AIoT
SMART
FARMING

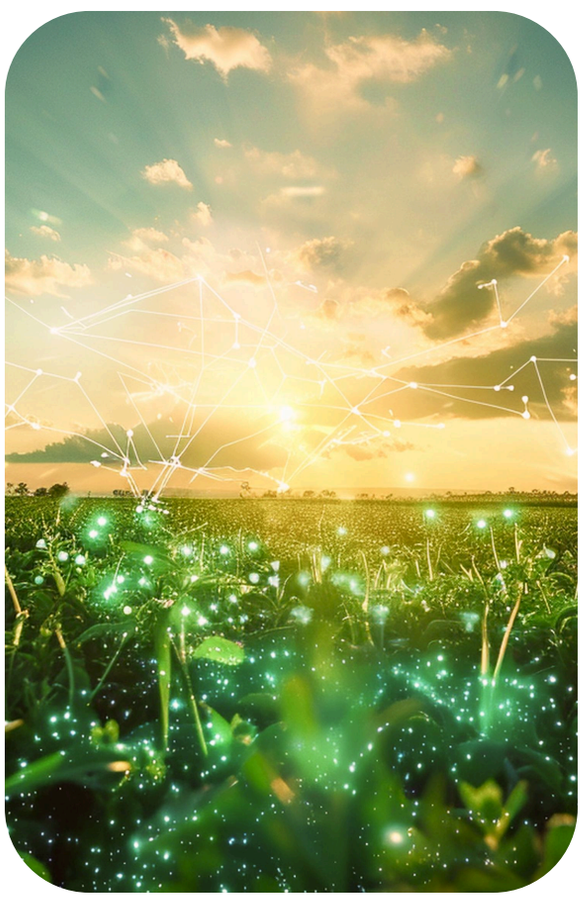
AgriBeacon

AIoT OPERATING SYSTEM FOR NEXT-GEN AGRICULTURE

Smart sensors | Accurate data | Sustainable growth

BUILDING A TRUSTED DATA LAYER FOR SUSTAINABLE AGRICULTURE

At AgriBeacon, we believe modern agriculture needs to combine growers' experience with the power of technology. Every farming decision should be backed by accurate data, captured in the field and verifiable across the entire operation.



Continuous field data

Every signal from soil, water, crops, IoT devices, drones, GPS, and daily activities is recorded in real time, creating a reliable data foundation for modern farm management.

AI that drives action

AI doesn't just analyze data - it turns field signals into alerts, suggestions, and concrete tasks so operators can make decisions faster.

A transparent value chain

Operational data is standardized into verifiable records, helping farms strengthen management capacity and helping buyers and exporters build trust with the market.

With AgriBeacon, data is not just for monitoring the farm - it becomes the foundation for improving yields, controlling costs, managing risks, and proving product value across the whole supply chain.

AGRICULTURE HAS PLENTY OF TOOLS, BUT DATA REMAINS FRAGMENTED

Farms, cooperatives, and agribusinesses are under growing pressure on yields, costs, labor, traceability, and compliance standards.

FARM

Farms run on experience

Many farms still rely on manual observation, notebooks, Excel, and after-the-fact reports.

Problems

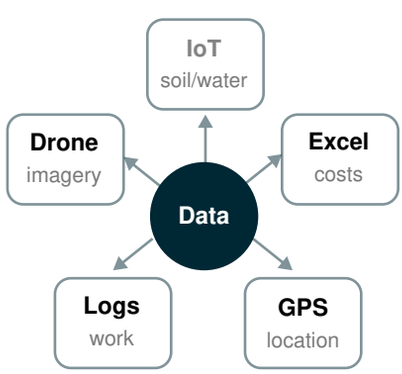
- Hard to detect pests, water shortage, and declining crop health early
- Wasted irrigation water, fertilizer, pesticides, and labor
- Hard to track farming history for each plot
- Slow reports, lacking field data to cross-check

Example
Crops start lacking water or developing pests, but the team only finds out days later through manual checks.

