

# Pest Detection Systems

ANMD-MRS11-103 · AI & Digital Agriculture Technologies

A Global Sustainability Due Diligence & Market Research Study

History 2020–2024 · Base Year 2025 · Forecast 2025–2032 · Outlooks 2035 / 2040 / 2050 · Currency US\$

## WHY THIS REPORT

Pest detection systems give farms an early-warning network against insects and disease — the smart traps, camera-based monitors, acoustic sensors and predictive-risk platforms that identify and forecast pest pressure before infestations cause loss. This decision-grade study sizes the global market three ways — value, hectares/acres monitored and devices/subscriptions — across system type, target and application, across seven regions and four scenarios to 2032, with outlooks to 2050.

## SUSTAINABILITY & SDG IMPACT — THE ANMD LENS

Sustainability is this report's backbone, not an afterthought. Pest detection's core contribution is reduced pesticide use, protected yield and food security, and support for integrated pest management.

Mapped Sustainable Development Goals:

<b>SDG 2</b> Zero Hunger	<b>SDG 8</b> Decent Work & Economic Growth	<b>SDG 12</b> Responsible Consumption	<b>SDG 13</b> Climate Action	<b>SDG 15</b> Life on Land
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Measurable sustainability outcomes assessed:

- Reduced pesticide use via targeted intervention
- Protected yield and food security
- Support for integrated pest management
- Device e-waste, data ownership and smallholder access as material risks

**Framework alignment:** Double materiality mapped to GRI, SASB, ISSB, TCFD, TNFD, CSRD and the EU Taxonomy, with greenwashing and SDG-washing screens applied throughout.

## WHAT'S INSIDE AT A GLANCE

<b>53</b> Chapters	<b>9</b> Report Parts	<b>7</b> Regions Covered	<b>40+</b> Country Markets
<b>2025–32</b> Forecast Horizon	<b>4</b> Forward Scenarios	<b>25+</b> Companies Profiled	<b>5</b> SDGs Mapped

## REPORT COVERAGE

**Geographic scope:** North America, Europe, Asia Pacific, Latin America, Africa, Middle East and Rest of World — with named country intelligence. Europe leads regulation-driven adoption; North America scales on broadacre and orchard use; Asia Pacific and emerging markets grow fast; other regions assessed on their own merits.

## MARKET OVERVIEW

**From periodic scouting to continuous surveillance — where predictive risk turns detection into prevention.**

Pest detection is being pulled by IPM and pesticide-reduction pressure. Demand is driven by integrated pest management mandates, resistance management and input-cost control — with smart traps, edge sensing and predictive platforms shifting value to recurring monitoring. The market is read three ways — value, hectares/acres monitored and devices/subscriptions — and forecast under four scenarios, each region reported separately.

- **Europe leads regulation-driven adoption** — Slovenia, Austria and Switzerland, where pesticide-reduction policy accelerates monitoring
- **North America scales on broadacre and orchard use** — United States and Canada, across high-value and row-crop systems
- **Asia Pacific and emerging markets grow fast** — India and China, extending detection to smallholder and specialty contexts
- **Predictive risk is the differentiator** — forecasting pest pressure from trap, weather and model data turns detection into prevention

## REGIONAL OUTLOOK

Across seven reporting regions, the report separates leading markets from high-growth and emerging ones — each profiled in full rather than aggregated into Rest of World.

Region	Stage	Lead Markets & Drivers
Europe	Regulation-driven leader	Slovenia, Austria, Switzerland — pesticide-reduction policy
North America	Broadacre & orchard	United States, Canada — high-value & row-crop systems
Asia Pacific	Fastest-growing	India, China — smallholder & specialty
Latin America	Emerging	Brazil — pest-pressure monitoring
Africa	Frontier	Kenya, South Africa — pest early-warning
Middle East	Emerging	Israel — arid-ag pest sensing

