

Smart Agriculture Market with COVID-19 impact analysis by Offering, Agriculture Type (Precision Farming, Livestock Monitoring, Precision Aquaculture, Precision Forestry, Smart Greenhouse), Application, Farm Size, & Geography – Global Forecast to 2026

https://marketpublishers.com/r/S4F8A101953EN.html

Date: October 2021

Pages: 300

Price: US\$ 4,950.00 (Single User License)

ID: S4F8A101953EN

Abstracts

The smart agriculture market is expected to grow from USD 12.9 billion in 2021 to USD 20.8 billion by 2026; it is expected to grow at a CAGR of 10.1% during the forecast period. The major driving factors for the growth of the smart agriculture market include the implementation of advanced technologies like IoT and AI and the increase in population across the globe.

RFID tags and readers to have the largest share of livestock monitoring hardware during the forecast period

RFID tags and readers to account for the largest share of the livestock monitoring hardware market during the forecast period. The market growth can be attributed to the rising demand for livestock monitoring systems, increasing preference for automated hardware and systems, and the rising number of dairy cattle across the world, along with technological advancements. GPS technology is gaining popularity among livestock owners owing to its low cost and compatibility with other devices such as cell phones, tabs, and laptops.

Precision farming application to dominate the smart agriculture market during the forecast period.



Major factors fueling the growth of the precision farming market include the high pressure on the global food supply system owing to the growing world population, substantial cost-cutting made possible with the adoption of precision farming technology, and strong support and initiatives by several governments across the world to adopt modern agricultural techniques.

The Americas to have the largest market share during the forecast period

The Americas accounted for the largest share of the smart agriculture market in 2020, and a similar trend is likely to be observed during the forecast period due to the presence of several major players in the smart agriculture market, such as Deere & Company (US), Trimble (US), and Topcon Positioning Systems (US). These companies have contributed to the growth of the smart agriculture market by launching innovative products and services, as well as by spending extensively on the R&D of smart agriculture solutions.

In the process of determining and verifying the market size for several segments and subsegments gathered through secondary research, extensive primary interviews have been conducted with key officials in the smart agriculture market. Following is the breakup of the profiles of primary participants for the report.

By Company Type: Tier 1 – 20 %, Tier 2 – 45%, and Tier 3 – 35%

By Designation: C-Level Executives – 35%, Directors – 25%, and Others – 40%

By Region: Americas – 45%, Europe – 25%, APAC – 20%, and RoW – 10%

The report profiles key players in the smart agriculture market and analyzes their market shares. Players profiled in this report are John Deere (US), Trimble (US), Topcon Positioning Systems (US), DeLaval (Sweden), AKVA(Norway) Antelliq(France), Afimilk(Israel), InnovaSea Systems(US), Heliospectra(Sweden) and LumiGrow(US), ABACO(Italy), Treemetrics(Ireland), Raven Industries(US), AG Leader Technology(US), AgJunction(US), The Climate Corporation(US), Nedap(Netherlands), BouMatic(US), Fancom(Netherlands), Aquabyte(US), Steinsvik(Norway), VEMCO(Nova Scotia), Nexus Greenhouse Systems(US), Certhon (Netherlands), NV5 Geospatial(US), Hitachi Construction Machinery(Japan), Akuakare(Turkey), Gamaya(Switzerland), ec2ce(Spain), Eruvaka Technologies(India) and CropX Technologies(Israel).



Research Coverage

This report segments the smart agriculture market based on agriculture type, offering, application, farm size and region. It also describes major drivers, restraints, challenges, and opportunities about this market, as well as includes market share analysis, value chain analysis, porter's five forces analysis, trade analysis, ecosystem, technological trends, pricing analysis, key patents, standards and frameworks, and case studies/use cases.

Reasons to Buy This Report

The report will help leaders/new entrants in the smart agriculture market in the following ways:

- 1. The report segments the smart agriculture market comprehensively and provides the closest market size estimation for all subsegments across regions.
- 2. The report will help stakeholders understand the pulse of the market and provide them with information on key drivers, restraints, challenges, and opportunities about the smart agriculture market.
- 3. The report will help stakeholders understand their competitors better and gain insights to improve their position in the smart agriculture market. The competitive landscape section describes the competitor ecosystem.



Contents

1 INTRODUCTION

- 1.1 STUDY OBJECTIVES
- 1.2 MARKET DEFINITION
- 1.2.1 INCLUSIONS AND EXCLUSIONS
- 1.3 STUDY SCOPE
 - 1.3.1 MARKETS COVERED
 - 1.3.2 GEOGRAPHIC SCOPE
- 1.3.3 YEARS CONSIDERED FOR THE STUDY
- 1.4 CURRENCY
- 1.5 LIMITATIONS
- 1.6 STAKEHOLDERS
- 1.7 SUMMARY OF CHANGES

2 RESEARCH METHODOLOGY

2.1 RESEARCH DATA

FIGURE 1 SMART AGRICULTURE MARKET: PROCESS FLOW OF MARKET SIZE ESTIMATION

FIGURE 2 SMART AGRICULTURE MARKET: RESEARCH DESIGN

- 2.1.1 SECONDARY AND PRIMARY RESEARCH
- 2.1.2 SECONDARY DATA
 - 2.1.2.1 Key secondary sources
 - 2.1.2.2 Secondary sources
- 2.1.3 PRIMARY DATA
 - 2.1.3.1 Primary interviews with experts
 - 2.1.3.2 List of key primary respondents
 - 2.1.3.3 Breakdown of primaries
 - 2.1.3.4 Key data from primary sources
- 2.1.3.5 Key industry insights
- 2.2 MARKET SIZE ESTIMATION
 - 2.2.1 BOTTOM-UP APPROACH
 - 2.2.1.1 Approach for capturing market size by bottom-up analysis

(demand side)

FIGURE 3 MARKET SIZE ESTIMATION METHODOLOGY: BOTTOM-UP APPROACH (DEMAND SIDE)

FIGURE 4 MARKET SIZE ESTIMATION METHODOLOGY: BOTTOM-UP APPROACH



(SUPPLY SIDE)

2.2.2 TOP-DOWN APPROACH

2.2.2.1 Approach for capturing market size by top-down analysis

(supply side)

FIGURE 5 MARKET SIZE ESTIMATION METHODOLOGY: TOP-DOWN APPROACH

2.3 MARKET BREAKDOWN AND DATA TRIANGULATION

FIGURE 6 DATA TRIANGULATION

2.4 RESEARCH ASSUMPTIONS

2.5 LIMITATIONS

2.6 RISK ASSESSMENT

TABLE 1 RISK FACTOR ANALYSIS

3 EXECUTIVE SUMMARY

- 3.1 SMART AGRICULTURE MARKET: POST-COVID-19
 - 3.1.1 REALISTIC SCENARIO

FIGURE 7 REALISTIC SCENARIO: SMART AGRICULTURE MARKET, 2017-2026 (USD BILLION)

3.1.2 PESSIMISTIC SCENARIO

FIGURE 8 PESSIMISTIC SCENARIO: SMART AGRICULTURE MARKET, 2017-2026 (USD BILLION)