DATA

Data lives in many different places

Sensors, drones, e-logs, Excel, and farm software often run in isolation, never forming one unified flow.



Example
A sensor detects low soil moisture, but the data never automatically becomes an alert or an irrigation task.

BUSINESS

Businesses lack field-level proof

Buyers, exporters, and supply chains need clear data on origin, growing areas, farming practices, and compliance.

Risks

- Product origin is hard to verify
- Audit records depend on manual notes
- No visibility into suppliers' actual operations
- Compliance risk can shift to the buyer

Example
A shipment is declared from a certified growing area, but lacks GPS, farming logs, and field data to prove it under inspection.

THE CORE BOTTLENECK

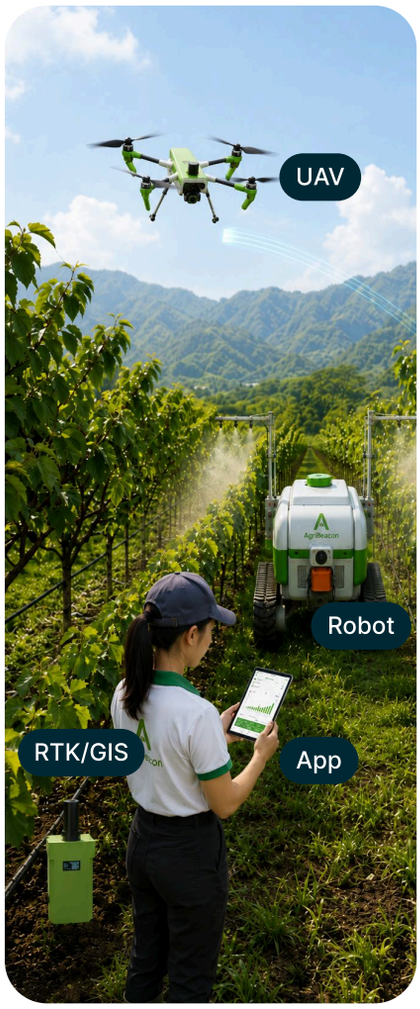
What's missing is not another standalone tool, but a unified operating layer connecting data at the source, field activities, people, devices, AI, and verified records.

When data is captured at the right time, place, and activity, farms decide faster, businesses verify origin more clearly, and the entire value chain becomes more transparent.

THE AGRIBEACON HIGH-TECH ECOSYSTEM

AgriBeacon connects field data collection, farm operations, AI intelligence, and traceability into a single operating flow

1 Field



2 AI Brain & Cloud

- Collect
- Normalize & Connect
- Validate & Quality
- Security & Compliance

SUTAGROW OS
Intelligence that turns data into decisions and actions

3 Market Connection

Farm operations

- Protect yields
- Optimize resources
- Labor productivity
- Sustainable practices
- Real-time visibility

Trusted proof for buyers

- Origin & farm identity
- Input & activity records
- Compliance & standards
- End-to-end traceability
- Audit-ready evidence

Value created

Higher yields
Better year after year

Optimized inputs
Lower costs, less waste

Sustainable farming
Protect soil for the next generation

Stronger relationships
Built on trust & transparency

RTK ROVER/BASE: MONRTK

Crop & farm mapping solution powered by RTK technology

MONRTK applies high-accuracy RTK positioning to create farm maps, plot boundaries, tree positions, and travel routes for agricultural machinery.

High-accuracy positioning
Pinpoint locations with centimeter-level accuracy.

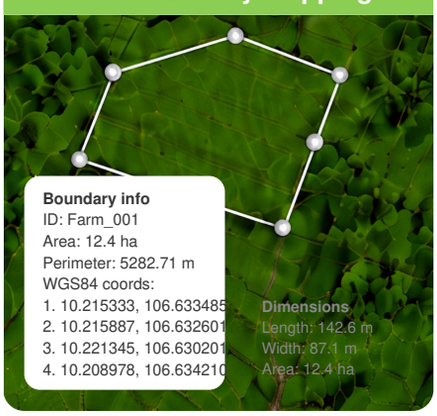
Detailed maps
Map boundaries, crops, roads, and farm infrastructure.

