

ANMD-MRS29-284 · Smart Farming & Precision Agriculture

# Drone Crop Monitoring Systems

*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

Drone crop-monitoring systems use aerial imaging, multispectral sensors and analytics to scout fields, detect stress and inform precision interventions at scale. This decision-grade study sizes the global market three ways — value, volume and hectares surveyed — across the report’s segmentation axes, 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. Beyond productivity, drone crop monitoring systems deliver measurable input savings, resource efficiency and lower environmental footprint, while data-driven precision strengthens the natural-capital story.

### Mapped Sustainable Development Goals:

<b>SDG 2</b> Zero Hunger	<b>SDG 6</b> Clean Water	<b>SDG 7</b> Affordable & Clean Energy	<b>SDG 13</b> Climate Action	<b>SDG 15</b> Life on Land
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### Measurable sustainability outcomes assessed:

- Targeted input use from early stress and disease detection
- Reduced chemical and water waste through precision scouting
- Higher yield through timely intervention
- Battery and electronics embodied carbon and end-of-life 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. North America commercial leader ; Europe scaling on regulation ; Asia Pacific scale engine.

## MARKET OVERVIEW

### From ground scouting to aerial crop intelligence — where the whole field is seen from above, fast.

Drone crop monitoring is moving from service-bureau scouting to grower-owned, analytics-integrated workflows. Demand is driven by the convergence of input-optimisation pressure, agronomy-labour scarcity and digital-agriculture adoption, supported by maturing sensors and software across North America, Europe and Asia Pacific. The market is read three ways — value, units shipped and hectares surveyed — and forecast under conservative, base, accelerated and disruption scenarios, with every projection resolved to the 2025 base year and each region reported separately rather than folded into Rest of World.

- North America leads early commercialisation, anchored by the United States and Canada, where agronomy services, large acreage and analytics platforms are most advanced.
- Asia Pacific is the scale engine, with China, India, Japan and Australia combining large drone-manufacturing bases with strong crop-monitoring demand.
- Europe is accelerating, supported by France, Germany and the Netherlands, where precision-agronomy and regulatory-driven input reduction are strongest.
- System type and airframe segment the value, across multispectral, thermal and mapping drones, and across multirotor, fixed-wing and VTOL airframes, each with distinct economics.
- Early detection is the differentiator, frequent high-resolution imagery plus analytics — and increasingly integrated advisory — underpin returns that ground scouting cannot match.

## REGIONAL OUTLOOK

Across the seven reporting regions, the report separates early commercialisation leaders from high-growth and emerging markets, profiling named country sub-markets, policy regimes and project pipelines in each. North America and Europe anchor near-term adoption; Asia Pacific scales on food security and labour drivers; while Latin America, Africa and the Middle East are assessed on their own merits — for productivity, water security and rural development — rather than aggregated away.

Region	Stage	Lead Markets & Drivers
North America	Commercial leader	United States, Canada — large acreage, precision-ag adoption, dealer & agronomy networks
Europe	Scaling on regulation	Germany, France, Netherlands — input-reduction rules, CAP linkage, equipment supply
Asia Pacific	Scale engine	China, India, Japan, Australia — food security, labour decline, broadacre & drone adoption
Latin America	Emerging	Brazil, Argentina — large-scale row crops, agribusiness integration
Africa	Frontier	South Africa, Kenya, Morocco — food security, smallholder digitisation, blended finance
Middle East	Frontier	Saudi Arabia, UAE, Israel — water security, controlled-environment & agtech investment

## KEY MARKET DRIVERS & RESTRAINTS

Drivers	Restraints
<ul style="list-style-type: none"> <li>• Input-optimisation &amp; yield-protection pressure</li> <li>• Agronomy-labour scarcity &amp; coverage needs</li> <li>• Digital-agriculture &amp; analytics adoption</li> <li>• Early stress, disease &amp; variability detection</li> <li>• Sensor, airframe &amp; photogrammetry advances</li> </ul>	<ul style="list-style-type: none"> <li>• Drone-flight &amp; airspace regulation</li> <li>• Data-processing &amp; analytics-translation gaps</li> <li>• Battery endurance &amp; coverage limits</li> <li>• Connectivity &amp; turnaround-time constraints</li> <li>• ROI-attribution &amp; adoption inertia</li> </ul>

## SEGMENTATION SNAPSHOT

<b>By System Type</b>	Multispectral survey · thermal monitoring · scouting · mapping / photogrammetry · analytics-integrated
<b>By Component</b>	Airframes · multispectral / thermal sensors · GNSS · batteries · ground station
<b>By Application</b>	Growers · agronomists · ag service providers · research institutions
<b>By End User</b>	Growers · agronomists · ag service providers · research institutions
<b>By Business Model</b>	Equipment purchase · SaaS · lease · managed-service
<b>By Deployment</b>	Row crops · orchard · vineyard · specialty · plantation

## 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.

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- › Chapter 2. Industry Discovery Summary — Drone Crop Monitoring 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

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

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## Part IX — Annexes, Directories and Reference Material

- › Chapter 47. Methodology Annex
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- › Chapter 50. Project Intelligence Annex
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- › Chapter 53. Reference Annexes

## COMPETITIVE & INVESTMENT SNAPSHOT

The competitive field spans agriculture-drone specialists, established UAV manufacturers, and ag-analytics innovators. Profiled players include DJI Agriculture, XAG, Parrot, Sentera and Wingtra. Deal activity — partnerships, technology licensing and demonstration programmes — signals a market consolidating around bankable, repeatable designs.

### Representative players profiled in the full report:

SZ DJI Technology Co., Ltd. (DJI Agriculture) · XAG Co., Ltd. · Parrot SA · Sentera, Inc. · WingtraOne (Wingtra AG) · and 20+ further profiled players across the value chain.

**Investment intelligence:** venture, growth, infrastructure, development, climate and blended finance, green bonds and sustainability-linked instruments — culminating in a bankability assessment and a Go / No-Go / Conditional-Go investment verdict.

## KEY QUESTIONS THIS REPORT ANSWERS

- ? How large is the global drone crop monitoring systems market, and how fast will it grow to 2032?
- ? Which regions, countries and segments offer the strongest risk-adjusted opportunity?
- ? How do precision-agriculture economics change returns versus conventional methods?
- ? Who leads, and where is the competitive and patent white space?
- ? Is the investment case bankable — and under what conditions?
- ? How does the technology align with the SDGs and emerging disclosure regulation?

## 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 verdict in a single architecture.*

- **Triangulated sizing** — every market read three ways so value, volume and area 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 Go / No-Go / Conditional-Go investment verdict.

## WHO SHOULD BUY THIS REPORT

Investors, manufacturers, growers, agronomists, cooperatives, policymakers, lenders, and corporate strategy and ESG teams — alongside 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.