3.1.3 OPTIMISTIC SCENARIO

FIGURE 9 OPTIMISTIC SCENARIO: SMART AGRICULTURE MARKET, 2017-2026 (USD BILLION)

FIGURE 10 IMPACT OF COVID-19 ON SMART AGRICULTURE MARKET

FIGURE 11 PRECISION FARMING SEGMENT TO LEAD SMART AGRICULTURE MARKET FROM 2021 TO 2026

FIGURE 12 SMART AGRICULTURE MARKET FOR SERVICES TO GROW AT HIGHEST CAGR DURING FORECAST PERIOD

FIGURE 13 SMALL FARMS TO GROW AT HIGHEST CAGR DURING FORECAST PERIOD

FIGURE 14 SMART AGRICULTURE MARKET IN APAC TO GROW AT THE HIGHEST CAGR FROM 2021 TO 2026

4 PREMIUM INSIGHT

4.1 ATTRACTIVE OPPORTUNITIES IN SMART AGRICULTURE MARKET FIGURE 15 INCREASING DEMAND FOR SMART AGRICULTURE IN APAC TO FUEL MARKET GROWTH



4.2 SMART AGRICULTURE MARKET, BY OFFERING

FIGURE 16 HARDWARE SEGMENT TO DOMINATE MARKET DURING FORECAST PERIOD

4.3 SMART AGRICULTURE MARKET, BY APPLICATION

FIGURE 17 PRECISION FARMING PROJECTED TO LEAD SMART AGRICULTURE MARKET FROM 2021 TO 2026

4.4 AMERICAS: SMART AGRICULTURE MARKET, BY AGRICULTURE TYPE & REGION

FIGURE 18 PRECISION FARMING TO ACCOUNT FOR LARGEST SHARE IN AMERICAS DURING FORECAST PERIOD

4.5 SMART AGRICULTURE MARKET, BY FARM SIZE

FIGURE 19 SMALL FARM TO GROW HIGHEST CAGR DURING FORECAST PERIOD

4.6 SMART AGRICULTURE MARKET, BY GEOGRAPHY

FIGURE 20 MARKET IN CHINA TO GROW AT HIGHEST CAGR DURING FORECAST PERIOD

5 MARKET OVERVIEW

5.1 DEVELOPMENT OF SMART AGRICULTURE PRACTICES

FIGURE 21 EVOLUTION OF SMART AGRICULTURE CONCEPT

5.2 MARKET DYNAMICS

FIGURE 22 SMART AGRICULTURE MARKET: DRIVERS, RESTRAINTS, OPPORTUNITIES, AND CHALLENGES

5.2.1 DRIVERS

FIGURE 23 SMART AGRICULTURE MARKET: DRIVERS

5.2.1.1 Rising pressure on food supply system owing to rapidly growing population

FIGURE 24 GLOBAL CONSUMPTION OF MAJOR FIELD CROPS, 2005–2050

5.2.1.2 Surging use of modern technologies in agricultural products

5.2.1.3 Rising income levels and demand for protein-rich agua food

FIGURE 25 GLOBAL FISHERY PRODUCTION, 2016–2026 (MILLION TONS)

- 5.2.1.4 Growing focus of farmers on livestock monitoring and disease detection
- 5.2.1.5 Increasing emphasis on reducing management cost by adopting advanced livestock monitoring products
- 5.2.1.6 Increased adoption of advanced technologies such as IoT and AI in aquaculture farms

5.2.2 RESTRAINTS

FIGURE 26 SMART AGRICULTURE MARKET: RESTRAINTS

- 5.2.2.1 High upfront cost for development of modern agricultural equipment
- 5.2.2.2 Fragmented agriculture industry



5.2.3 OPPORTUNITIES

FIGURE 27 SMART AGRICULTURE MARKET: OPPORTUNITIES

- 5.2.3.1 Rising adoption of livestock monitoring solutions in emerging countries
- FIGURE 28 GLOBAL MILKING ROBOTS INSTALLED BASE, 2017–2030 (UNITS)
 - 5.2.3.2 Growing use of unmanned aerial vehicles or drones in agricultural farms
 - 5.2.3.3 Increasing popularity of land-based recirculating aquaculture systems
- 5.2.3.4 Growing focus on integration of smartphones with agricultural hardware and software applications
- 5.2.3.5 Agritech startups to increase the use of smart agriculture practices in COVID-19 times
 - 5.2.4 CHALLENGES

FIGURE 29 SMART AGRICULTURE MARKET: CHALLENGES

- 5.2.4.1 Management of large volumes of data for productive decision making
- 5.2.4.2 Livestock farming is increasing environmental concerns and global warming
- 5.2.5 WINNING IMPERATIVES
- 5.2.5.1 Environmental protection with the utilization of smart agriculture techniques
- 5.3 REVENUE SHIFT AND NEW REVENUE POCKETS FOR SMART AGRICULTURE MARKET PLAYERS

FIGURE 30 REVENUE SHIFT IN SMART AGRICULTURE MARKET

5.4 AVERAGE SELLING PRICE ANALYSIS

TABLE 2 MILKING ROBOTS: AVERAGE SELLING PRICE ANALYSIS, 2019 VS. 2025 TABLE 3 RFID TAGS & READERS: AVERAGE SELLING PRICE ANALYSIS, 2019 VS. 2025

5.5 PRICING ANALYSIS: AVERAGE SELLING PRICE (ASP) TREND FOR SENSORS IN PRECISION AQUACULTURE

FIGURE 31 AVERAGE SELLING PRICES OF PRECISION AQUACULTURE SENSORS (USD)

TABLE 4 PRICING ANALYSIS FOR ROV SYSTEM COMPONENTS

FIGURE 32 AVERAGE PRECISION FARMING DATA ANALYTICS SERVICE COST PER HECTARE FOR DIFFERENT FARM SIZES, 2019

5.6 VALUE CHAIN ANALYSIS

FIGURE 33 VALUE CHAIN ANALYSIS: SMART AGRICULTURE MARKET

5.6.1 MAJOR STAKEHOLDERS IN SMART AGRICULTURE MARKET

FIGURE 34 MAJOR PARTICIPANTS IN SMART AGRICULTURE VALUE CHAIN

5.7 SMART AGRICULTURE MARKET ECOSYSTEM

FIGURE 35 SMART AGRICULTURE ECOSYSTEM

5.7.1 SMART AGRICULTURE ECOSYSTEM

5.8 TECHNOLOGICAL TRENDS

5.8.1 INTERNET OF THINGS (IOT)



5.8.2 M2M SOLUTIONS

FIGURE 36 INCREASING USE OF M2M SOLUTIONS IN AGRICULTURE—LEADING TREND AMONG KEY MARKET PLAYERS

5.8.3 ROBOTICS

5.8.4 AI AND BLOCKCHAIN IN LIVESTOCK FARMING

FIGURE 37 BLOCKCHAIN AND AI IN PRECISION LIVESTOCK FARMING

5.8.5 ADOPTION OF ROBOTIC CAGES AND UNDERWATER DRONES IN AQUACULTURE FARMS

5.8.6 INTEGRATION OF TELEMATICS WITH FOREST MECHANIZATION IN PRECISION FORESTRY

5.8.7 ADVENT OF LIDAR-FITTED UAVS IN PRECISION FORESTRY

5.9 PORTER'S FIVE FORCES ANALYSIS

FIGURE 38 SMART AGRICULTURE MARKET: PORTER'S FIVE FORCES ANALYSIS TABLE 5 SMART AGRICULTURE MARKET: PORTER'S FIVE FORCES ANALYSIS, 2020

