+357 96 030922
info@marketpublishers.com

Global Harvesting Robots Market Size study, by Type (Unmanned Aerial Vehicles (UAVs), Milking Robots, Driverless Tractors, Automated Harvesting Systems, Others), Robot Type (Semi-Autonomous, Fully-Autonomous), Farming Environment (Indoor, Outdoor), Farm Produce (Fruits and Vegetables, Leafy Vegetables, Pumpkin, Lettuce, Cabbage, Others), Fruit Vegetables (Tomato, Cucumber, Okra, Others), Seed Vegetables (Egusi Melon, Ito Melon, Others), Root Vegetables (Sweet Potato, Irish Potato, Carrot, Raddish, Others), Application, and Regional Forecasts 2022-2032

https://marketpublishers.com/r/G3ED80D20DBCEN.html
Date: May 2025
Pages: 285
Price: US$ 3,218.00 (Single User License)
ID: G3ED80D20DBCEN

Abstracts

Global Harvesting Robots Market is valued at approximately USD 0.84 billion in 2023 and is anticipated to grow with a robust CAGR of more than 11.50% over the forecast period 2024-2032. The harvesting robots market is at the epicenter of a transformative shift in global agriculture, where precision, scalability, and automation converge to redefine crop production. These advanced machines are increasingly deployed to streamline labor-intensive harvesting tasks, mitigate human error, and elevate productivity metrics in both controlled and open-field environments. At the core of this revolution are innovations in AI, machine vision, and robotics, enabling these systems to identify, evaluate, and harvest crops with minimal damage and maximum efficiency.

The exponential growth in food demand, exacerbated by shrinking labor availability in

+357 96 030922
info@marketpublishers.com

agriculture, has amplified the adoption of robotic harvesting solutions. These systems are proving vital in fruit and vegetable farms, where manual harvesting is time-consuming and prone to quality inconsistencies. Furthermore, driverless tractors, milking robots, and UAVs are being leveraged across broader agricultural processes. The rise of indoor vertical farming and smart greenhouses has provided fertile ground for deploying semi- and fully-autonomous robots in high-density crop environments. This trend is supported by a growing ecosystem of agri-tech startups, government subsidies, and institutional R&D investments.

Despite its strong outlook, the harvesting robots market contends with several challenges, including high capital costs, fragmented technology standards, and complex integration within traditional farm operations. Additionally, farmers in developing economies often face adoption barriers due to limited digital literacy and infrastructure. However, the transition to agriculture-as-a-service (AaaS) business models is helping bridge this gap, enabling access to automation via pay-as-you-go frameworks. As edge computing and cloud analytics improve real-time decision-making capabilities, harvesting robots are evolving from standalone units into networked, intelligent systems that sync seamlessly with broader farm management platforms.

Another compelling advancement lies in crop-specific robotics tailored for diverse farm produce such as tomatoes, lettuce, cabbage, sweet potatoes, and okra. These robots combine depth sensors, GPS mapping, and gripping mechanisms to selectively harvest produce with minimal damage. Manufacturers are focusing on building adaptable, modular robots that can navigate variable terrain, weather conditions, and crop geometries. The integration of multi-spectral imaging and predictive yield analytics further enhances operational efficiency and sustainability.

Geographically, North America currently leads the market, underpinned by tech-savvy farms, favorable investment climates, and high adoption of agricultural automation. Europe follows closely, driven by labor shortages and strong policy backing for precision farming technologies. Meanwhile, the Asia Pacific region is forecasted to experience the highest growth during the forecast period, fueled by rising food demand, agrarian reforms, and increasing mechanization in countries like China, India, and Japan. Latin America and the Middle East & Africa are also emerging as high-potential regions with government-led initiatives and the gradual digital transformation of their agricultural landscapes.

Major market player included in this report are:

+357 96 030922
info@marketpublishers.com

Agrobot

Harvest CROO Robotics

Abundant Robotics

FFRobotics

Naio Technologies

Energid Technologies Corporation

Ecorobotix

Robotics Plus

Vision Robotics Corporation

Octinion

Deere & Company

CNH Industrial N.V.

AGCO Corporation

Trimble Inc.

