

Smart Vineyard Management Market Forecasts to 2032 – Global Analysis By Component (Hardware, Software and Services), Technology, Application and By Geography

<https://marketpublishers.com/r/SECCDC1D9E96EN.html>

Date: May 2025

Pages: 150

Price: US\$ 4,150.00 (Single User License)

ID: SECCDC1D9E96EN

Abstracts

According to Statistics MRC, the Global Smart Vineyard Management Market is accounted for \$8.2 billion in 2025 and is expected to reach \$16.4 billion by 2032 growing at a CAGR of 10.37% during the forecast period. The use of cutting-edge technologies in vineyard operations, such as drones, GPS, IoT sensors, and data analytics, to improve grape output, quality, and sustainability is known as 'smart vineyard management.' It makes it possible to track weather, pest activity, plant health, and soil moisture in real time, enabling accurate and prompt actions. This method reduces waste and increases productivity by optimising the use of pesticides, fertiliser, and irrigation. In a competitive market, smart vineyard management helps winemakers and vineyard owners make better decisions, save costs, and use resources more efficiently by fusing automation and data-driven insights.

Market Dynamics:

Driver:

Rising demand for high-quality grapes and wine

Vineyard owners are implementing cutting-edge technologies to improve grape quality as consumers seek for premium wines. Drones and Internet of Things sensors are examples of smart vineyard management equipment that assist in real-time insect control, irrigation, and soil health monitoring. Improved grape quality, lower expenses, and higher crop yields are the results of this precision farming method. Furthermore, in

order to guarantee the best growing conditions for vineyards, climate change has increased the necessity for data-driven decisions. Therefore, it is anticipated that the market for smart vineyard solutions would keep expanding due to the demand for high-end wine production.

Restraint:

High initial investment

Smart technology setup, such as IoT sensors, drones, and automation systems, is expensive. Owners of small and medium-sized vineyards frequently lack the funding necessary to implement these cutting-edge solutions. Costs for professional labour, software integration, and continuing maintenance are all included in the high price. Widespread adoption is delayed by this financial hurdle, particularly in underdeveloped nations. Consequently, despite the long-term advantages of intelligent vineyard management, market development is still constrained.

Opportunity:

Integration with other agricultural technologies

The market for smart vineyard management is greatly increased by integration with other agricultural technology, which improve accuracy and productivity. Real-time soil, crop health, and weather monitoring is made possible by combining IoT sensors with GPS and drones. Informed decision-making is aided by data from these technologies, which optimise pest control, fertilisation, and irrigation. Robotics and automated equipment also lower labour expenses and increase operational reliability. Planning resources and doing data analysis are made easier by connectivity with farm management software. All things considered, in contemporary vineyard operations, this integration promotes profitability, sustainability, and productivity.

Threat:

Adoption of AI and machine learning

Vineyard operators frequently underuse sophisticated instruments due to a lack of technical skills. Significant obstacles also include unwillingness to share vineyard data and worries about data privacy. Real-time data gathering and analysis may be hampered by inconsistent internet connectivity in isolated vineyard areas. System

integration across many devices and technologies is made more difficult by the absence of standardised platforms. Last but not least, doubts regarding the precision and dependability of AI-driven suggestions might erode confidence and impede uptake.

Covid-19 Impact

The Covid-19 pandemic significantly impacted the Smart Vineyard Management Market, causing disruptions in supply chains, labor shortages, and a reduction in vineyard operations. Delays in the adoption of smart technologies and lower investments in precision agriculture slowed market growth. However, as the industry recovers, there is an increased demand for automation and digital solutions to improve efficiency, sustainability, and reduce operational costs, which is expected to drive long-term growth in the smart vineyard management sector.

The sensors segment is expected to be the largest during the forecast period

The sensors segment is expected to account for the largest market share during the forecast period by enabling real-time monitoring of soil conditions. These sensors enable accurate vineyard management by gathering information on temperature, humidity, soil moisture, and fertiliser levels. They contribute to the optimisation of pest control, fertilisation, and irrigation by offering precise insights, which enhances grape output and quality. Decision-making is improved by automation and data analytics when IoT and cloud platforms are integrated. Sensor-driven systems thereby promote sustainable viticulture methods, lower resource waste, and improve operational efficiency.