Time savings
Survey faster, with less manual measurement.

Efficient management
Map data supports monitoring, operations, and more accurate decisions.

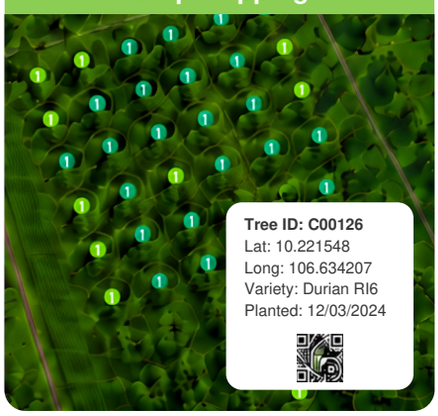
Practical applications

Farm boundary mapping



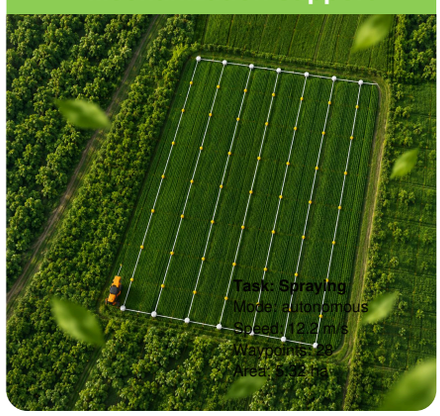
Accurately determine boundary area, perimeter, and coordinates for planning and management.

Crop mapping



Geo-tag each tree with an ID/QR code storing variety, planting date, condition, and care history.

Mechanization support



Create routes so robots, sprayers, and autonomous machines operate more precisely.

Deployment process

Install the RTK Base
Set up the base station and a stable power supply.

Survey with the Rover
Move through the farm collecting RTK coordinates.

Transmit data
Push survey data to the system via 4G/MQTT.

Process & build maps
Generate 2D/3D maps, boundaries, crops, roads, and infrastructure.

Manage & utilize
Monitor and operate maps on app/web.

UAV: MONSKY

Drone-based surveying, monitoring, and traceability for agriculture

MONSKY UAV is an AI-powered drone that captures multispectral imagery, analyzes crop health, and supports real-time decision-making.

Key value

- **Automated drone surveys:** wide coverage, flight planning, and crop-zone data collection.
- **Per-tree monitoring:** track growth, canopy size, and crop health over time.
- **AI pest & disease detection:** spot pests, crop stress, and nutrient deficiency early. dưỡng.
- **Traceability & compliance:** digitize farm records to support certification and origin tracing.

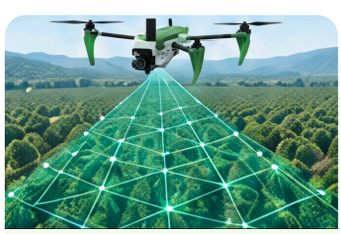
Data capabilities

- Crop maps
- Multispectral maps
- Growth timeline
- Anomaly alerts

Practical applications

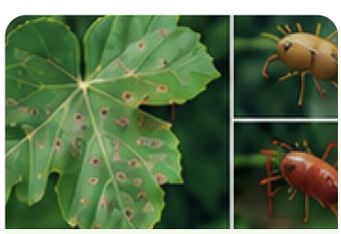
Visualize crop health in real time to support decisions

Practical applications

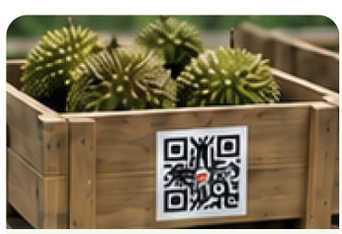


Crop-zone monitoring
Wide coverage, full visibility, and time savings

Crop health maps
Assess crop health via NDVI, NDRE, SAVI, and multispectral indices



