

ANMD-MRS29-283 · Smart Farming & Precision Agriculture

Autonomous Tractors

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

Autonomous tractors combine GPS guidance, perception and self-driving control to perform field operations with reduced or no operator input, addressing labour scarcity and efficiency. This decision-grade study sizes the global market three ways — value, volume and operating hectares — 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, autonomous tractors deliver measurable input savings, resource efficiency and lower environmental footprint, while data-driven precision strengthens the natural-capital story.

Mapped Sustainable Development Goals:

SDG 2 Zero Hunger	SDG 6 Clean Water	SDG 7 Affordable & Clean Energy	SDG 13 Climate Action	SDG 15 Life on Land
-----------------------------	-----------------------------	---	---------------------------------	-------------------------------

Measurable sustainability outcomes assessed:

- Fuel and input efficiency from optimised autonomous operation
- Reduced labour dependency and operator fatigue
- Lower soil compaction through lighter, repeatable passes
- Battery and powertrain 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

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 commercial leader ; Europe scaling on regulation ; Asia Pacific scale engine.

MARKET OVERVIEW

From operator-driven to fully autonomous fieldwork — where the machine works the field on its own.

Autonomous tractors are moving from supervised pilots to driver-optional commercial fleets. Demand is driven by the convergence of farm-labour shortages, rising input costs and electrification, supported by maturing autonomy and RTK guidance across North America, Europe and Asia Pacific. The market is read three ways — value, units shipped and operating hectares — 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 large row-crop acreage, labour scarcity and OEM autonomy programmes are most advanced.
- Europe is scaling on innovation, with Germany, France and the Netherlands combining electric and driver-optional platforms with strong equipment supply.
- Asia Pacific is accelerating, supported by Japan, China, India and Australia, where rice automation, labour decline and broadacre drivers are strongest.
- System type and autonomy level segment the value, across full-autonomy, driver-optional and retrofit-kit systems, and across supervised, driver-optional and full-autonomy tiers, each with distinct economics.
- Labour savings are the differentiator, reduced operator dependence plus longer windows — and increasingly electrification — underpin returns that conventional tractors 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"> • Farm-labour shortage & cost pressure • Input-efficiency & field-consistency gains • Electrification & decarbonisation linkage • Extended operating windows & throughput • RTK guidance, perception & autonomy advances 	<ul style="list-style-type: none"> • High autonomy-platform & retrofit CAPEX • Safety-certification & liability uncertainty • Perception reliability in dust, mud & glare • Connectivity & RTK-coverage gaps • Farmer trust & change-management barriers

SEGMENTATION SNAPSHOT

By System Type	Full-autonomy · driver-optional · retrofit kits · electric autonomous · swarm / fleet
By Autonomy Level	Supervised autonomy · driver-optional · full autonomy
By Application	Large row-crop farms · custom operators · specialty growers · research institutions
By End User	Large row-crop farms · custom operators · specialty growers · research institutions
By Business Model	Equipment purchase · SaaS · lease · managed-service
By Deployment	Tillage & seeding · spraying · harvest support · multi-operation

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 — Autonomous Tractors
- › 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
- › Chapter 16. Africa Market Intelligence
- › 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
- › Chapter 32. Carbon, Net-Zero and Climate-Mitigation Intelligence
- › 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 established tractor OEMs, autonomy-first startups, and electric-platform innovators. Profiled players include John Deere, CNH Industrial, AGCO / Fendt, Monarch Tractor and Kubota. Deal activity — partnerships, technology licensing and demonstration programmes — signals a market consolidating around bankable, repeatable designs.

Representative players profiled in the full report:

Deere & Company · CNH Industrial N.V. · AGCO Corporation (Fendt) · Monarch Tractor, Inc. · Kubota Corporation · 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 autonomous tractors 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 · 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.