

Agricultural Mapping & GIS Market Forecasts to 2034 – Global Analysis By Solution Type (Field Mapping Solutions, Soil Mapping Solutions, Crop Monitoring Solutions, Farm Planning Solutions and Other Solution Types), Component, Technology, Application, End User, and By Geography

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Abstracts

According to Statistics MRC, the Global Agricultural Mapping & GIS Market is accounted for \$5.4 billion in 2026 and is expected to reach \$17.1 billion by 2034 growing at a CAGR of 15.5% during the forecast period. Agricultural mapping and geographic information systems (GIS) involve the use of spatial data, satellite imagery, and geospatial technologies to analyze and manage agricultural land and farming activities. These systems help farmers monitor soil conditions, crop health, irrigation patterns, land use, and field variability with high precision. GIS technologies support precision agriculture by enabling data-driven decisions related to planting, fertilization, pest management, and resource allocation. Integration with drones, remote sensing, and AI-based analytics further improves farm productivity and sustainability. Growing demand for efficient land management is driving adoption of agricultural mapping technologies worldwide.

Market Dynamics:

Driver:

Growing precision agriculture adoption

Farmers are leveraging geospatial technologies to optimize crop yields and resource

use. Governments are promoting precision farming through subsidies and modernization programs. Partnerships between agritech firms and farmers are expanding. Awareness campaigns highlight the benefits of GIS in improving efficiency. Digital platforms are making mapping solutions more accessible.

Restraint:

High geospatial software expenses

Farmers often struggle to afford premium GIS solutions. Smaller farms face challenges in scaling operations due to financial constraints. Limited access to financing slows adoption in developing regions. Maintenance and licensing costs add further burdens. Regulatory compliance increases expenses for deployment.

Opportunity:

Integration with drone imaging

Drones provide real-time aerial data that enhances mapping accuracy. Farmers benefit from improved crop monitoring and resource planning. Innovation in affordable drone solutions supports wider adoption. Governments are encouraging drone-based precision farming through supportive policies. Partnerships with drone manufacturers are expanding accessibility. This opportunity is fostering market growth.

Threat:

Inaccurate field data interpretation

Errors in mapping can lead to poor farming decisions and financial losses. Farmers may lose confidence in GIS platforms if inaccuracies persist. Regional variations in soil and climate data add complexity. High costs of improving accuracy create challenges for providers. Negative publicity around failed mapping projects reduces trust. This issue is constraining faster market expansion.

Covid-19 Impact:

Covid-19 had a mixed impact on the agricultural mapping & GIS market. On one hand, demand rose as farmers sought remote monitoring and predictive tools during lockdowns. Online platforms supported continuity of farming operations. On the other

hand, supply chain disruptions affected hardware availability. Economic uncertainty limited investments in advanced technologies. Preventive health awareness increased focus on contactless farming solutions.

The field mapping solutions segment is expected to be the largest during the forecast period

The field mapping solutions segment is expected to account for the largest market share during the forecast period as farmers increasingly adopt GIS platforms for crop planning. Mapping solutions integrate data from satellites, drones, and sensors. They provide actionable insights for soil health and resource management. Manufacturers are investing in user-friendly interfaces to improve adoption. Retail penetration of mapping solutions is strong in developed markets. Farmers prefer these systems for efficiency and productivity.

The irrigation planning segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the irrigation planning segment is predicted to witness the highest growth rate due to rising demand for water-efficient farming practices. GIS-based irrigation planning improves resource allocation and reduces wastage. Farmers benefit from lower costs and improved crop yields. Younger demographics are adopting smart irrigation practices rapidly. Digital platforms promote awareness of irrigation innovations. Governments are supporting water-efficient farming through subsidies.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share owing to advanced agricultural infrastructure. High adoption of GIS technologies supports growth. Leading companies and innovators are headquartered in this region. Government initiatives promote precision farming and climate resilience. Retail penetration of mapping solutions is strong in the US and Canada. Farmers are willing to invest in premium GIS systems. North America is fostering the market as the largest contributor.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR driven by growing agricultural modernization. Urbanization and food security

concerns are fueling adoption of GIS solutions. Countries such as China, India, and Japan are rapidly modernizing farming practices. E-commerce platforms support distribution of mapping technologies. Government subsidies encourage adoption in rural areas. Affordable solutions appeal to mass farmers.

Key players in the market

Some of the key players in Agricultural Mapping & GIS Market include Trimble Inc., Hexagon AB, Topcon Positioning Systems, Inc., Esri, Deere & Company, AGCO Corporation, Fujitsu Limited, IBM Corporation, Planet Labs PBC, Descartes Labs, Inc., Raven Industries, Inc., Satellite Imaging Corporation, Leica Geosystems AG, GeoSys and Ag Leader Technology.

Key Developments:

In February 2026, Hexagon AB executed a comprehensive New Product Launch by introducing its WebGIS 2025 platform featuring smarter, 64-bit precision parcel geocoding. The application allows commercial farms to construct photorealistic 3D digital twins that optimize crop health assessments and large-scale timberlands management.

In November 2025, Trimble Inc. announced a strategic Partnership to integrate its Connected Farm GIS environments natively with global regional agronomy portals. The cloud-based software synchronization enables growers to map localized field boundaries and instantly push variable-rate prescription maps directly to active machinery fleets.

Solution Types Covered:

Field Mapping Solutions

Soil Mapping Solutions

Crop Monitoring Solutions

Farm Planning Solutions

Other Solution Types

Components Covered:

Software

Hardware

Services

GPS & Navigation Systems

Other Components

Technologies Covered:

Geographic Information Systems

Remote Sensing Technology

Global Positioning Systems

Drone Mapping Technology

Other Technologies

Applications Covered:

Field Surveying

Precision Farming

Soil Analysis

Irrigation Planning

Other Applications

End Users Covered:

- Commercial Farms
- Agricultural Cooperatives
- Government Agricultural Agencies
- Research Organizations
- Other End Users

Regions Covered:**North America**

- United States
- Canada
- Mexico

Europe

- United Kingdom
- Germany
- France
- Italy
- Spain
- Netherlands
- Belgium

Sweden

Switzerland

Poland

Rest of Europe

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of Africa

What our report offers:

Market share assessments for the regional and country-level segments

Strategic recommendations for the new entrants

Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030,

2032 and 2034

Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)

Strategic recommendations in key business segments based on the market estimations

Competitive landscaping mapping the key common trends

Company profiling with detailed strategies, financials, and recent developments

Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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