Pest & stress detection
AI detects pests, nutrient deficiency, and crop stress early



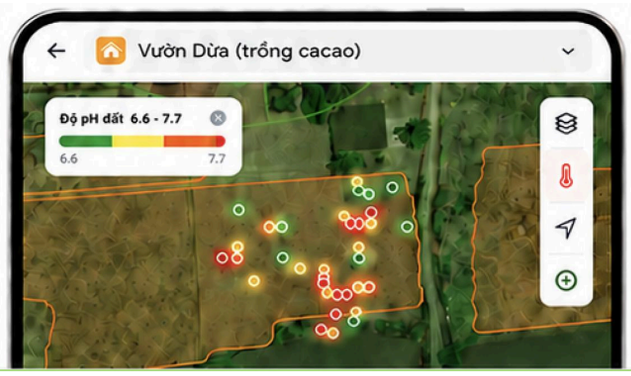
Origin traceability
Digitized farm records support certification and traceability

MONSKY UAV updates crop-zone data in real time, detects crop stress and anomalies early, and supports AI-driven analysis for more accurate decisions. Digitized data also helps farms meet international standards and stay ready for traceability and export.

VY-SO SOIL NUTRIENT SENSOR

7-in-1 AIoT solution

Real-time data | Visual dashboard | Precision agriculture



Soil quality heat map

Why monitor?

Nutrient imbalance
Reduces yields and raises pest & disease risk.

Guesswork fertilizing
Wastes money and degrades the soil.

Slow lab testing
Hard to track soil changes in real time.

Highlights

- Measures 7 metrics: N, P, K, pH, EC, moisture, temperature
- BLE 5.0 streams real-time readings to your phone
- Built-in OLED display + QR pairing - read values right in the field
- Live dashboard & soil-quality heat map of the whole orchard
- Ideal for perennial crops: coffee, pepper, durian, cacao, fruit trees

Crop applications

- Track soil health season by season
- Detect acidification trends early via pH + EC
- Optimize fertilization for each crop zone
- Reduce yield gaps between plots

Key benefits

20%
Higher crop yields

24/7
Continuous monitoring

30s
Fast alert response

2X
Payback within the first season

VY-WA WATER QUALITY SENSOR

5-in-1 AIoT solution for irrigation water monitoring

Real-time data

Dashboard & alerts

4G/LTE

IP68 rated

Why?

- Poor irrigation water quality can kill plants and stunt growth by **40%**
- Polluted irrigation sources can cut crop yields by up to **25%**
- Manual checks are slow, lack continuous data, and make early warning hard

Practical application

Highlights

- Measures 5 metrics at once: pH, DO, ORP, temperature, TDS
- 4G/LTE connectivity, continuous data streaming
- Web/app dashboard with real-time alerts
- IP68 waterproof, durable outdoors
- Solar / DC 12V power

5 key parameters

pH	TEMP	DO	ORP	TDS
0 – 14 pH	-10 – 60°C	0 – 20 mg/L	±2,000 mV	0 – 10,000 ppm
Range: ±0.1 pH	Range: ±0.3°C	Range: ±0.3 mg/L	Range: ±5 mV	Range: ±2%

From readings to farming decisions

pH
Control acidity/alkalinity so plants absorb nutrients better.

TEMP
Track water temperature to limit root shock and biological swings.

DO
Measure dissolved oxygen to assess water quality and aeration.

ORP
Assess water cleanliness and organic/ microbial pollution risk.

TDS
Control salts, dissolved minerals, and risks affecting plant roots.

Typical applications

- **Healthy aquaculture**
- **Smart irrigation**
- **Risk prevention**
- **Data-driven decisions**

Monitor water quality directly at ponds and irrigation sources

ROBOTS: DUBIRO

Autonomous / semi-autonomous spraying robot solution for modern farms

> Operate remotely and automate the spraying process - safe, consistent, and fully traceable after every run.

