



ANMD-MRS1-001 · Advanced Agriculture Technologies

Agrivoltaic Structures

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

Agrivoltaic structures place solar generation and agriculture on the same land, turning the food-versus-energy land conflict into a dual-income, dual-output asset. This decision-grade study sizes the global structures market three ways — value, installed capacity (MW) and land area (ha) — across system design, module technology, application, scale and business model, and stress-tests the investment case across seven regions and four forward scenarios to 2032, with long-term outlooks to 2050.

SUSTAINABILITY & SDG IMPACT — THE ANMD LENS

Sustainability is this report's backbone, not an afterthought. Beyond clean generation, agrivoltaics delivers measurable land-equivalent uplift, irrigation and evapotranspiration savings, and crop climate-resilience, while pollinator-friendly designs strengthen the natural-capital story — each treated as material, evidenced outcomes rather than marketing claims.

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
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Measurable sustainability outcomes assessed:

- Land-equivalent ratio (LER) — proving combined energy + crop output beats separate land uses
- Water-use and evapotranspiration savings under partial shade
- Crop heat-stress shielding and climate-adaptation contribution
- Embodied carbon, module end-of-life circularity and farmer land-tenure 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	29+ 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 including the US, Germany, France, China, Japan, India, Brazil, Saudi Arabia and South Africa. Europe leads early commercialisation; Asia Pacific is the scale engine; North America accelerates on IRA and USDA incentives.



MARKET OVERVIEW

A market moving from pilot to commercial scale — where the energy transition meets the world's land, water and climate squeeze.

Agrivoltaics is moving from pilot to commercial scale. Demand is driven by the convergence of the energy transition with intensifying land, water and climate pressure on agriculture, supported by maturing incentives across Europe, North America and Asia Pacific. The market is read three ways — value, installed capacity (MW) and land area (ha) — and forecast under four scenarios, with each region reported separately rather than folded into Rest of World.

- Europe leads early commercialisation — France, Germany, Italy and the Netherlands, on favourable tariffs, CAP linkage and advanced vertical/dynamic-tracker designs
- Asia Pacific is the scale engine — China, Japan, India, South Korea and Australia, combining module supply bases with food-security and land-efficiency drivers
- North America is accelerating — IRA incentives, USDA and state agrivoltaic programmes, pollinator-friendly and grazing models, and community solar
- Dual revenue is the differentiator — energy sales plus crop yield, increasingly with ecosystem-service payments, underpin returns single-use solar or farming cannot match

REGIONAL OUTLOOK

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

Region	Stage	Lead Markets & Drivers
Europe	Commercial leader	France, Germany, Italy, Netherlands — tariffs, CAP linkage, vertical/dynamic designs
Asia Pacific	Scale engine	China, Japan, India, South Korea, Australia — supply base, food security
North America	Accelerating	United States, Canada — IRA, USDA & state programmes, community solar
Latin America	Emerging	Brazil, Chile — irrigation savings, agribusiness integration
Africa	Frontier	South Africa, Kenya, Morocco — water-energy access, blended finance
Middle East	Frontier	Saudi Arabia, UAE, Israel — water security, sovereign investment

KEY MARKET DRIVERS & RESTRAINTS

Drivers	Restraints
<ul style="list-style-type: none"> • Energy-transition + land-scarcity convergence • Water savings & crop heat-stress resilience • Policy incentives (IRA, CAP, FiT, state programmes) • Dual-income farmer economics & rural development • Bifacial, tracker & semi-transparent technology gains 	<ul style="list-style-type: none"> • Elevated-structure CAPEX premium vs ground-mount • Shading-vs-yield design trade-off • Permitting, zoning & agricultural-land rules • Steel / aluminium / module cost inflation • Farmer adoption, financing & social-licence barriers



SEGMENTATION SNAPSHOT

By Structure Type	Fixed-tilt elevated · single-axis & dynamic trackers · vertical bifacial · greenhouse-integrated PV · pergola/canopy
By Module Technology	Bifacial · monofacial · translucent / semi-transparent
By Application	Crop cultivation · livestock / pasture · aquaculture co-location
By End User	Farmers · cooperatives · IPPs · utilities · agribusiness
By Business Model	Self-consumption · lease · PPA · dual-income
By Scale	Pilot · distributed · utility-scale

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 — Agrivoltaics
- › 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
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- › Chapter 10. Pricing, Cost and Commercial Model Intelligence

Part III — Regional and Country Intelligence

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- › Chapter 12. North America 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
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Part V — Company, Competition, Patent and Project Intelligence

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

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- › Chapter 45. Bottom-Line Verdict and Strategic Recommendations
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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 dedicated agrivoltaic specialists, established solar and tracker manufacturers, and turnkey developers. Deal activity — platform partnerships, pipeline financing and EU LIFE-funded demonstrations — signals a market consolidating around bankable, repeatable designs.

Representative players profiled in the full report:

Sun'Agri SAS · BayWa r.e. AG · Next2Sun AG · Trina Solar Co., Ltd. · First Solar, Inc. · and 24+ further profiled players across structures, modules, trackers and development.

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



KEY QUESTIONS THIS REPORT ANSWERS

- ? How large is the global agrivoltaic structures market, and how fast will it grow to 2032?
- ? Which regions, countries and segments offer the strongest risk-adjusted opportunity?
- ? How does the dual-income model change project economics versus conventional solar?
- ? 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 and infrastructure / PE funds, project developers and IPPs, structure and module manufacturers, technology providers, agribusinesses and cooperatives, policymakers and development-finance institutions, and corporate strategy and ESG teams.

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.