



Real-time Soil Insight

Provides instant Soil Moisture and Soil EC readings, enabling data driven irrigation decisions.

Simple & Reliable Technology

Dielectric principle — 0% in dry soil and 100% at field capacity.

Water Potential

Know Soil EC, know salt buildup in soil. Make soil more productive.

If you are thinking of irrigation management...think of

Water Potential before you manage irrigation!

For We do not give water only!

Think of Galileo

A Total 360°

Farming Ecosystem



Powdered By
CROPSPY

BHARATBIT
INFOCON PVT LTD

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Galileo is a **simple, portable tool** to get realtime soil moisture levels.

It is based on a very simple technology, based on the first ever soil moisture technique developed.

Simple hardware gives us required insights to get whats there is soil.

Galileo data when coupled with **Cropspy** Weather Intelligence gives us elaborative picture of soil - the most valuable assets we have in farming business.

Galileo and **CropSpy** work together to provide scientific irrigation and fertigation guidance based on real field conditions.

Galileo is a **portable soil sensor**, so it can be used **at multiple locations** within a farm. Because it is not fixed at a single point, it helps capture actual soil variability across the field, reducing error due to differences in soil type, texture, or localized conditions.

Galileo measures Soil Moisture, Soil EC (Electrical Conductivity), and Soil Temperature directly in the root zone, with **Error margin if +/- 5% for Soil Moisture and 0.1 +/- for Soil EC.**

The device is powered using a **power bank** or **mobile OTG connection** and transfers measured data to the **Galileo Smart Farm mobile app via Bluetooth.**



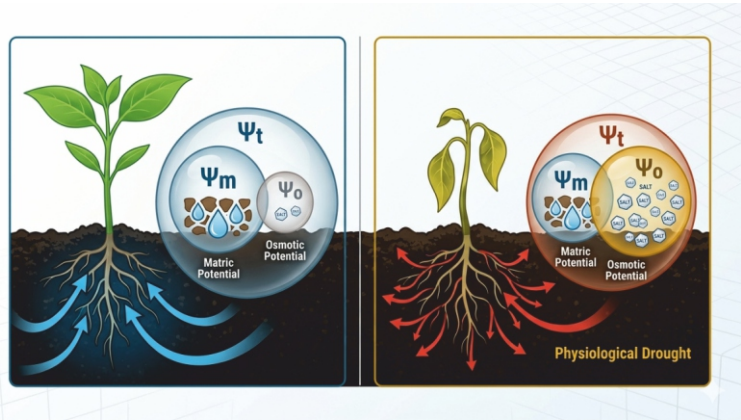
The Science of Total Water Potential

Why Moisture + EC Must Be Monitored Together

Plants don't just "drink" water; they absorb it based on Total Water Potential (Ψ_t). Relying on moisture sensors alone only tells half the story.

Matric Potential (Ψ_m): Driven by soil moisture levels and soil structure.

Osmotic Potential (Ψ_o): Driven by dissolved salts and nutrient concentration (EC).

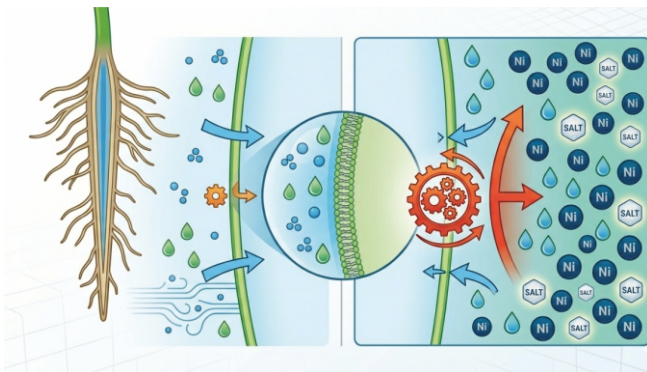


The Reality: High salt levels (High EC) lower the osmotic potential. This creates "**Physiological Drought**" - where the soil looks wet, but the plant cannot physically pull water into its roots.

The Impact of Fertigation

Managing the "Energy Cost" of Growth

Modern fertigation increases Electrical Conductivity (EC) in the root zone. Without precise monitoring, your fertilizer could be working against you:



Root Stress: Higher osmotic pressure forces plants to expend more energy to absorb water, diverting energy away from growth.

Growth Stunting: Elevated EC can slow transpiration and nutrient transport.

Efficiency: Monitoring Moisture + EC together prevents over-fertilization and ensures your nutrients are actually reaching the plant.