The vineyard mapping segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the vineyard mapping segment is predicted to witness the highest growth rate by enabling precise monitoring of vineyard topography and plant health. It supports data-driven decision-making through high-resolution imagery and geospatial analytics. This leads to optimized irrigation, targeted pest control, and improved yield forecasting. Integration with drones and satellite technologies enhances real-time data collection and analysis. As a result, vineyard mapping helps reduce resource wastage and boosts overall vineyard productivity.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market

sharedriven by technological advancements in precision agriculture. The integration of Internet of Things (IoT) devices, drones, artificial intelligence, and data analytics is enhancing vineyard monitoring and management, enabling improved crop yield, quality, and resource efficiency. The increasing adoption of sustainable farming practices, coupled with government support for smart agriculture technologies, is further fueling the market. Countries like China, India, and Australia are key contributors to this growth.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, owing to the increasing adoption of advanced technologies such as IoT, drones, AI, and data analytics for precision farming. These technologies help vineyard owners optimize irrigation, monitor soil health, detect diseases, and predict yields more efficiently. With the rising demand for high-quality wine and the need to improve sustainability, the market is poised for expansion, with key players focusing on innovative solutions and strategic partnerships to cater to the growing demand.

Key players in the market

Some of the key players profiled in the Smart Vineyard Management Market include PrecisionHawk, Inc., SureHarvest Services, LLC, TracMap Limited, YANMAR HOLDINGS CO., LTD., Trimble Inc., AGRIVI Ltd., AHA Viticulture, VineView, TeeJet Technologies, Elmibit d.o.o., Fruition Sciences, Robotnik, ISAGRI, TerraNIS, Naio Technologies, Pollen Systems Corporation, TerraviewPte. Ltd. and Vidacycle.

Key Developments:

In April 2024, Yanmar Vineyard Solutions, partnered with Moët & Chandon to develop the YV01 autonomous vineyard robot. This collaboration aimed to enhance vineyard efficiency and safety through advanced robotic solutions.

In January 2024, Yanmar Vineyard Solutions launched their product YV01 Autonomous Vineyard Robot, the YV01 is a fully autonomous spraying robot designed for vineyards. It features advanced spraying technology, enabling precise application of treatments while minimizing environmental impact.

In March 2023, PrecisionHawk merged with Field, a European leader in digital realty services, to support Field's expansion into the U.S. market. This merger aims to leverage combined expertise in AI and machine learning for infrastructure and energy

sector solutions, with PrecisionHawk continuing to operate under the Field brand while retaining its U.S. headquarters in Raleigh, North Carolina.

Components Covered:

Hardware

Software

Services

Technologies Covered:

Precision Viticulture

Remote Sensing

Variable Rate Technology (VRT)

Artificial Intelligence (AI)

Internet of Things (IoT)

Data Analytics

Other Technologies

Applications Covered:

Yield Monitoring

Crop Scouting

Irrigation Management

Weather Monitoring & Forecasting

Pest & Disease Detection

Harvesting Management

Vineyard Mapping

Soil Monitoring

Other Applications

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & 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 2024, 2025, 2026, 2028, and 2032

- 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

Contents

1 EXECUTIVE SUMMARY

2 PREFACE

- 2.1 Abstract
- 2.2 Stake Holders
- 2.3 Research Scope
- 2.4 Research Methodology
 - 2.4.1 Data Mining
 - 2.4.2 Data Analysis
 - 2.4.3 Data Validation
 - 2.4.4 Research Approach
- 2.5 Research Sources
 - 2.5.1 Primary Research Sources
 - 2.5.2 Secondary Research Sources
 - 2.5.3 Assumptions