- Remote operation
- RTK GNSS
- 4G / LTE
- 360° panoramic camera

Highlights

- Less direct contact with chemicals
- Even, consistent spraying along routes
- Flexible operation: remote control or semi-autonomous
- Real-time monitoring via 360° camera video stream
- Logs routes, flow rates, and spraying time
- Multiple nozzle types for each crop

Control & monitor live from anywhere

4G / LTE | Live video | Real-time monitoring

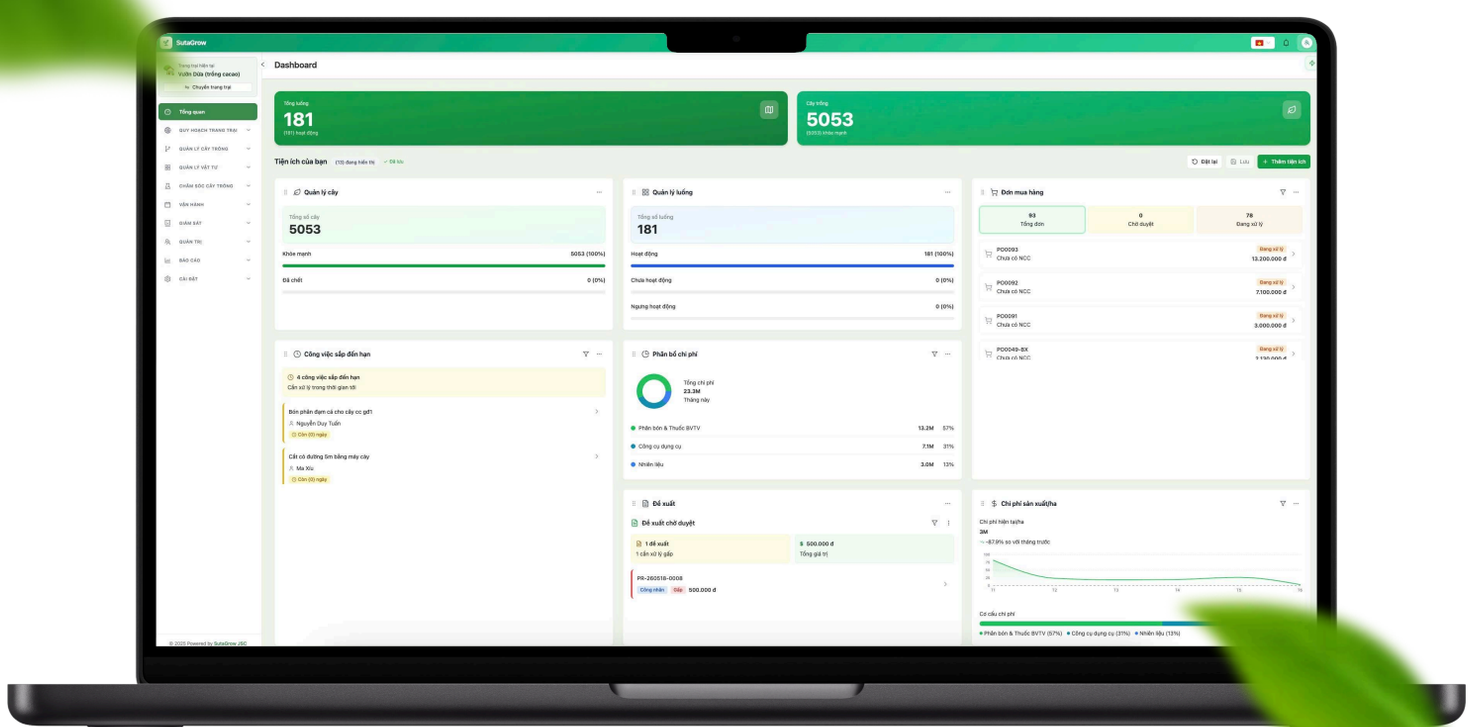
Benefits

- Safer
- More consistent
- Easier to control
- Traceable data

SUTAGROW OS + AI AGENTS - THE COMPLETE FARM MANAGEMENT PLATFORM

SutaGrow is AgriBeacon's Farm OS, designed to manage every farm operation on a single platform.