- **5.9.1 THREAT OF NEW ENTRANTS**
- 5.9.2 THREAT OF SUBSTITUTES
- 5.9.3 BARGAINING POWER OF SUPPLIERS
- 5.9.4 BARGAINING POWER OF BUYERS
- 5.9.5 INTENSITY OF COMPETITIVE RIVALRY
- 5.10 IMPACT OF COVID-19 ON SMART AGRICULTURE MARKET
 - 5.10.1 PRECISION FARMING
 - 5.10.2 LIVESTOCK MONITORING
 - 5.10.3 PRECISION AQUACULTURE
 - 5.10.4 SMART GREENHOUSE
 - 5.10.5 PRECISION FORESTRY
- 5.11 REGULATORY LANDSCAPE IN SMART AGRICULTURE
 - 5.11.1 US: AGRICULTURAL DATA ACT 2018
 - 5.11.2 NATIONAL MISSION FOR SUSTAINABLE AGRICULTURE (NMSA)
 - 5.11.3 ENVIRONMENTAL IMPACT ASSESSMENT (EIA)
 - 5.11.4 NATURE CONSERVATION EUROPEAN UNION (EU)
- 5.11.5 TARIFF AND REGULATIONS RELATED TO PRECISION FARMING AND SMART GREENHOUSES

TABLE 6 TARIFF REGULATIONS: PRECISION FARMING AND SMART GREENHOUSES

5.11.6 TARIFFS AND REGULATIONS RELATED TO PRECISION AQUACULTURE

TABLE 7 TARIFF REGULATIONS: PRECISION AQUACULTURE

5.12 CASE STUDIES: SMART AGRICULTURE MARKET

5.12.1 INTRODUCTION



5.12.2 OPEN BLUE

TABLE 8 INNOVASEA HELPS OPEN BLUE BECOME LARGEST OPEN-OCEAN FISH FARM IN WORLD

5.12.3 EARTH OCEAN FARMS

TABLE 9 INNOVASEA ENABLES EARTH OCEAN FARMS TO EXPAND PRODUCTION WITH RUGGED EVOLUTION PENS

5.12.4 GIFAS

TABLE 10 PHILIPS LED SOLUTIONS OFFER NEW POSSIBILITIES FOR SALMON INDUSTRY

5.12.5 ERKO SEAFOOD AS

TABLE 11 AKVA GROUP HELPS ERKO SEAFOOD AS WITH PRECISION AQUACULTURE PRODUCTS

5.13 PATENT ANALYSIS

FIGURE 39 TOP 10 COMPANIES WITH HIGHEST NO. OF PATENT IN LAST 10 YEARS

5.13.1 JURISDICTION ANALYSIS

FIGURE 40 JURISDICTION ANALYSIS

5.13.2 TOP PATENT OWNERS

TABLE 12 TOP 20 PATENT OWNERS (US) IN LAST 10 YEARS

TABLE 13 SOME KEY INNOVATIONS AND PATENT REGISTRATIONS FROM SEL 5.14 TRADE DATA

TABLE 14 IMPORT DATA FOR AGRICULTURAL, HORTICULTURAL, OR FORESTRY MACHINERY EQUIPMENT UNDER HS CODE 843290, 2016-2020 (USD THOUSAND) FIGURE 41 IMPORT DATA FOR AGRICULTURAL, HORTICULTURAL, OR FORESTRY MACHINERY EQUIPMENT UNDER HS CODE 843290, 2016-2020 (USD THOUSAND)

TABLE 15 EXPORT DATA FOR AGRICULTURAL, HORTICULTRAL, OR FORESTRY MACHINERY EQUIPMENT UNDER HS CODE 843290, 2016-2020 (USD THOUSAND) FIGURE 42 EXPORT DATA FOR AGRICULTURAL, HORTICULTURAL, OR FORESTRY MACHINERY EQUIPMENT UNDER HS CODE 843290, 2016-2020 (USD THOUSAND)

6 SMART AGRICULTURE MARKET, BY OFFERING

6.1 INTRODUCTION

FIGURE 43 SERVICES SEGMENT TO GROW AT HIGHEST CAGR FROM 2021 TO 2026

TABLE 16 SMART AGRICULTURE MARKET, BY OFFERING, 2017–2020 (USD MILLION)



TABLE 17 SMART AGRICULTURE MARKET, BY OFFERING, 2021–2026 (USD MILLION)

6.2 HARDWARE

- 6.2.1 PRECISION FARMING HARDWARE
- 6.2.1.1 Variety of precision farming tools is expected to increase the demand for precision hardware in the forecast period

FIGURE 44 IMPACT OF COVID-19 ON SMART AGRICULTURE HARDWARE MARKET

TABLE 18 POST-COVID-19: SMART AGRICULTURE HARDWARE MARKET, BY OFFERING, 2017–2026 (USD MILLION)

FIGURE 45 AUTOMATION AND CONTROL SYSTEMS TO GROW AT HIGHER CAGR DURING FORECAST PERIOD

TABLE 19 PRECISION FARMING MARKET, BY OFFERING, 2017–2020 (USD MILLION)

TABLE 20 PRECISION FARMING MARKET, BY OFFERING, 2021–2026 (USD MILLION)

TABLE 21 PRECISION FARMING HARDWARE MARKET, BY TYPE, 2017–2020 (USD MILLION)

TABLE 22 PRECISION FARMING HARDWARE MARKET, BY TYPE, 2021–2026 (USD MILLION)

6.2.1.2 Automation and control systems

FIGURE 46 IRRIGATION CONTROLLER TO GROW AT HIGHEST CAGR FROM 2021 TO 2026

TABLE 23 AUTOMATION AND CONTROL SYSTEMS MARKET, BY DEVICE TYPE, 2017–2020 (USD MILLION)

TABLE 24 AUTOMATION AND CONTROL SYSTEMS MARKET, BY DEVICE TYPE, 2021–2026 (USD MILLION)

- 6.2.1.2.1 Displays
- 6.2.1.2.1.1 Utilization of display devices in precision farming systems will drive the hardware market during the forecast period
 - 6.2.1.2.2 Guidance and steering systems
- 6.2.1.2.2.1 Automated guidance and steering systems are increasingly adopted in tractors and agriculture robots
 - 6.2.1.2.3 GPS/GNSS devices
- 6.2.1.2.3.1 High demand for GPS/GNSS devices for variable rate applications will drive the market for automation control system
 - 6.2.1.2.4 Drones/UAVs
 - 6.2.1.2.4.1 Drones are mostly adopted for the identification of pests and weeds
 - 6.2.1.2.5 Handheld mobile devices/handheld computers