Blue River Technology

The detailed segments and sub-segment of the market are explained below:

By Type

Unmanned Aerial Vehicles (UAVs)

Milking Robots

+357 96 030922
info@marketpublishers.com

Driverless Tractors

Automated Harvesting Systems

Others

By Robot Type

Semi-Autonomous

Fully-Autonomous

By Farming Environment

Indoor

Outdoor

By Farm Produce

Fruits and Vegetables

Leafy Vegetables

Pumpkin

Lettuce

Cabbage

Others

By Fruit Vegetables

Tomato

+357 96 030922
info@marketpublishers.com

- Cucumber
- Okra
- Others

By Seed Vegetables

- Egusi Melon
- Ito Melon
- Others

By Root Vegetables

- Sweet Potato
- Irish Potato
- Carrot
- Raddish
- Others

By Application

- Field Crops
- Horticulture
- Greenhouse
- Others

+357 96 030922
info@marketpublishers.com

By Region:

North America

- U.S.
- Canada

Europe

- UK
- Germany
- France
- Spain
- Italy
- Rest of Europe

Asia Pacific

- China
- India
- Japan
- Australia
- South Korea
- Rest of Asia Pacific

+357 96 030922
info@marketpublishers.com

Latin America

- Brazil
- Mexico
- Rest of Latin America

Middle East & Africa

- Saudi Arabia
- South Africa
- Rest of Middle East & Africa

Years considered for the study are as follows:

- Historical year – 2022
- Base year – 2023
- Forecast period – 2024 to 2032

Key Takeaways:

- Market Estimates & Forecast for 10 years from 2022 to 2032.
- Annualized revenues and regional level analysis for each market segment.
- Detailed analysis of geographical landscape with country-level analysis of major regions.
- Competitive landscape with information on major players in the market.

+357 96 030922
info@marketpublishers.com

Analysis of key business strategies and recommendations on future market approach.

Analysis of competitive structure of the market.

Demand side and supply side analysis of the market.

Companies Mentioned

Agrobot

Harvest CROO Robotics

Abundant Robotics

FFRobotics

Naio Technologies

Energid Technologies Corporation

Ecorobotix

Robotics Plus

Vision Robotics Corporation

Octinion

Deere & Company

CNH Industrial N.V.

AGCO Corporation

Trimble Inc.

+357 96 030922
info@marketpublishers.com

Blue River Technology

+357 96 030922
info@marketpublishers.com

Contents

CHAPTER 1. GLOBAL HARVESTING ROBOTS MARKET EXECUTIVE SUMMARY

1.1. Global Harvesting Robots Market Size & Forecast (2022–2032)
1.2. Regional Summary
1.3. Segmental Summary
  1.3.1. By Type
  1.3.2. By Robot Type
  1.3.3. By Farming Environment
  1.3.4. By Farm Produce
1.4. Key Trends
1.5. Recession Impact
1.6. Analyst Recommendation & Conclusion

CHAPTER 2. GLOBAL HARVESTING ROBOTS MARKET DEFINITION AND RESEARCH ASSUMPTIONS

2.1. Research Objective
2.2. Market Definition
2.3. Research Assumptions
  2.3.1. Inclusion & Exclusion
  2.3.2. Limitations
  2.3.3. Supply Side Analysis
    2.3.3.1. Availability
    2.3.3.2. Infrastructure
    2.3.3.3. Regulatory Environment
    2.3.3.4. Market Competition
    2.3.3.5. Economic Viability (Farmer’s Perspective)
  2.3.4. Demand Side Analysis
    2.3.4.1. Regulatory Frameworks
    2.3.4.2. Technological Advancements
    2.3.4.3. Environmental Considerations
    2.3.4.4. Farmer Awareness & Acceptance
2.4. Estimation Methodology
2.5. Years Considered for the Study
2.6. Currency Conversion Rates

CHAPTER 3. GLOBAL HARVESTING ROBOTS MARKET DYNAMICS

+357 96 030922
info@marketpublishers.com

3.1. Market Drivers
3.1.1. Exponential Growth in Food Demand
3.1.2. Shrinking Agricultural Labor Availability
3.1.3. Rise of Indoor and Controlled-Environment Farming
3.1.4. Advances in AI, Machine Vision & Robotics
3.2. Market Challenges
3.2.1. High Capital and Maintenance Costs
3.2.2. Fragmented Technology Standards
3.2.3. Complex Integration with Traditional Operations
3.2.4. Digital Literacy & Infrastructure Barriers in Developing Regions
3.3. Market Opportunities
3.3.1. Agriculture-as-a-Service (AaaS) Business Models
3.3.2. Edge Computing & Cloud Analytics Integration
3.3.3. Crop-Specific Robotic Solutions
3.3.4. Multi-Spectral Imaging & Predictive Yield Analytics