19+ modules | Web · iOS · Android | Open API



SutaGrow helps farms manage

Land & crops
Manage growing areas, plots, crops, seasons, and harvests.

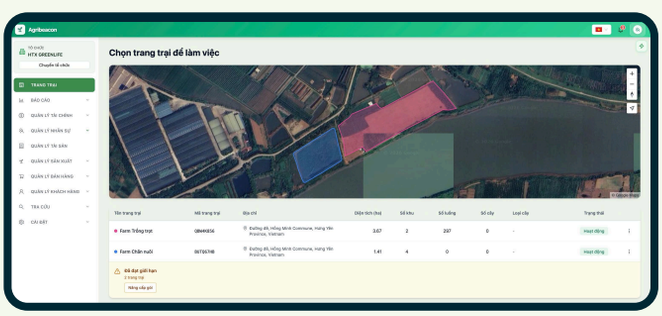
Daily operations
Track farming logs, labor, attendance, tasks, and work progress.

Inputs & IoT
Manage supplies, inventory, costs, soil-water-weather sensors, drones, and field imagery.

Reports & traceability
Build dashboards, operations reports, and traceability records for certification and procurement.

MANAGE MULTIPLE FARMS ON ONE OPERATIONS MAP

Monitor multiple farms, growing areas, and plots on one unified operations platform, accurate to real field locations.



Multi-farm management

Monitor multiple farms, growing areas, and seasons on one centralized dashboard.

AgriBeacon standardizes operational data by location, helping businesses manage their farm network clearly, consistently, and at scale.

Plot zoning | **Crop cycles** | **Cross-site KPIs**

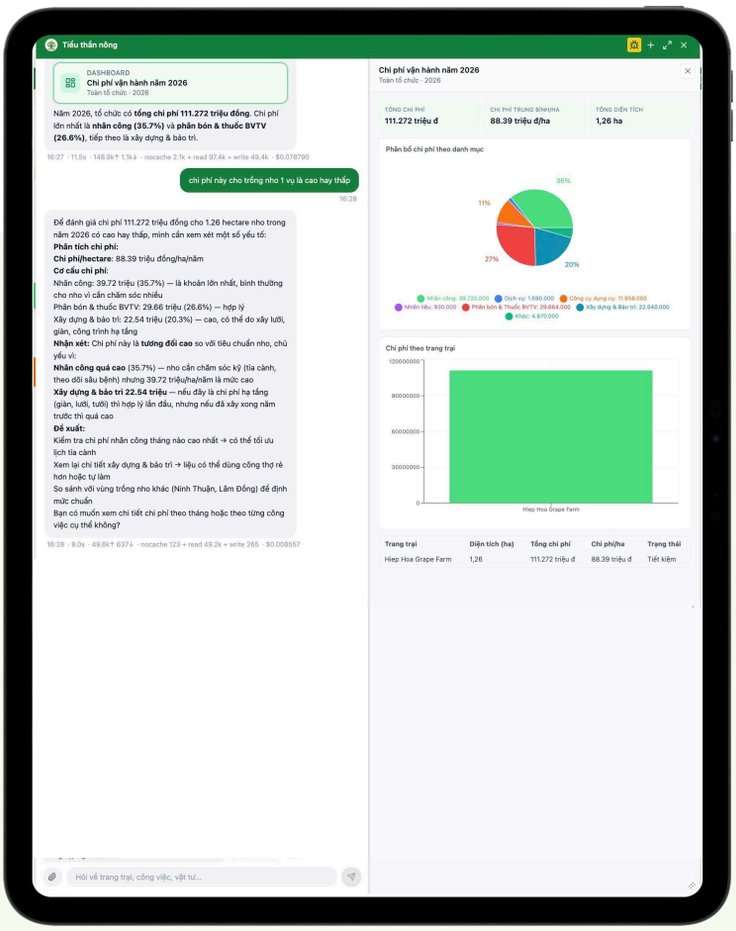
GIS / RTK maps

Digitize farm and plot boundaries with precise location data.