3 MARKET TREND ANALYSIS

- 3.1 Introduction
- 3.2 Drivers
- 3.3 Restraints
- 3.4 Opportunities
- 3.5 Threats
- 3.6 Application Analysis
- 3.7 Emerging Markets
- 3.8 Impact of Covid-19

4 PORTERS FIVE FORCE ANALYSIS

- 4.1 Bargaining power of suppliers
- 4.2 Bargaining power of buyers
- 4.3 Threat of substitutes
- 4.4 Threat of new entrants
- 4.5 Competitive rivalry

5 GLOBAL SMART VINEYARD MANAGEMENT MARKET, BY COMPONENT

- 5.1 Introduction
- 5.2 Hardware
 - 5.2.1 Sensors
 - 5.2.2 Drones/UAVs
 - 5.2.3 Cameras
 - 5.2.4 Controllers
 - 5.2.5 GPS Devices
- 5.3 Software
 - 5.3.1 Cloud-based
 - 5.3.2 On-premise
- 5.4 Services
 - 5.4.1 Installation & Maintenance
 - 5.4.2 Consulting
 - 5.4.3 Support Services

6 GLOBAL SMART VINEYARD MANAGEMENT MARKET, BY TECHNOLOGY

- 6.1 Introduction
- 6.2 Precision Viticulture
- 6.3 Remote Sensing
- 6.4 Variable Rate Technology (VRT)
- 6.5 Artificial Intelligence (AI)
- 6.6 Internet of Things (IoT)
- 6.7 Data Analytics
- 6.8 Other Technologies

7 GLOBAL SMART VINEYARD MANAGEMENT MARKET, BY APPLICATION

- 7.1 Introduction
- 7.2 Yield Monitoring
- 7.3 Crop Scouting
- 7.4 Irrigation Management
- 7.5 Weather Monitoring & Forecasting
- 7.6 Pest & Disease Detection
- 7.7 Harvesting Management
- 7.8 Vineyard Mapping
- 7.9 Soil Monitoring
- 7.10 Other Applications

8 GLOBAL SMART VINEYARD MANAGEMENT MARKET, BY GEOGRAPHY

8.1 Introduction

8.2 North America

8.2.1 US

8.2.2 Canada

8.2.3 Mexico

8.3 Europe

8.3.1 Germany

8.3.2 UK

8.3.3 Italy

8.3.4 France

8.3.5 Spain

8.3.6 Rest of Europe

8.4 Asia Pacific

8.4.1 Japan

8.4.2 China

8.4.3 India

8.4.4 Australia

8.4.5 New Zealand

8.4.6 South Korea

8.4.7 Rest of Asia Pacific

8.5 South America

8.5.1 Argentina

8.5.2 Brazil

8.5.3 Chile

8.5.4 Rest of South America

8.6 Middle East & Africa

8.6.1 Saudi Arabia

8.6.2 UAE

8.6.3 Qatar

8.6.4 South Africa

8.6.5 Rest of Middle East & Africa

9 KEY DEVELOPMENTS

9.1 Agreements, Partnerships, Collaborations and Joint Ventures

9.2 Acquisitions & Mergers

9.3 New Product Launch

9.4 Expansions

9.5 Other Key Strategies

10 COMPANY PROFILING

10.1 PrecisionHawk, Inc.

10.2 SureHarvest Services, LLC

10.3 TracMap Limited

10.4 YANMAR HOLDINGS CO., LTD.

10.5 Trimble Inc.

10.6 AGRIVI Ltd.

10.7 AHA Viticulture

10.8 VineView

10.9 TeeJet Technologies

10.10 Elmibit d.o.o.

10.11 Fruition Sciences

10.12 Robotnik

10.13 ISAGRI

10.14 TerraNIS

10.15 Naio Technologies

10.16 Pollen Systems Corporation

10.17 Terraview Pte. Ltd.

10.18 Vidacycle

List Of Tables

LIST OF TABLES

Table 1 Global Smart Vineyard Management Market Outlook, By Region (2024-2032) (\$MN)

