Outbreak Labs

Pest & Disease Risk Intelligence for Global Agriculture

Protecting billions in crop value before outbreaks happen

Trusted By: Gates Foundation

The Problem

$220B/year in unmodelled yield risk

Agriculture has a blind spot: there is no reliable way to *price, forecast, or mitigate pest and disease outbreak risk before damage occurs*.

Ag-chem companies, insurers, commodity buyers, and governments lack real-time intelligence that can:

- **Quantify outbreak risk**
- **Forecast spread**
- **Model intervention impact**

Current tools are reactive:

- **Fragmented field surveys**
- **Static risk maps**
- **Legacy models built pre-satellite and pre-ML**

Outbreaks move fast, driving:

- **Yield shocks**
- **Insurance losses**
- **Price volatility**
- **System-wide operational uncertainty**

20-40%

Of global yield is lost to pest and disease

$220B

Of yield is lossed to pest and disease

Our Solution

A Risk Intelligence Platform

Outbreak Labs delivers insurance-grade risk intelligence by combining:

- **FieldSense: Continuous data generation**
- **ForeSight: Predictive epidemic modelling**
- **PathFinder: Scenario-based optimisation**

Decision-makers gain the ability to anticipate outbreaks, allocate resources efficiently, and protect yield *before losses occur*.

5x
Faster

30x
Cheaper

4x
Standardised Transmission Mechanisms

FieldSense: The Data Flywheel

1. Collect a *small* amounts of high-precision ground-labelled data

2. Train high-accuracy drone mod

3. Automatically label large volumes of unlabelled drone imagery

4. Generate massive proprietary training datasets

5. Train and validate -based detection models

Solving the Ground-Truth Bottleneck

High-quality ground truth is the limiting factor in agricultural risk modelling.

Once trained, satellite models:

- Reconstruct historical disease dynamics
- Scale at marginal cost

Every flight makes our satellite models smarter.

Human input is front-loaded, minimised and then automated, no army of manual labellers.

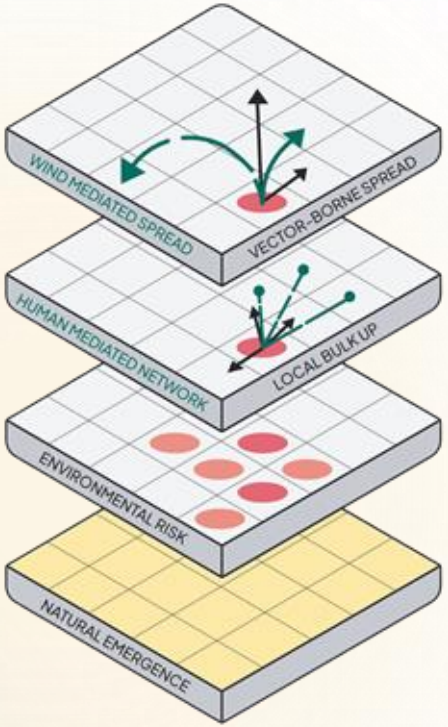
ForeSight: One Modelling Framework. Any Crop. Any Outbreak.

Our stochastic spatial modelling framework simulates the spread of any pest or disease across real landscapes.