AgriBeacon links maps with sensors, drones, and field activities, managing growing areas zone by zone and supporting traceability.

AI CHATBOT: LITTLE TILLER

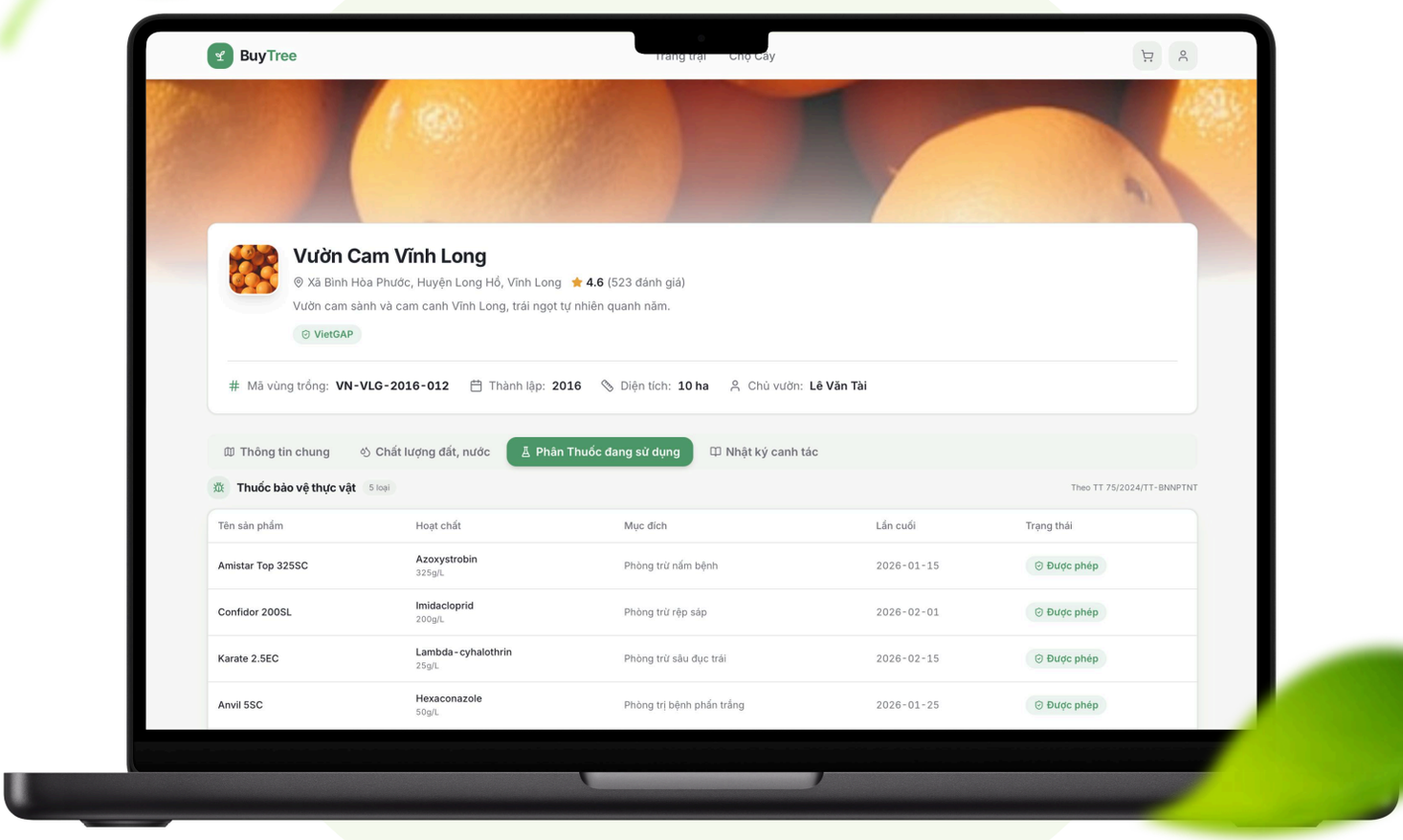
A specialized AI assistant for agriculture, helping farm owners and operations teams make faster decisions every day.