Table 2 Global Smart Vineyard Management Market Outlook, By Component (2024-2032) (\$MN)

Table 3 Global Smart Vineyard Management Market Outlook, By Hardware (2024-2032) (\$MN)

Table 4 Global Smart Vineyard Management Market Outlook, By Sensors (2024-2032) (\$MN)

Table 5 Global Smart Vineyard Management Market Outlook, By Drones/UAVs (2024-2032) (\$MN)

Table 6 Global Smart Vineyard Management Market Outlook, By Cameras (2024-2032) (\$MN)

Table 7 Global Smart Vineyard Management Market Outlook, By Controllers (2024-2032) (\$MN)

Table 8 Global Smart Vineyard Management Market Outlook, By GPS Devices (2024-2032) (\$MN)

Table 9 Global Smart Vineyard Management Market Outlook, By Software (2024-2032) (\$MN)

Table 10 Global Smart Vineyard Management Market Outlook, By Cloud-based (2024-2032) (\$MN)

Table 11 Global Smart Vineyard Management Market Outlook, By On-premise (2024-2032) (\$MN)

Table 12 Global Smart Vineyard Management Market Outlook, By Services (2024-2032) (\$MN)

Table 13 Global Smart Vineyard Management Market Outlook, By Installation & Maintenance (2024-2032) (\$MN)

Table 14 Global Smart Vineyard Management Market Outlook, By Consulting (2024-2032) (\$MN)

Table 15 Global Smart Vineyard Management Market Outlook, By Support Services (2024-2032) (\$MN)

Table 16 Global Smart Vineyard Management Market Outlook, By Technology (2024-2032) (\$MN)

Table 17 Global Smart Vineyard Management Market Outlook, By Precision Viticulture (2024-2032) (\$MN)

Table 18 Global Smart Vineyard Management Market Outlook, By Remote Sensing

(2024-2032) (\$MN)

Table 19 Global Smart Vineyard Management Market Outlook, By Variable Rate Technology (VRT) (2024-2032) (\$MN)

Table 20 Global Smart Vineyard Management Market Outlook, By Artificial Intelligence (AI) (2024-2032) (\$MN)

Table 21 Global Smart Vineyard Management Market Outlook, By Internet of Things (IoT) (2024-2032) (\$MN)

Table 22 Global Smart Vineyard Management Market Outlook, By Data Analytics (2024-2032) (\$MN)

Table 23 Global Smart Vineyard Management Market Outlook, By Other Technologies (2024-2032) (\$MN)

Table 24 Global Smart Vineyard Management Market Outlook, By Application (2024-2032) (\$MN)

Table 25 Global Smart Vineyard Management Market Outlook, By Yield Monitoring (2024-2032) (\$MN)

Table 26 Global Smart Vineyard Management Market Outlook, By Crop Scouting (2024-2032) (\$MN)

Table 27 Global Smart Vineyard Management Market Outlook, By Irrigation Management (2024-2032) (\$MN)

Table 28 Global Smart Vineyard Management Market Outlook, By Weather Monitoring & Forecasting (2024-2032) (\$MN)

Table 29 Global Smart Vineyard Management Market Outlook, By Pest & Disease Detection (2024-2032) (\$MN)

Table 30 Global Smart Vineyard Management Market Outlook, By Harvesting Management (2024-2032) (\$MN)

Table 31 Global Smart Vineyard Management Market Outlook, By Vineyard Mapping (2024-2032) (\$MN)

Table 32 Global Smart Vineyard Management Market Outlook, By Soil Monitoring (2024-2032) (\$MN)

Table 33 Global Smart Vineyard Management Market Outlook, By Other Applications (2024-2032) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

I would like to order

Product name: Smart Vineyard Management Market Forecasts to 2032 – Global Analysis By Component (Hardware, Software and Services), Technology, Application and By Geography

Product link: <https://marketpublishers.com/r/SECCDC1D9E96EN.html>

Price: US\$ 4,150.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/SECCDC1D9E96EN.html>