- 6.2.1.2.5.1 Operational flexibility and ease of operation are measure factors for the growing use of handheld mobile devices and computers
 - 6.2.1.2.6 Irrigation controllers
- 6.2.1.2.6.1 Concerns for efficient use of water expected to propel irrigation controllers market
 - 6.2.1.2.7 Flow and application control devices
- 6.2.1.2.7.1 Flow and application control devices to facilitate the growth of the precision farming market for variable rate applications
 - 6.2.1.2.8 Others
 - 6.2.1.3 Sensing and monitoring devices

FIGURE 47 YIELD MONITORS TO LEAD MARKET FOR SENSING AND MONITORING DEVICES FROM 2021 TO 2026

TABLE 25 SENSING AND MONITORING DEVICES MARKET, BY DEVICE TYPE, 2017–2020 (USD MILLION)

TABLE 26 SENSING AND MONITORING DEVICES MARKET, BY DEVICE TYPE, 2021–2026 (USD MILLION)

- 6.2.1.3.1 Yield monitors
- 6.2.1.3.1.1 Yield monitors to continue to hold the largest market share during the forecast period
 - 6.2.1.3.2 Soil sensors
 - 6.2.1.3.2.1 Soil sensors to provide real-time data on various soil properties
 - 6.2.1.3.3 Nutrient sensors
- 6.2.1.3.3.1 Nutrient sensors help in identifying nutrients is gaining popularity in precision farming
 - 6.2.1.3.4 Moisture sensors
 - 6.2.1.3.4.1 Moisture sensors help manage irrigation systems more efficiently
 - 6.2.1.3.5 Temperature sensors
- 6.2.1.3.5.1 Adoption of temperature sensors for checking the suitability of soil for planting expected to grow during the forecast period
 - 6.2.1.4 Water sensors
- 6.2.1.4.1 Need to focus on effective control on irrigation to drive the use of water sensors
 - 6.2.1.5 Climate sensors
- 6.2.1.5.1 Uncertainties related to weather and climate propel the demand for climate sensors
 - 6.2.2 LIVESTOCK MONITORING HARDWARE

FIGURE 48 GPS TO GROW AT HIGHEST CAGR FROM 2021 TO 2026 TABLE 27 LIVESTOCK MONITORING MARKET, BY OFFERING, 2017–2020 (USD MILLION)



TABLE 28 LIVESTOCK MONITORING MARKET, BY OFFERING, 2021–2026 (USD MILLION)

TABLE 29 LIVESTOCK MONITORING HARDWARE MARKET, BY DEVICE TYPE, 2017–2020 (USD MILLION)

TABLE 30 LIVESTOCK MONITORING HARDWARE MARKET, BY DEVICE TYPE, 2021–2026 (USD MILLION)

- 6.2.2.1 RFID tags and readers
- 6.2.2.1.1 Innovation in RFID tags and readers help increase its market share during forecast period
 - 6.2.2.2 Sensors
- 6.2.2.2.1 Availability of various types of sensors help improve livestock monitoring applications
 - 6.2.2.3 Transmitters and mounting equipment
- 6.2.2.3.1 Requirement for sending wireless video and audio signals projected to accelerate demand for transmitters
 - 6.2.2.4 GPS
- 6.2.2.4.1 GPS help in monitoring animals and taking rapid actions to improve the overall efficiency of livestock farming
 - 6.2.2.5 Others
 - 6.2.3 PRECISION FORESTRY HARDWARE
 - 6.2.3.1 Harvesters and forwarders
- 6.2.3.1.1 Harvesters and forwarders expected to play a crucial role in precision forestry operations
 - 6.2.3.2 UAVs/drones
- 6.2.3.2.1 Advancements in UAVs/drones expected to increase their demand during the forecast period
 - 6.2.3.3 GPS
 - 6.2.3.3.1 Site-specific forestry management expected to propel the demand for GPS 6.2.3.4 Cameras
- 6.2.3.4.1 Demand for video cameras with hyperspectral, multispectral, and infra-red sensors expected to increase substantially during the forecast period
 - 6.2.3.5 RFID tags and sensors
 - 6.2.3.5.1 RFID tags and sensors help prevent illegal cutting and smuggling of trees 6.2.3.6 Variable rate controllers
- 6.2.3.6.1 Increasing adoption of site-specific vegetation management is expected to fuel the demand for variable rate controllers
 - 6.2.3.7 Others
- TABLE 31 PRECISION FORESTRY MARKET, BY OFFERING, 2017–2020 (USD MILLION)



TABLE 32 PRECISION FORESTRY MARKET, BY OFFERING, 2021–2026 (USD MILLION)

TABLE 33 PRECISION FORESTRY HARDWARE MARKET, BY TYPE, 2017–2020 (USD MILLION)

TABLE 34 PRECISION FORESTRY HARDWARE MARKET, BY TYPE, 2021–2026 (USD MILLION)

6.2.4 PRECISION AQUACULTURE HARDWARE

FIGURE 49 MONITORING DEVICES TO LEAD PRECISION AQUACULTURE HARDWARE MARKET FROM 2021 TO 2026

TABLE 35 PRECISION AQUACULTURE MARKET, BY OFFERING, 2017–2020 (USD MILLION)

TABLE 36 PRECISION AQUACULTURE MARKET, BY OFFERING, 2021–2026 (USD MILLION)

TABLE 37 PRECISION AQUACULTURE HARDWARE MARKET, BY DEVICE TYPE, 2017–2020 (USD MILLION)

TABLE 38 PRECISION AQUACULTURE HARDWARE MARKET, BY DEVICE TYPE, 2021–2026 (USD MILLION)

- 6.2.4.1 Monitoring devices
 - 6.2.4.1.1 Temperature and environmental monitoring devices
- 6.2.4.1.1.1 Increasing demand for wireless sensor networks to monitor aquaculture farms would propel the growth of monitoring devices
 - 6.2.4.1.2 pH and dissolved oxygen sensors
- 6.2.4.1.2.1 Growing need to monitor dissolved oxygen content expected to boost the deployment of pH and dissolved oxygen sensors
 - 6.2.4.1.3 Others
 - 6.2.4.2 Camera systems
- 6.2.4.2.1 Increase in the adoption of smart HD camera systems in aquaculture farming projected to fuel the market growth
 - 6.2.4.3 Control systems
- 6.2.4.3.1 Adoption of automation devices in aquaculture farming is expected increase the demand for control systems
 - 6.2.4.4 Others
 - 6.2.5 SMART GREENHOUSE HARDWARE

FIGURE 50 HVAC SYSTEMS TO LEAD SMART GREENHOUSE HARDWARE MARKET DURING FORECAST PERIOD

TABLE 39 SMART GREENHOUSE MARKET, BY OFFERING, 2017–2020 (USD MILLION)

TABLE 40 SMART GREENHOUSE MARKET, BY OFFERING, 2021–2026 (USD MILLION)



