

AI-Driven Weed Identification Cameras

ANMD-MRS11-107 · 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

AI-driven weed identification cameras are the perception engine behind precision weeding — the sprayer-mounted, robot-mounted and see-and-spray vision systems that distinguish crop from weed in real time to target herbicide or mechanical action only where needed. This decision-grade study sizes the global market three ways — value, hectares/ acres treated and units/subscriptions — across system type, action mode 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. Weed-vision's headline contribution is dramatic herbicide reduction, with chemical-free weeding, resistance management and soil-health benefits alongside.

Mapped Sustainable Development Goals:

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

- Dramatic herbicide reduction via plant-by-plant action
- Chemical-free weeding and resistance management
- Soil-health co-benefits
- Device e-waste, data ownership and access for smaller operations 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

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

REPORT COVERAGE

Geographic scope: North America, Europe, Asia Pacific, Latin America, Africa, Middle East and Rest of World — with named country intelligence. North America leads see-and-spray scale; Europe drives mechanical and laser weeding; Israel and specialists add retrofit vision; other regions assessed on their own merits.

MARKET OVERVIEW

From blanket spraying to plant-by-plant decisions — where real-time vision cuts herbicide use sharply.

Weed-identification vision is the core of the see-and-spray revolution. Demand is driven by herbicide-resistance, input-cost pressure and tightening pesticide regulation — with see-and-spray and laser/mechanical weeding shifting value from chemicals to vision systems. The market is read three ways — value, hectares/acres treated and units/subscriptions — and forecast under four scenarios, each region reported separately.

- **North America leads see-and-spray scale** — United States, anchoring broadacre see-and-spray adoption
- **Europe drives mechanical and laser weeding** — Germany, France and Switzerland, on chemical-free weeding platforms
- **Israel and specialists add retrofit vision** — enabling see-and-spray on existing sprayer fleets
- **Real-time crop-weed discrimination is the differentiator** — on-the-move classification accuracy gates herbicide savings and crop safety

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
North America	See-and-spray leader	United States — broadacre see-and-spray
Europe	Mechanical & laser weeding	Germany, France, Switzerland — chemical-free weeding
Asia Pacific	Emerging	Australia, China — broadacre & specialty trials
Latin America	Emerging	Brazil, Argentina — herbicide-reduction adoption
Africa	Frontier	South Africa — precision-weeding pilots
Middle East	Emerging	Israel — see-and-spray innovation

KEY MARKET DRIVERS & RESTRAINTS

Drivers	Restraints
• Herbicide resistance & efficacy loss • Input-cost & herbicide-price pressure • Pesticide-reduction regulation • See-and-spray & laser-weeding maturity • Labour scarcity for manual weeding	• Real-time accuracy & speed trade-offs • Crop-weed discrimination in dense canopy • High system cost & ROI proof • Retrofit & machine compatibility • Connectivity & model-update logistics

SEGMENTATION SNAPSHOT

By System Type	Sprayer-mounted vision · robot-mounted weed cameras · handheld / scouting · see-and-spray systems · laser-weeding vision
By Action Mode	Detect-only · see-and-spray · laser / mechanical weeding
By Application	Row crops · specialty / horticulture · livestock
By End User	Farmers · agribusiness · co-operatives · agronomists
By Integration	OEM-integrated · retrofit · robot-platform
By Business Model	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 — AI-Driven Weed Identification Cameras
- › 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
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Part IV — Technology, Innovation and Category-Specific Intelligence

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

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- › Chapter 25. Mergers, Acquisitions, Partnerships and Ecosystem Intelligence
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- › 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 see-and-spray leaders, weeding-robot makers and retrofit-vision specialists. Deal activity — vision-startup acquisitions, OEM integration and robot-platform partnerships — signals a market consolidating around accurate, high-speed crop-weed discrimination.

Representative players profiled in the full report:

Deere & Company (Blue River Technology) · Robert Bosch GmbH / BASF SE (Bosch-BASF Smart Farming) · Greeneye Technology · Carbon Robotics, Inc. · Naïo Technologies SAS · FarmWise Labs, Inc. · Ecorobotix SA · and further profiled players across see-and-spray leaders and weeding-robot makers.

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

- How large is the global weed-vision market, and how fast will it grow to 2032?
- Which regions, countries and segments offer the strongest risk-adjusted opportunity?
- How does real-time discrimination change value versus blanket spraying?
- 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, herbicide reduction and farmer-equity expectations?

WHY ANMD — THE DIFFERENCE

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

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 · 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. The full detailed table of contents will be sent directly to your registered company email address.