CHAPTER 4. GLOBAL HARVESTING ROBOTS MARKET INDUSTRY ANALYSIS

4.1. Porter’s Five Forces Model
4.1.1. Bargaining Power of Suppliers
4.1.2. Bargaining Power of Buyers
4.1.3. Threat of New Entrants
4.1.4. Threat of Substitutes
4.1.5. Competitive Rivalry
4.1.6. Futuristic Approach to Porter’s Model
4.1.7. Porter’s Model Impact Analysis
4.2. PESTEL Analysis
4.2.1. Political
4.2.2. Economic
4.2.3. Social
4.2.4. Technological
4.2.5. Environmental
4.2.6. Legal
4.3. Top Investment Opportunities
4.4. Top Winning Strategies
4.5. Disruptive Trends
4.6. Industry Expert Perspectives
4.7. Analyst Recommendation & Conclusion

+357 96 030922
info@marketpublishers.com

CHAPTER 5. GLOBAL HARVESTING ROBOTS MARKET SIZE & FORECASTS BY TYPE (2022–2032)

5.1. Segment Dashboard
5.2. Revenue Trend Analysis by Type, 2022 & 2032 (USD Million/Billion)
  5.2.1. Unmanned Aerial Vehicles (UAVs)
  5.2.2. Milking Robots
  5.2.3. Driverless Tractors
  5.2.4. Automated Harvesting Systems
  5.2.5. Others

CHAPTER 6. GLOBAL HARVESTING ROBOTS MARKET SIZE & FORECASTS BY ROBOT TYPE, FARMING ENVIRONMENT, PRODUCE & APPLICATION (2022–2032)

6.1. By Robot Type (Semi-Autonomous vs. Fully-Autonomous)
6.2. By Farming Environment (Indoor vs. Outdoor)
6.3. By Farm Produce
  6.3.1. Fruits & Vegetables
  6.3.2. Leafy Vegetables (Lettuce, Cabbage, Others)
  6.3.3. Pumpkin
  6.3.4. Other Produce
6.4. By Fruit Vegetables (Tomato, Cucumber, Okra, Others)
6.5. By Seed Vegetables (Egusi Melon, Ito Melon, Others)
6.6. By Root Vegetables (Sweet Potato, Irish Potato, Carrot, Radish, Others)
6.7. By Application (Field Crops, Horticulture, Greenhouse, Others)

CHAPTER 7. GLOBAL HARVESTING ROBOTS MARKET SIZE & FORECASTS BY REGION (2022–2032)

7.1. North America
  7.1.1. U.S.
    7.1.1.1. By Type Breakdown (2022–2032)
    7.1.1.2. By Robot Type & Environment Breakdown (2022–2032)
  7.1.2. Canada
7.2. Europe
  7.2.1. U.K.
  7.2.2. Germany
  7.2.3. France

+357 96 030922
info@marketpublishers.com

7.2.4. Spain
7.2.5. Italy
7.2.6. Rest of Europe
7.3. Asia Pacific
7.3.1. China
7.3.2. India
7.3.3. Japan
7.3.4. Australia
7.3.5. South Korea
7.3.6. Rest of Asia Pacific
7.4. Latin America
7.4.1. Brazil
7.4.2. Mexico
7.4.3. Rest of Latin America
7.5. Middle East & Africa
7.5.1. Saudi Arabia
7.5.2. South Africa
7.5.3. Rest of Middle East & Africa

CHAPTER 8. COMPETITIVE INTELLIGENCE

8.1. Key Company SWOT Analysis
8.1.1. Agrobot
8.1.2. Harvest CROO Robotics
8.1.3. Abundant Robotics
8.2. Top Market Strategies
8.3. Company Profiles
8.3.1. Agrobot
8.3.1.1. Key Information
8.3.1.2. Overview
8.3.1.3. Financial (Subject to Data Availability)
8.3.1.4. Product Summary
8.3.1.5. Market Strategies
8.3.2. Harvest CROO Robotics
8.3.3. Abundant Robotics
8.3.4. FFRobotics
8.3.5. Naio Technologies
8.3.6. Energid Technologies Corporation
8.3.7. Ecorobotix

+357 96 030922
info@marketpublishers.com

8.3.8. Robotics Plus
8.3.9. Vision Robotics Corporation
8.3.10. Octinion
8.3.11. Deere & Company
8.3.12. CNH Industrial N.V.
8.3.13. AGCO Corporation
8.3.14. Trimble Inc.
8.3.15. Blue River Technology

CHAPTER 9. RESEARCH PROCESS

9.1. Research Process
9.1.1. Data Mining
9.1.2. Analysis
9.1.3. Market Estimation
9.1.4. Validation
9.1.5. Publishing
9.2. Research Attributes