- TABLE 41 SMART GREENHOUSE HARDWARE MARKET, BY DEVICE TYPE, 2017–2020 (USD MILLION)
- TABLE 42 SMART GREENHOUSE HARDWARE MARKET, BY DEVICE TYPE, 2021–2026 (USD MILLION)
- TABLE 43 SMART GREENHOUSE HARDWARE MARKET, BY TYPE, 2017–2020 (USD MILLION)
- TABLE 44 SMART GREENHOUSE HARDWARE MARKET, BY TYPE, 2021–2026 (USD MILLION)
 - 6.2.5.1 HVAC systems
- 6.2.5.1.1 HVAC systems provide an improved indoor environment in smart greenhouses
 - 6.2.5.2 LED grow lights
- 6.2.5.2.1 LED grow lights enhances operational efficiency and reduces energy consumption in smart greenhouses
 - 6.2.5.3 Irrigation systems
- 6.2.5.3.1 Irrigation systems help in proper and timely watering of each zone in the greenhouse
 - 6.2.5.4 Material handling equipment
- 6.2.5.4.1 Material handling equipment helps in reducing plant handling costs on farm
 - 6.2.5.5 Valves and pumps
- 6.2.5.5.1 Valves and pumps help in managing efficient flow of water by proper distribution of water in various zones of farms
 - 6.2.5.6 Control systems
- 6.2.5.6.1 Control systems in smart greenhouses make heating and cooling operations easy
 - 6.2.5.7 Sensors and cameras
- 6.2.5.7.1 Sensors provide quantitative information to guide cultivators and enable automated decision-making related to crop cultivation
 - 6.2.6 OTHER AGRICULTURE HARDWARE
- TABLE 45 OTHER AGRICULTURE MARKET, BY OFFERING, 2017–2020 (USD MILLION)
- TABLE 46 OTHER AGRICULTURE MARKET, BY OFFERING, 2021–2026 (USD MILLION)
- 6.3 SOFTWARE
- FIGURE 51 IMPACT OF COVID-19 ON SMART AGRICULTURE SOFTWARE MARKET
- TABLE 47 POST-COVID-19: SMART AGRICULTURE SOFTWARE MARKET, 2017–2026 (USD MILLION)



FIGURE 52 0N-CLOUD TO LEAD LIVESTOCK MONITORING SOFTWARE MARKET DURING FORECAST PERIOD

TABLE 48 PRECISION FARMING SOFTWARE MARKET, BY DEPLOYMENT TYPE, 2017–2020 (USD MILLION)

TABLE 49 PRECISION FARMING SOFTWARE MARKET, BY DEPLOYMENT TYPE, 2021–2026 (USD MILLION)

TABLE 50 LIVESTOCK MONITORING SOFTWARE MARKET, BY DEPLOYMENT TYPE, 2017–2020 (USD MILLION)

TABLE 51 LIVESTOCK MONITORING SOFTWARE MARKET, BY DEPLOYMENT TYPE, 2021–2026 (USD MILLION)

TABLE 52 PRECISION AQUACULTURE SOFTWARE MARKET, BY DEPLOYMENT TYPE, 2017–2020 (USD MILLION)

TABLE 53 PRECISION AQUACULTURE SOFTWARE MARKET, BY DEPLOYMENT TYPE, 2021–2026 (USD MILLION)

TABLE 54 SMART GREENHOUSE SOFTWARE MARKET, BY DEPLOYMENT TYPE, 2017–2020 (USD MILLION)

TABLE 55 SMART GREENHOUSE SOFTWARE MARKET, BY DEPLOYMENT TYPE, 2021–2026 (USD MILLION)

TABLE 56 OTHER AGRICULTURE SOFTWARE MARKET, BY DEPLOYMENT TYPE, 2017–2020 (USD MILLION)

TABLE 57 OTHER AGRICULTURE SOFTWARE MARKET, BY DEPLOYMENT TYPE, 2021–2026 (USD MILLION)

- 6.3.1 ON-PREMISES
- 6.3.1.1 Ability to reuse existing servers drive the market for on-premises software solutions
 - 6.3.2 ON-CLOUD
 - 6.3.2.1 Software-as-a-Service (SaaS)
- 6.3.2.1.1 Increasing popularity of the software-as-a-service model to access crucial data fuels demand for cloud technology
 - 6.3.2.2 Platform-as-a-Service (PaaS)
 - 6.3.2.2.1 PaaS helps in reducing upfront costs for organizations
 - 6.3.3 AI & DATA ANALYTICS
 - 6.3.3.1 Al & data analytics helps in improving harvest quality and accuracy
 - 6.3.4 FARM MANAGEMENT SOFTWARE
- 6.3.4.1 Farm management software is used to optimize and manage farm operations 6.4 SERVICES

FIGURE 53 SYSTEM INTEGRATION AND CONSULTING SERVICES TO LEAD PRECISION FARMING SERVICES MARKET FROM 2021 TO 2026

TABLE 58 PRECISION FARMING SERVICES MARKET, BY TYPE, 2017–2020 (USD



MILLION)

TABLE 59 PRECISION FARMING SERVICES MARKET, BY TYPE, 2021–2026 (USD MILLION)

TABLE 60 LIVESTOCK MONITORING SERVICES MARKET, BY TYPE, 2017–2020 (USD MILLION)

TABLE 61 LIVESTOCK MONITORING SERVICES MARKET, BY TYPE, 2021–2026 (USD MILLION)

TABLE 62 PRECISION AQUACULTURE SERVICES MARKET, BY TYPE, 2017–2020 (USD MILLION)

TABLE 63 PRECISION AQUACULTURE SERVICES MARKET, BY TYPE, 2021–2026 (USD MILLION)

TABLE 64 SMART GREENHOUSE SERVICES MARKET, BY TYPE, 2017–2020 (USD MILLION)

TABLE 65 SMART GREENHOUSE SERVICES MARKET, BY TYPE, 2021–2026 (USD MILLION)

TABLE 66 OTHER AGRICULTURE SERVICES MARKET, BY TYPE, 2017–2020 (USD MILLION)

TABLE 67 OTHER AGRICULTURE SERVICES MARKET, BY TYPE, 2021–2026 (USD MILLION)

6.4.1 SYSTEM INTEGRATION AND CONSULTING SERVICES

6.4.1.1 High demand for integration of software and hardware equipment expected to propel the growth of system integration and consulting services

6.4.2 MANAGED SERVICES

- 6.4.2.1 Managed services are provided by third-party vendors who help in the management of precision farming activities
 - 6.4.2.2 Farm operation services
- 6.4.2.2.1 Farm operation services help generate records and integrate unstructured data
 - 6.4.2.3 Data services
- 6.4.2.3.1 Growth of mobile applications is expected to increase demand for data services
 - 6.4.2.4 Analytics services
- 6.4.2.4.1 Increased demand for real-time information to propel the market for analytics services
 - 6.4.3 CONNECTIVITY SERVICES
- 6.4.3.1 Connectivity services help in generating real-time data for better decision making
 - 6.4.4 ASSISTED PROFESSIONAL SERVICES
 - 6.4.4.1 Assisted professional services help in the improvement and implementation of



standards of projects

- 6.4.4.2 Supply chain management services
- 6.4.4.2.1 Supply and management services help in mitigating frequent hardware system failures
 - 6.4.4.3 Climate information services
 - 6.4.4.3.1 Climate information services help in better planning of farming activities 6.4.4.4 Others
 - 6.4.5 MAINTENANCE AND SUPPORT SERVICES
- 6.4.5.1 High deployment of software solutions and precision farming hardware equipment to boost demand for maintenance and support services
 - 6.4.6 INSTALLATION AND DEPLOYMENT SERVICES
- 6.4.6.1 Installation of hardware equipment and software platform expected to create new opportunities