Weather-Driven Irrigation Intelligence

Precision Based on Real-Time Atmosphere & Crop Stage

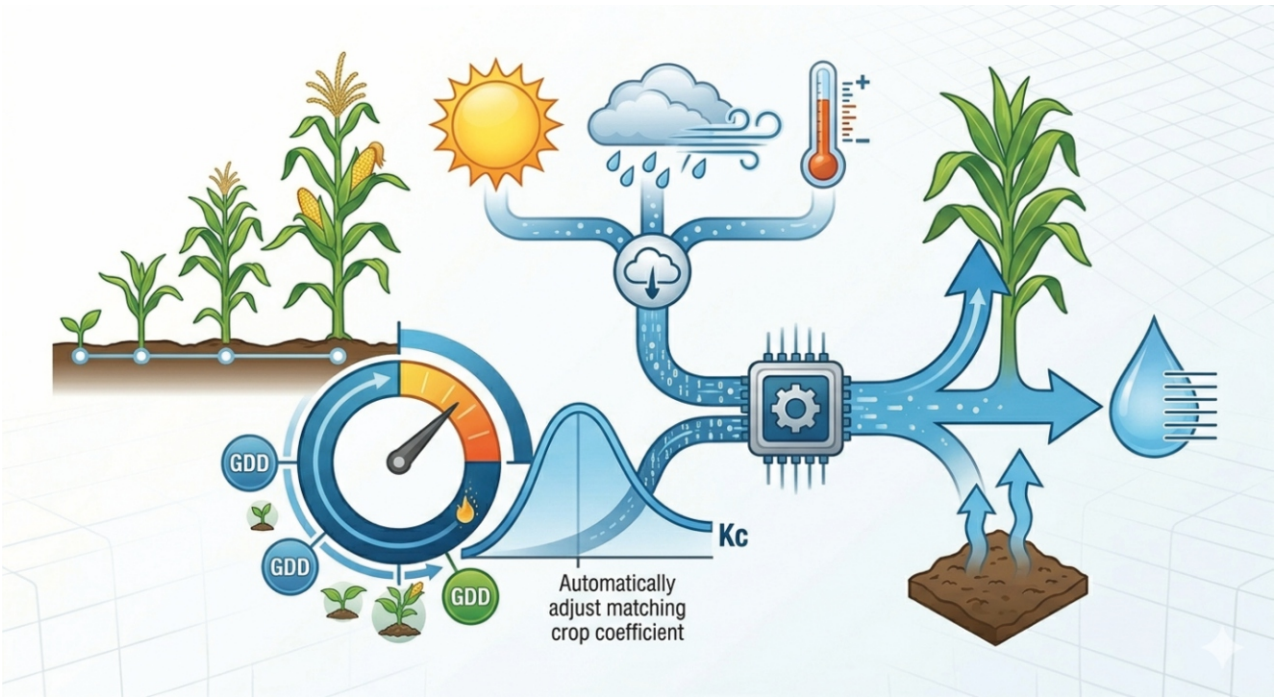
We calculate the Crop Water Requirement (ET_c) using the gold-standard FAO-56 Penman-Monteith method.

Dynamic Calculation: We determine $ET_c = K_c \times E_{to}$.

K_c : Adjusted automatically using Growing Degree Days (GDD) to match the specific growth stage.

E_{to} : Real-time atmospheric demand (Evapotranspiration).





Volumetric Precision: The system converts ETc into exact water requirements per acre, ensuring proper information about water requirements per acre.

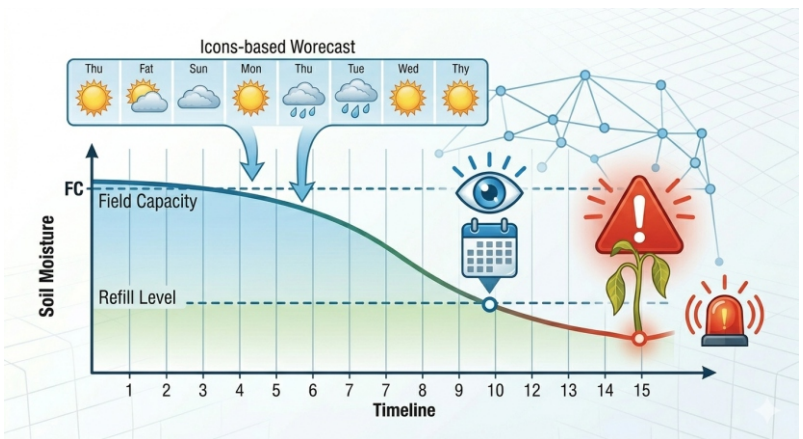
Predictive Analytics & Alerts

Moving from Reactive to Proactive Farming By integrating soil properties (Field Capacity & Wilting Point) with 15-day weather forecasts, the system predicts your next move:

Observation Alert: Early warning for irrigation planning and logistics.

Critical Alert: Immediate risk of crop stress; action required.

The Goal: Maintain the "Sweet Spot" between Field Capacity and the Refill Point to maximize yield.



