providing geospatial and software solutions to clients in sectors ranging from utilities, communications, navigation & location-based services, natural resources, land & infrastructure to government & funding agencies.

RMSI is one of the largest geospatial employers with an employee base of over 5000 resources and is consistently ranked amongst the top companies to work for. RMSI has three state-of-the-art development centers in India and six fully owned international subsidiaries in the US, Canada, Australia, UK, Middle East, and Bahrain.

About RMSI Cropalytics

RMSI Cropalytics aims to organize all relevant data related to agriculture to throw a sharp light on agrarian distress hotspots, to enable help to reach those who need it, when they need it. We at Cropalytics use advanced technologies like AI-ML, Satellite imagery, Modelling, and Geo-coding to offer end-to-end analytic solutions to crop insurance companies, farm lenders, agri-input companies, commodity buyers and others.

For more information write to us at, **info@rmsicropalytics.com,** alternately dial us at **+918600843926, +919007017325**