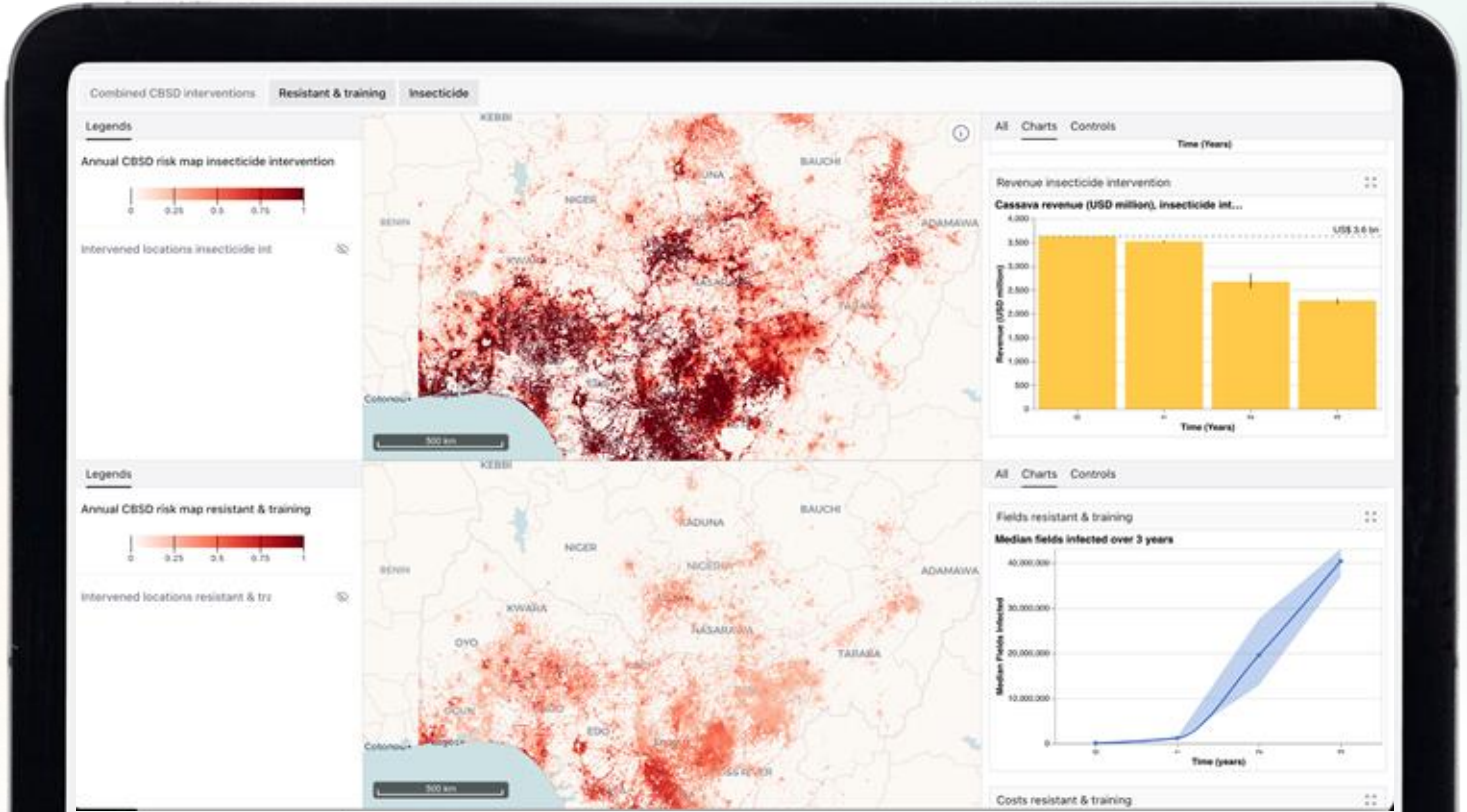
Globally standardised transmission routes:

- **Wind-mediated spread**
- **Vector-borne transmission (e.g. aphids)**
- **Human-driven networks**
- **Local bulk up**

Environmental risk layers are natively integrated, enabling true forward-looking risk modelling.



PathFinder: Scenario Planning, Data-driven Insights and Strategic Decisions



From Prediction to Decision

Users can quantify:

- Likelihood of spread
- Timing of impact
- Cost effectiveness of mitigation actions

Initial Target Market & Expansion Path

Our initial customers are organisations that already spend heavily to understand, price, and manage agricultural risk.

Initial Beachhead Customers

Insurance

- Anticipatory Actions
- Pest and disease risk modelling
- Parametric pest and disease indices
- Embedded products in agrochemical inputs

Agchem

- Sales targeting
- Supply chain
- Farmer recommendations

Government & NGO

- Risk forecasting
- Scenario planning and Intervention Optimisation

Why These Buyers

- Large, recurring budgets for risk and surveillance
- Feel pain *before* yield loss occurs
- Require probabilistic, uncertainty-aware models
- Value multi-year, enterprise-grade platforms

Expansion Path

1. Single crop, single region (paid pilot)
2. Multi-crop, multi-region deployment
3. Portfolio-level risk intelligence
4. Embedded into underwriting, procurement, or trading workflows

Competitor Analysis

The majority of agtech companies focus on field level precision agriculture and farm advisory. We are focused on the strategic country/continent level pest and disease insights.

	Outbreak Labs	Earth Daily Analytics	EOS Data Analytics	Verisk
Pest and Disease specialisation	Yes	Mentioned but not specialised	Mentioned but not specialised	No
Target Clients	Insurers, governments, ag-chem, traders	Insurers, governments, ag-chem, traders	Insurers, governments, ag-chem, traders	Insurance
Satellite-based ML	Yes	Yes	Yes	Unclear
Epidemiological and scenario modelling	Yes	No	No	No
Training data pipeline for pest/disease-specific satellite-based ML	Yes	No	No	No

The Core Team

Dr David Godding

Co-founder, CEO

PhD from Cambridge University in Epidemiology and Modelling, BSc Imperial College London. Held senior and co-founding roles in tech startups.

Seb Worthington

Co-founder, CCO

Built and scaled venture-backed startups across Europe and Asia, backed by Sequoia, Burda, and Mitsubishi. Leads commercial growth and partnerships.

Dr Will Probert

Senior Infectious Disease Modeller

PhD in Applied Maths, Postdoctoral roles at Oxford, Warwick. Held technical roles at World Health Organisation.

Dr Naomi Waterlow

Infectious Disease Modeller

PhD in Infectious Disease Modelling from London School of Hygiene and Tropical Medicine, BSc Cambridge. Industry experience at IBM.

Elias Sebastian

Senior Full Stack Developer

Full stack engineer with 8+ years of industry experience. Cross-industry experience from martech to medtech and helped small teams grow beyond $1M+ ARR.

Speak To Us

Outbreak Labs

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