The Galileo Advantage: A Total 360° Farming Ecosystem

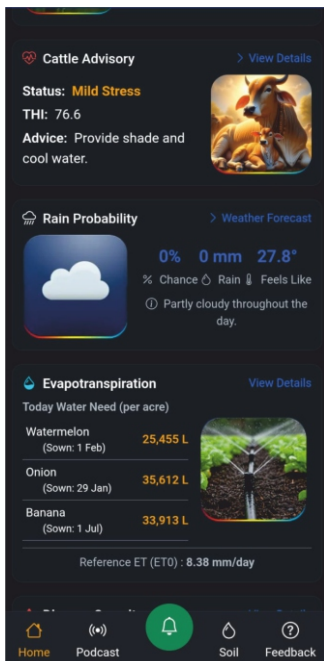
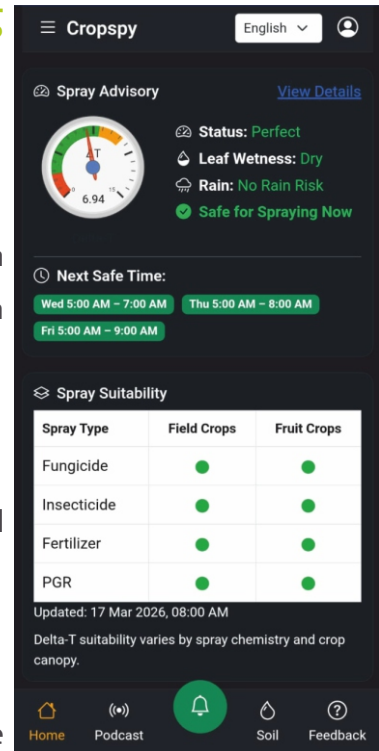
Integrated Intelligence for World-Class Agriculture

The Galileo Smart Farm experience includes a 1-Year Premium Membership to CropSpy - the industry-leading Data Decision Support System (DDSS).

While Galileo monitors your soil, CropSpy masters your environment, requiring no additional hardware.

1. Atmospheric Intelligence & Spray Optimization

Delta T Indicator: Real-time and 15-day hourly forecasts for the perfect spray window. Prevent chemical loss from evaporation or drift.



Leaf Wetness Prediction: Advanced modeling of surface moisture to identify fungal risks.

Disease & Insect Alerts: 15-day risk forecasting and control measures based on FRAC & IRAC guidelines to manage resistance and slash chemical costs.

Thermal Heat Index (THI): Get current THI, to give comfortable ambiance to milking cows. THI helps us to know adverse climate conditions that can adversely affect milk yield.

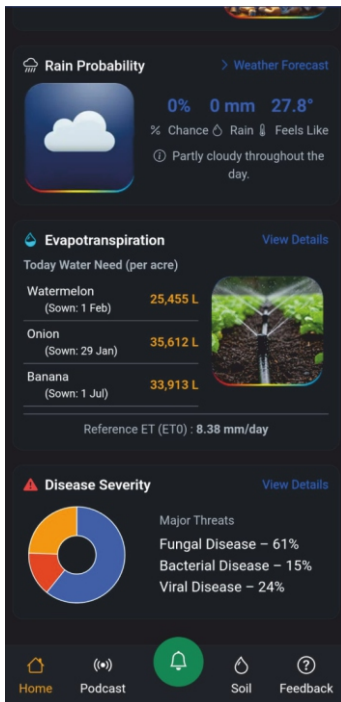
2. Precision Water Management guidance (FAO-56 Standard)

Science-Backed ET Calculations:

Uses the Penman-Monteith method to calculate exact Evapotranspiration.

Volumetric Guidance: Get precise "Water-per-Acre" requirements tailored to your specific crop stage.





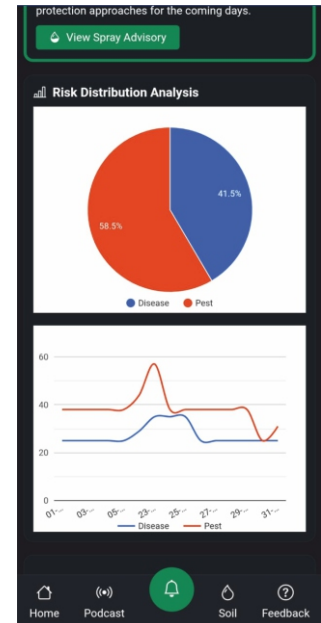
Hardware-Free Advantage: CropSpy uses advanced satellite and weather models, turning your mobile location into a virtual weather station.

3. Scalable Management for the Modern Farmer

Unlimited Plot Support: Manage multiple crops, plots, and sowing dates simultaneously with plot-wise custom recommendations.

Local Modeling:

High-resolution weather data including rain probability, wind speed, and humidity-tailored to your GPS coordinates.



Multi-Language Accessibility:

Operated in English, Hindi, Marathi, Tamil, Telugu, Kannada, Bengali, and Punjabi.

This Makes Galileo "World-Class":

"Hardware meets Algorithm." By combining Galileo's soil sensor depth with CropSpy's atmospheric algorithms, farmers no longer have to guess. From the roots in the soil to the leaves in the air, you have a 360-degree scientific shield.

Go Data Driven in Just 4 easy steps

- Install "Galileo Smart Phone Android App" and Create Cropsy Account
- **Power On Galileo** by connecting to phone with **OTG Or Powerbank**.
- Connect Galileo to phones **blue tooth** and then to Galileo App
- Insert Sensors up to 6 inches depth and **send Data to Cropsy**

Galileo Soil Sensor provides indicative soil moisture and EC values based on dielectric measurement principle. Readings may vary depending on soil type, placement, salinity, and field conditions. Data should be used as decision support, not as a sole basis for critical farm actions.

Developed and Marketed by:
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