## KEY MARKET DRIVERS & RESTRAINTS

Drivers	Restraints
<ul style="list-style-type: none"> <li>• IPM &amp; pesticide-reduction mandates</li> <li>• Resistance &amp; input-cost management</li> <li>• Edge sensing &amp; smart-trap advances</li> <li>• Predictive risk &amp; prevention value</li> <li>• Specialty-crop &amp; orchard demand</li> </ul>	<ul style="list-style-type: none"> <li>• Detection accuracy across pests</li> <li>• Connectivity &amp; power in the field</li> <li>• Farmer adoption &amp; workflow fit</li> <li>• ROI proof &amp; seasonal payback</li> <li>• Data integration with spray systems</li> </ul>

## SEGMENTATION SNAPSHOT

<b>By System Type</b>	Smart insect traps · camera-based monitors · acoustic sensors · drone-based detection · predictive pest-risk platforms
<b>By Target</b>	Insects · disease · multi-pest
<b>By Application</b>	Row crops · specialty / horticulture · livestock
<b>By End User</b>	Farmers · agribusiness · co-operatives · agronomists
<b>By Sensing</b>	Optical · acoustic · environmental
<b>By Business Model</b>	Hardware sales · SaaS subscription · services

## TABLE OF CONTENTS — PARTS & CHAPTERS

The full report is organised into nine parts across 53 chapters, listed below. Detailed sub-headings, country tables and directories are provided in the full report.

### Part I — Report Foundation, Discovery and Strategic Intelligence

- › Chapter 1. Scope, Methodology and Report Architecture
- › Chapter 2. Industry Discovery Summary — Pest Detection Systems
- › Chapter 3. Executive Intelligence and Decision Dashboard
- › Chapter 4. Strategic Findings, Materiality and Investment Verdict Preview

### Part II — Market Intelligence, Sizing, Forecasting and Segmentation

- › Chapter 5. Industry Overview and Market Evolution
- › Chapter 6. Market Dynamics
- › Chapter 7. Global Market Size and Forecast, 2020–2032
- › Chapter 8. Market Segmentation Analysis
- › Chapter 9. End-User and Demand-Side Intelligence
- › Chapter 10. Pricing, Cost and Commercial Model Intelligence

### Part III — Regional and Country Intelligence

- › Chapter 11. Global Regional Intelligence Framework
- › Chapter 12. North America Market Intelligence
- › Chapter 13. Europe Market Intelligence
- › Chapter 14. Asia Pacific Market Intelligence
- › Chapter 15. Latin America Market Intelligence
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- › Chapter 17. Middle East Market Intelligence
- › Chapter 18. Rest of World Market Intelligence

### Part IV — Technology, Innovation and Category-Specific Intelligence

- › Chapter 19. Technology Landscape and Architecture
- › Chapter 20. Emerging and Next-Generation Technology Intelligence
- › Chapter 21. Category-Specific Intelligence Module
- › Chapter 22. Research, Innovation and Funding Landscape

## Part V — Company, Competition, Patent and Project Intelligence

- › Chapter 23. Competitive Landscape
- › Chapter 24. Company Profiles
- › Chapter 25. Mergers, Acquisitions, Partnerships and Ecosystem Intelligence
- › Chapter 26. Patent Landscape and Intellectual Property Intelligence
- › Chapter 27. Project, Deployment and Case-Study Intelligence

## Part VI — Sustainability, ESG, SDG, Climate and Natural-Capital Intelligence

- › Chapter 28. Sustainability Intelligence Suite
- › Chapter 29. ESG Intelligence and Double Materiality
- › Chapter 30. ESG and Sustainability Framework Alignment
- › Chapter 31. SDG Intelligence
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- › Chapter 33. Water, Biodiversity and Natural-Capital Intelligence
- › Chapter 34. Circular Economy and Resource-Security Intelligence
- › Chapter 35. Social Impact, Human Capital and Community Intelligence
- › Chapter 36. Climate Risk, Adaptation and Resilience Intelligence

## Part VII — Supply Chain, Policy, Legal, Economics and Finance

- › Chapter 37. Value Chain, Supply Chain and Geopolitical Intelligence
- › Chapter 38. Policy, Regulation and Incentive Intelligence
- › Chapter 39. Legal, Contracting and Risk-Allocation Intelligence
- › Chapter 40. Unit Economics, CAPEX, OPEX and Return Analysis
- › Chapter 41. Investment, Sustainable Finance and Bankability Intelligence