7 SMART AGRICULTURE MARKET, BY AGRICULTURE TYPE

7.1 INTRODUCTION

FIGURE 54 PRECISION FARMING EXPECTED TO DOMINATE SMART AGRICULTURE MARKET FROM 2021 TO 2026

TABLE 68 SMART AGRICULTURE MARKET, BY AGRICULTURE TYPE, 2017–2020 (USD MILLION)

TABLE 69 SMART AGRICULTURE MARKET, BY AGRICULTURE TYPE, 2021–2026 (USD MILLION)

7.2 PRECISION FARMING

7.2.1 FOCUS ON FARMERS TO IMPROVE FARM EFFICIENCY AND INCREASE CROP PRODUCTIVITY IS DRIVING THE PRECISION FARMING MARKET FIGURE 55 VARIABLE RATE TECHNOLOGY TO GROW AT HIGHEST CAGR FROM 2021 TO 2026

TABLE 70 PRECISION FARMING MARKET, BY TECHNOLOGY, 2017–2020 (USD MILLION)

TABLE 71 PRECISION FARMING MARKET, BY TECHNOLOGY, 2021–2026 (USD MILLION)

TABLE 72 PRECISION FARMING MARKET, BY REGION, 2017–2020 (USD MILLION) TABLE 73 PRECISION FARMING MARKET, BY REGION, 2021–2026 (USD MILLION) FIGURE 56 PRECISION FARMING MARKET IN APAC EXPECTED TO GROW AT HIGHEST CAGR DURING FORECAST PERIOD

7.3 LIVESTOCK MONITORING

7.3.1 LIVESTOCK MONITORING HELPS PROVIDE REAL-TIME INFORMATION ON ANIMAL HEALTH



FIGURE 57 EUROPE TO LEAD LIVESTOCK MONITORING MARKET DURING FORECAST PERIOD

TABLE 74 LIVESTOCK MONITORING MARKET, BY REGION, 2017–2020 (USD MILLION)

TABLE 75 LIVESTOCK MONITORING MARKET, BY REGION, 2021–2026 (USD MILLION)

7.4 PRECISION AQUACULTURE

7.4.1 ADOPTION OF TECHNOLOGIES LIKE IOT AND AI IN AQUAFARMS HELPS IN DRIVING PRECISION AQUACULTURE MARKET

TABLE 76 PRECISION AQUACULTURE MARKET, BY REGION, 2017–2020 (USD MILLION)

TABLE 77 PRECISION AQUACULTURE MARKET, BY REGION, 2021–2026 (USD MILLION)

7.4.2 SMART FEEDING SYSTEMS

7.4.2.1 Smart feeding system helps in determining the size and eating behavior of fishes

7.4.3 MONITORING AND CONTROL SYSTEMS

7.4.3.1 Monitoring and control system improving the efficiency of aquafarms

7.4.4 UNDERWATER REMOTELY-OPERATED VEHICLES

7.4.4.1 ROVs helps in monitoring underwater species to improve the aquafarms operation

7.5 PRECISION FORESTRY

7.5.1 USE OF TECHNOLOGIES HELPS IN MAKING PRECISION FORESTRY EFFICIENT AND ECONOMICAL

FIGURE 58 FIRE DETECTION TECHNOLOGY TO GROW AT HIGHEST CAGR FROM 2021 TO 2026

TABLE 78 PRECISION FORESTRY MARKET, BY TECHNOLOGY, 2017–2020 (USD MILLION)

TABLE 79 PRECISION FORESTRY MARKET, BY TECHNOLOGY, 2021–2026 (USD MILLION)

TABLE 80 PRECISION FORESTRY MARKET, BY REGION, 2017–2020 (USD MILLION)

TABLE 81 PRECISION FORESTRY MARKET, BY REGION, 2021–2026 (USD MILLION)

FIGURE 59 PRECISION FORESTRY MARKET IN APAC AND ROW TO GROW AT HIGHEST CAGR FROM 2021 TO 2026

7.6 SMART GREENHOUSE

7.6.1 WIRED AND WIRELESS TECHNOLOGIES HELPS IN IMPROVING SMART GREENHOUSE OPERATIONS



TABLE 82 SMART GREENHOUSE MARKET, BY TYPE, 2017–2020 (USD MILLION) TABLE 83 SMART GREENHOUSE MARKET, BY TYPE, 2021–2026 (USD MILLION) TABLE 84 SMART GREENHOUSE MARKET, BY REGION, 2017–2020 (USD MILLION)

TABLE 85 SMART GREENHOUSE MARKET, BY REGION, 2021–2026 (USD MILLION)

FIGURE 60 SMART GREENHOUSE MARKET IN EUROPE TO GROW AT HIGHEST CAGR FROM 2021 TO 2026

7.7 OTHERS

FIGURE 61 AMERICAS EXPECTED TO BE THE LARGEST MARKET FOR OTHER AGRICULTURE TYPES DURING FORECAST PERIOD

TABLE 86 OTHER AGRICULTURE MARKET, BY TYPE, 2017–2020 (USD MILLION) TABLE 87 OTHER AGRICULTURE MARKET, BY TYPE, 2021–2026 (USD MILLION) TABLE 88 OTHER AGRICULTURE MARKET, BY REGION, 2017–2020 (USD MILLION)

TABLE 89 OTHER AGRICULTURE MARKET, BY REGION, 2021–2026 (USD MILLION)

8 SMART AGRICULTURE MARKET, BY APPLICATION

8.1 INTRODUCTION

FIGURE 62 SMART AGRICULTURE MARKET, BY APPLICATION
TABLE 90 SMART AGRICULTURE MARKET, BY APPLICATION, 2017–2020 (USD MILLION)

TABLE 91 SMART AGRICULTURE MARKET, BY APPLICATION, 2021–2026 (USD MILLION)

8.2 PRECISION FARMING

FIGURE 63 COVID-19 IMPACT ON PRECISION FARMING

TABLE 92 POST-COVID 19: PRECISION FARMING MARKET, 2017–2026 (USD MILLION)

FIGURE 64 WEATHER TRACKING & FORECASTING TO GROW AT HIGHEST CAGR FROM 2021 TO 2026

TABLE 93 PRECISION FARMING MARKET, BY FUNCTION, 2017–2020 (USD MILLION)

TABLE 94 PRECISION FARMING MARKET, BY FUNCTION, 2021–2026 (USD MILLION)