- Coordinate farm operations
- Pest & disease lookup
- Timely risk alerts
- Crop care techniques & procedures
- Crop price lookup
- In-depth reports & analysis

SUTAMARKET: THE FARM LOOKUP & TREE BUYING PLATFORM

SutaMarket connects farm records, farming data, and market demand, helping farms showcase real value through verified data.



Own each tree
Buyers can look up tree info, growing areas, and care history through clear, transparent digital records.

Verified quality
Farming data, inputs, field imagery, and operations history credibly prove farm quality.

Transparent payments
SutaMarket connects farms, buyers, and procurement partners on a clear data platform, reducing reliance on manual commitments.

FROM FIELD DATA TO MEASURABLE ACTION

AgriBeacon doesn't just collect data. The system turns signals from sensors, drones, GPS, QR codes, field imagery, and labor logs into alerts, tasks, reports, and operational evidence.

Data collection process

Case Study

The farm owner struggled to control labor, supplies, crop health, and work progress because data relied heavily on manual notes, scattered photos, and after-the-fact updates.

- QR seedling tracking
- GPS labor check-in
- Geo-tagged field photos
- Drone farm monitoring
- AI crop health assessment
- Remote operations dashboard

The farm owner can monitor operations more reliably, depend less on manual reports, catch field issues earlier, and build a verifiable operations history.

FROM SURVEY TO REAL-WORLD OPERATIONS

AgriBeacon doesn't just provide standalone software or devices. We deploy an operating system that fits the actual situation of each farm, cooperative, or business.

Step 1

Verified quality

Farming data, inputs, field imagery, and operations history credibly prove farm quality.

Step 2

Define objectives

Clarify deployment goals: labor management, crop tracking, supplies control, remote monitoring, traceability, or certification reporting.

Step 3

Map the data

Set up GIS maps, plot zoning, sensor locations, drone monitoring zones, and the operational data structure.

Step 4

Install & configure

Deploy sensors, AIoT devices, QR codes, user accounts, Farm OS modules, and dashboards based on actual needs.

Step 5

Operations training

Train farm owners, technical managers, and workers to use the system, log work, and track data.

Step 6

Pilot & fine-tune

Validate real data, optimize workflows, and adjust dashboards, reports, and day-to-day usage.

Step 7

Operate & scale

Once stable, the system can expand to more plots, farms, crop types, or supply-chain units.

AgriBeacon takes customers from field survey to data-driven operations in a systematic way, reducing tool fragmentation and creating a scalable management foundation.

AIoT DEVICES

AgriBeacon provides an AIoT device suite that captures field data from soil, water, maps, drones, and robots - the foundation for farm monitoring, AI analysis, and precision operations.

5-parameter water quality sensor
(pH, EC, TDS, DO, ORP).

RTK Rover
Crop & farm mapping with RTK technology

7-parameter soil nutrient sensor
(pH, EC, N, P, K, moisture, temperature).

RTK base
Reference point for precise positioning

Agricultural monitoring drone (UAV)
Track and observe every single tree

Autonomous multi-purpose robot
Self-driving spraying and mowing

Stream source data seamlessly into one unified management system, where AI turns raw numbers into breakthrough growth solutions.

READY TO TAKE YOUR FARM TO THE NEXT LEVEL?

From in-field sensors to compliance-ready proof for buyers - AgriBeacon helps farms operate smarter, more sustainably, and stay better connected to the market every day.

AgriBeacon

SMART SENSORS, ACCURATE DATA, SUSTAINABLE GROWTH

Download the SutaGrow mobile app

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