## Part VIII — Scenario, Future Intelligence and Final Due Diligence Verdict

- › Chapter 42. Scenario Analysis and Future Intelligence
- › Chapter 43. Sustainability Due Diligence Framework and Data-Room Index
- › Chapter 44. Risk Register, RAG Rating and Anti-Greenwashing Screen
- › Chapter 45. Bottom-Line Verdict and Strategic Recommendations
- › Chapter 46. Implementation Roadmap and Stakeholder Playbooks

## Part IX — Annexes, Directories and Reference Material

- › Chapter 47. Methodology Annex
- › Chapter 48. Corporate Directory and Company Intelligence Annex
- › Chapter 49. Patent Directory and Patent Intelligence Annex
- › Chapter 50. Project Intelligence Annex
- › Chapter 51. Forecast Annex
- › Chapter 52. Sustainability KPI Annex
- › Chapter 53. Reference Annexes

## COMPETITIVE & INVESTMENT SNAPSHOT

The competitive field spans smart-trap pioneers, sensing specialists and input-company platforms. Deal activity — platform integration, input-company partnerships and sensing acquisitions — signals a market consolidating around predictive, recurring-revenue monitoring networks.

### Representative players profiled in the full report:

EFOS d.o.o. (Trapview) · Semios · DTN, LLC (Spensa) · Bayer AG (Bayer Crop Science) · Syngenta AG · FarmSense · Pessl Instruments GmbH (METOS) · and 20+ further profiled players across smart-trap pioneers and platforms.

**Investment intelligence:** venture, infrastructure, development, climate and blended finance, green bonds and sustainability-linked loans — culminating in a bankability assessment and a conditional investment view.

## KEY QUESTIONS THIS REPORT ANSWERS

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- How large is the global pest detection market, and how fast will it grow to 2032?
- Which regions, countries and segments offer the strongest risk-adjusted opportunity?
- How does predictive risk change value versus reactive detection?
- Who leads, and where is the competitive and patent white space?
- Is the investment case bankable — and under what conditions?
- How does the category align with the SDGs, pesticide reduction and farmer-equity expectations?

## WHY ANMD — THE DIFFERENCE

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*Most market studies stop at units and revenue. This report is built as a sustainability due diligence instrument — fusing market sizing with ESG, SDG, climate, water and natural-capital intelligence and a decision-ready bankability view in a single architecture.*

- **Triangulated sizing** — every market read three ways so value, volume and the physical-unit views reconcile rather than conflict.
- **Region-honest forecasting** — Latin America, Africa and the Middle East reported in full, never hidden inside Rest of World, every forecast resolved to the 2025 base year.
- **Integrated evidence base** — company, patent and project databases linked to the analysis, with published-filing patents and FTO treated as an indicator, not a legal conclusion.
- **No-fabrication discipline** — every estimate carries a data-confidence rating and disclosed sources; gaps are flagged for further diligence, never filled with invented numbers.
- **Anti-greenwashing rigour** — SDG-washing and greenwashing screens plus claim-substantiation checks built into the ESG and project analysis.
- **Decision-first structure** — 9 Parts and 53 Chapters culminating in stakeholder playbooks and a clear, conditional investment view.

## WHO SHOULD BUY THIS REPORT

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Investors, growers, agribusiness, co-operatives, OEMs, retailers, lenders and policymakers, and strategic corporate planners and decision-makers.

### Access the Full Report

The complete report delivers all 53 chapters in full, with every sub-heading, country table, company and patent directory, forecast model and due diligence checklist.

Purchase at [www.anewmarketdynamics.com](http://www.anewmarketdynamics.com) · Standard & Premium licences · Single-Site (SSL) and Global-Site (GSL) options at checkout.

### Want the Complete Detailed Table of Contents?

This prospectus lists the nine parts and 53 chapters. The complete detailed table of contents — every sub-heading, country table, exhibit, company and patent directory and annex — is available on request to registered users. To receive it, register with your official company email at [www.anewmarketdynamics.com](http://www.anewmarketdynamics.com). The full detailed table of contents will be sent directly to your registered company email address.