8.2.1 YIELD MONITORING

TABLE 95 BENEFITS OF YIELD MONITORING

8.2.1.1 On-farm yield monitoring



- 8.2.1.1.1 On-farm yield monitoring helps in the specific allocation of resources according to the needs of plants
 - 8.2.1.2 Off-farm yield monitoring
- 8.2.1.2.1 Off-farm monitoring technique is beneficial for analysing health of the yield after the harvesting

FIGURE 65 MARKET FOR YIELD MONITORING IN APAC TO GROW AT HIGHEST CAGR FROM 2021 TO 2026

- 8.2.2 FIELD MAPPING
- 8.2.2.1 Drainage mapping application to record higher CAGR during the forecast period
 - 8.2.3 BOUNDARY MAPPING
 - 8.2.3.1 Boundary mapping helps farmers attain objectives related to crop productivity
 - 8.2.4 DRAINAGE MAPPING
 - 8.2.4.1 Drainage mapping helps in the elimination of soil moisture
 - 8.2.5 CROP SCOUTING
- 8.2.5.1 Increase in demand for crop management to propel the growth of crop scouting
 - 8.2.6 WEATHER TRACKING & FORECASTING
- 8.2.6.1 Weather tracking and forecasting helps in taking precautionary measures for farm protection from natural calamities
 - 8.2.7 VARIABLE RATE
 - 8.2.7.1 Variable rate helps in optimizing crops input for efficient farming
 - 8.2.8 PRECISION IRRIGATION
- 8.2.8.1 Precision irrigation helps in minimizing water wastage and improving soil fertility
 - 8.2.9 PRECISION SEEDING
 - 8.2.9.1 Precision seeding improves harvest and packing efficiency
 - 8.2.10 PRECISION FERTILIZATION
- 8.2.10.1 Precision fertilizer helps in the nutrition requirements of crops for optimum growth
 - 8.2.11 PESTICIDE VRA
 - 8.2.11.1 Pesticide VRA prevents overuse of pesticides on crops
 - 8.2.12 INVENTORY MANAGEMENT
- 8.2.12.1 Growing demand for GPS devices for inventory management to propel market growth
 - 8.2.13 FARM LABOR MANAGEMENT
- 8.2.13.1 Increasing need for effective handling of labor expected to drive demand for farm labor management solutions
 - 8.2.14 FINANCIAL MANAGEMENT



8.2.14.1 Financial management helps farmers or growers make strategic decisions 8.2.15 OTHERS

8.3 LIVESTOCK MONITORING

FIGURE 66 IMPACT OF COVID-19 ON LIVESTOCK MONITORING

TABLE 96 POST-COVID-19: LIVESTOCK MONITORING, 2017–2026 (USD MILLION)

FIGURE 67 BREEDING MANAGEMENT & ANIMAL COMFORT MANAGEMENT

EXPECTED TO GROW AT HIGHEST CAGR FROM 2021 TO 2026

TABLE 97 LIVESTOCK MONITORING MARKET, BY FUNCTION, 2017–2020 (USD MILLION)

TABLE 98 LIVESTOCK MONITORING MARKET, BY FUNCTION, 2021–2026 (USD MILLION)

- 8.3.1 FEEDING MANAGEMENT
- 8.3.1.1 Increasing awareness in dairy farm owners for correct diet formulation is expected to fuel the growth of feeding management
 - 8.3.2 MILK HARVESTING MANAGEMENT
- 8.3.2.1 Automated milk solutions in dairy farms expected to drive milk harvest management
 - 8.3.3 BREEDING MANAGEMENT
- 8.3.3.1 Increase in dairy cattle reproduction will drive demand for livestock monitoring solutions
 - 8.3.4 HEAT STRESS MANAGEMENT
- 8.3.4.1 Heat stress management expected to witness steady growth in livestock monitoring market during the forecast period
 - 8.3.5 ANIMAL COMFORT MANAGEMENT
- 8.3.5.1 Increase in practices by livestock owners to detect diseases at initial phase drives demand for animal comfort management software
 - 8.3.6 BEHAVIOR MONITORING AND CONTROL
- 8.3.6.1 Active awareness regarding animal behavior is expected to boost demand for monitoring solutions
 - **8.3.7 OTHERS**
- 8.4 PRECISION AQUACULTURE

FIGURE 68 FEEDING MANAGEMENT TO LEAD PRECISION AQUACULTURE MARKET

FROM 2021 TO 2026

TABLE 99 PRECISION AQUACULTURE MARKET, BY FUNCTION, 2017–2020 (USD MILLION)

TABLE 100 PRECISION AQUACULTURE MARKET, BY FUNCTION, 2021–2026 (USD MILLION)

8.4.1 FEEDING MANAGEMENT



- 8.4.1.1 Increase in nutrition management of species projected to grow the demand for feeding management
 - 8.4.2 MONITORING, CONTROL, AND SURVEILLANCE
- 8.4.2.1 Rising adoption of AI and IoT technologies for farm management to propel the growth of monitoring and surveillance
 - **8.4.3 OTHERS**
- 8.5 PRECISION FORESTRY

FIGURE 69 SILVICULTURE AND FIRE MANAGEMENT TO GROW AT HIGHEST CAGR DURING FORECAST PERIOD

TABLE 101 PRECISION FORESTRY MARKET, BY FUNCTION, 2017–2020 (USD MILLION)

TABLE 102 PRECISION FORESTRY MARKET, BY FUNCTION, 2021–2026 (USD MILLION)

- 8.5.1 GENETICS AND NURSERIES
 - 8.5.1.1 UAVs/drones are increasingly being used for tree plantation
- 8.5.2 SILVICULTURE AND FIRE MANAGEMENT
- 8.5.2.1 High adoption of wireless sensor network-based forest fire detection systems to propel the growth of silviculture and fire management
 - 8.5.3 HARVESTING MANAGEMENT
- 8.5.3.1 Harvesting management to account for largest market share during the forecast period
 - 8.5.4 INVENTORY AND LOGISTICS MANAGEMENT
- 8.5.4.1 Inventory and logistics management helps in manual error to make the supply chain more effective
- 8.6 SMART GREENHOUSE

TABLE 103 SMART GREENHOUSE MARKET, BY FUNCTION, 2017–2020 (USD MILLION)

TABLE 104 SMART GREENHOUSE MARKET, BY FUNCTION, 2021–2026 (USD MILLION)

- 8.6.1 COMMERCIAL
- 8.6.1.1 Automation system to increase cultivation in commercial greenhouse
- 8.6.2 RESEARCH
- 8.6.2.1 Increase in demand for customized greenhouses for Research will drive the segment
 - 8.6.3 UNIVERSITIES & SCHOOLS
- 8.6.3.1 School greenhouse is an effective way to educate students about eco-friendly farming practices
 - 8.6.4 HVAC MANAGEMENT
 - 8.6.4.1 Greenhouse helps in providing an optimal indoor environment for plant growth