+357 96 030922
info@marketpublishers.com

List Of Tables

LIST OF TABLES

TABLE 1. Global Harvesting Robots market, report scope
TABLE 2. Global Harvesting Robots market estimates & forecasts by Region 2022–2032 (USD Million/Billion)
TABLE 3. Global Harvesting Robots market estimates & forecasts by Type 2022–2032 (USD Million/Billion)
TABLE 4. Global Harvesting Robots market estimates & forecasts by Robot Type 2022–2032 (USD Million/Billion)
TABLE 5. Global Harvesting Robots market estimates & forecasts by Farming Environment 2022–2032 (USD Million/Billion)
TABLE 6. Global Harvesting Robots market estimates & forecasts by Farm Produce 2022–2032 (USD Million/Billion)
TABLE 7. Global Harvesting Robots market estimates & forecasts by Fruit Vegetables 2022–2032 (USD Million/Billion)
TABLE 8. Global Harvesting Robots market estimates & forecasts by Seed Vegetables 2022–2032 (USD Million/Billion)
TABLE 9. Global Harvesting Robots market estimates & forecasts by Root Vegetables 2022–2032 (USD Million/Billion)
TABLE 10. Global Harvesting Robots market estimates & forecasts by Application 2022–2032 (USD Million/Billion)
TABLE 11. North America Harvesting Robots market estimates & forecasts, 2022–2032 (USD Million/Billion)
TABLE 12. U.S. Harvesting Robots market estimates & forecasts, 2022–2032 (USD Million/Billion)
TABLE 13. Canada Harvesting Robots market estimates & forecasts, 2022–2032 (USD Million/Billion)
TABLE 14. Europe Harvesting Robots market estimates & forecasts, 2022–2032 (USD Million/Billion)
TABLE 15. Asia Pacific Harvesting Robots market estimates & forecasts, 2022–2032 (USD Million/Billion)
TABLE 16. Latin America Harvesting Robots market estimates & forecasts, 2022–2032 (USD Million/Billion)
TABLE 17. Middle East & Africa Harvesting Robots market estimates & forecasts, 2022–2032 (USD Million/Billion)
TABLE 18. Key Company Market Shares, 2023 (%)
TABLE 19. Porter’s Five Forces Impact Scores

+357 96 030922
info@marketpublishers.com

TABLE 20. PESTEL Analysis Summary

+357 96 030922
info@marketpublishers.com

List Of Figures

LIST OF FIGURES

FIG 1. Global Harvesting Robots market, research methodology
FIG 2. Global Harvesting Robots market, market estimation techniques
FIG 3. Global market size estimates & forecast methods
FIG 4. Global Harvesting Robots market, key trends 2023
FIG 5. Global Harvesting Robots market, growth prospects 2022–2032
FIG 6. Global Harvesting Robots market, Porter’s Five Forces model
FIG 7. Global Harvesting Robots market, PESTEL analysis
FIG 8. Global Harvesting Robots market, value chain analysis
FIG 9. Global Harvesting Robots market by Type, 2022 & 2032 (USD Million/Billion)
FIG 10. Global Harvesting Robots market by Robot Type, 2022 & 2032 (USD Million/Billion)
FIG 11. Global Harvesting Robots market by Farming Environment, 2022 & 2032 (USD Million/Billion)
FIG 12. Global Harvesting Robots market by Farm Produce, 2022 & 2032 (USD Million/Billion)
FIG 13. Global Harvesting Robots market by Application, 2022 & 2032 (USD Million/Billion)
FIG 14. Global Harvesting Robots market, regional snapshot 2022 & 2032
FIG 15. North America Harvesting Robots market, 2022 & 2032 (USD Million/Billion)
FIG 16. Europe Harvesting Robots market, 2022 & 2032 (USD Million/Billion)
FIG 17. Asia Pacific Harvesting Robots market, 2022 & 2032 (USD Million/Billion)
FIG 18. Latin America Harvesting Robots market, 2022 & 2032 (USD Million/Billion)
FIG 19. Middle East & Africa Harvesting Robots market, 2022 & 2032 (USD Million/Billion)
FIG 20. Global Harvesting Robots market, company market share analysis (2023)

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: Global Harvesting Robots Market Size study, by Type (Unmanned Aerial Vehicles (UAVs), Milking Robots, Driverless Tractors, Automated Harvesting Systems, Others), Robot Type (Semi-Autonomous, Fully-Autonomous), Farming Environment (Indoor, Outdoor), Farm Produce (Fruits and Vegetables, Leafy Vegetables, Pumpkin, Lettuce, Cabbage, Others), Fruit Vegetables (Tomato, Cucumber, Okra, Others), Seed Vegetables (Egusi Melon, Ito Melon, Others), Root Vegetables (Sweet Potato, Irish Potato, Carrot, Raddish, Others), Application, and Regional Forecasts 2022-2032

Product link: https://marketpublishers.com/r/G3ED80D20DBCEN.html

Price: US$ 3,218.00 (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/G3ED80D20DBCEN.html