8.6.5 YIELD MONITORING AND HARVESTING

8.6.5.1 Yield monitoring tracks temperature, humidity, and light in the room to improves productivity

8.6.6 WATER & FERTILIZER MANAGEMENT

8.6.6.1 Water & fertilizer management helps in reducing waste and production costs of greenhouse

8.6.7 OTHERS

8.7 OTHERS

9 SMART AGRICULTURE MARKET, BY FARM SIZE

9.1 INTRODUCTION

FIGURE 70 MEDIUM FARMS TO LEAD SMART AGRICULTURE MARKET FROM 2021 TO 2026

TABLE 105 SMART AGRICULTURE MARKET, BY FARM SIZE, 2017–2020 (USD MILLION)

TABLE 106 SMART AGRICULTURE MARKET, BY FARM SIZE, 2021–2026 (USD MILLION)

FIGURE 71 SMALL FARMS TO DOMINATE PRECISION FARMING MARKET DURING FORECAST PERIOD

TABLE 107 PRECISION FARMING MARKET, BY FARM SIZE, 2017–2020 (USD MILLION)

TABLE 108 PRECISION FARMING MARKET, BY FARM SIZE, 2021–2026 (USD MILLION)

FIGURE 72 LIVESTOCK MONITORING MARKET FOR MEDIUM-SIZED FARMS TO GROW AT HIGHEST CAGR FROM 2021 TO 2026

TABLE 109 LIVESTOCK MONITORING MARKET, BY FARM SIZE, 2017–2020 (USD MILLION)

TABLE 110 LIVESTOCK MONITORING MARKET, BY FARM SIZE, 2021–2026 (USD MILLION)

TABLE 111 SMART GREENHOUSE MARKET, BY FARM SIZE, 2017–2020 (USD MILLION)

TABLE 112 SMART GREENHOUSE MARKET, BY FARM SIZE, 2021–2026 (USD MILLION)

9.2 SMALL FARMS

9.2.1 SMALL FARMS TO GROW AT HIGHEST RATE DURING FORECAST PERIOD FIGURE 73 AMERICAS TO LEAD SMART AGRICULTURE MARKET FOR SMALL FARMS DURING FORECAST PERIOD

TABLE 113 SMART AGRICULTURE MARKET FOR SMALL FARMS, BY REGION,



2017-2020 (USD MILLION)

TABLE 114 SMART AGRICULTURE MARKET FOR SMALL FARMS, BY REGION, 2021–2026 (USD MILLION)

9.3 MEDIUM FARMS

9.3.1 MEDIUM FARMS ARE CONSTANTLY ADOPTING MONITORING SOLUTIONS FIGURE 74 SMART AGRICULTURE MARKET FOR MEDIUM-SIZED FARMS IN EUROPE TO GROW AT HIGHEST CAGR FROM 2021 TO 2026

TABLE 115 SMART AGRICULTURE MARKET FOR MEDIUM-SIZED FARMS, BY REGION, 2017–2020 (USD MILLION)

TABLE 116 SMART AGRICULTURE MARKET FOR MEDIUM-SIZED FARMS, BY REGION, 2021–2026 (USD MILLION)

9.4 LARGE FARMS

9.4.1 LARGE FARMS USE PRECISION FARMING TECHNOLOGIES LIKE GPS FOR SOIL MAPPING

FIGURE 75 AMERICAS EXPECTED TO LEAD SMART AGRICULTURE MARKET FOR LARGE FARMS FROM 2021 TO 2026

TABLE 117 SMART AGRICULTURE MARKET FOR LARGE FARMS, BY REGION, 2017–2020 (USD MILLION)

TABLE 118 SMART AGRICULTURE MARKET FOR LARGE FARMS, BY REGION, 2021–2026(USD MILLION)

10 SMART AGRICULTURE MARKET, BY GEOGRAPHY

10.1 INTRODUCTION

FIGURE 76 IMPACT OF COVID-19 ON SMART AGRICULTURE MARKET IN AMERICAS

TABLE 119 POST-COVID-19: SMART AGRICULTURE MARKET IN AMERICAS, 2017–2026 (USD MILLION)

TABLE 120 SMART AGRICULTURE MARKET, BY GEOGRAPHY, 2017–2020 (USD MILLION)

TABLE 121 SMART AGRICULTURE MARKET, BY GEOGRAPHY, 2021–2026 (USD MILLION)

10.2 AMERICAS

TABLE 122 SMART AGRICULTURE MARKET IN AMERICAS, BY OFFERING, 2017–2020 (USD MILLION)

TABLE 123 SMART AGRICULTURE MARKET IN AMERICAS, BY OFFERING, 2021–2026 (USD MILLION)

TABLE 124 SMART AGRICULTURE MARKET IN AMERICAS, BY AGRICULTURE TYPE, 2017–2020 (USD MILLION)



TABLE 125 SMART AGRICULTURE MARKET IN AMERICAS, BY AGRICULTURE TYPE, 2021–2026 (USD MILLION)

TABLE 126 SMART AGRICULTURE MARKET IN AMERICAS, BY REGION, 2017–2020 (USD MILLION)

TABLE 127 SMART AGRICULTURE MARKET IN AMERICAS, BY REGION, 2021–2026 (USD MILLION)

10.2.1 NORTH AMERICA

FIGURE 77 NORTH AMERICA: SMART AGRICULTURE MARKET SNAPSHOT TABLE 128 SMART AGRICULTURE MARKET IN NORTH AMERICA, BY OFFERING, 2017–2020 (USD MILLION)

TABLE 129 SMART AGRICULTURE MARKET IN NORTH AMERICA, BY OFFERING, 2021–2026 (USD MILLION)

TABLE 130 SMART AGRICULTURE MARKET IN NORTH AMERICA, BY COUNTRY, 2017–2020 (USD MILLION)

TABLE 131 SMART AGRICULTURE MARKET IN NORTH AMERICA, BY COUNTRY, 2021–2026 (USD MILLION)

10.2.1.1 US

10.2.1.1.1 Presence of key players in the US to boost smart agriculture market growth

10.2.1.2 Canada

10.2.1.2.1 Increasing government initiatives and investments for automation of greenhouses to fuel growth of greenhouses in Canada

10.2.1.3 Mexico

10.2.1.3.1 Mexico expected to register the highest growth in the

North American market during the forecast period

10.2.2 SOUTH AMERICA

FIGURE 78 SOUTH AMERICA: SMART AGRICULTURE MARKET SNAPSHOT TABLE 132 SMART AGRICULTURE MARKET IN SOUTH AMERICA, BY OFFERING, 2017–2020 (USD MILLION)

TABLE 133 SMART AGRICULTURE MARKET IN SOUTH AMERICA, BY OFFERING, 2021–2026 (USD MILLION)

TABLE 134 SMART AGRICULTURE MARKET IN SOUTH AMERICA, BY COUNTRY, 2017–2020 (USD MILLION)

TABLE 135 SMART AGRICULTURE MARKET IN SOUTH AMERICA, BY COUNTRY, 2021–2026 (USD MILLION)

10.2.2.1 Brazil

10.2.2.1.1 Rapid adoption of precision farming by commercial farmers to fuel the market growth in Brazil

10.2.2.2 Argentina



10.2.2.2.1 Argentina would be the fastest-growing market for smart agriculture solutions in South America during the forecast period

10.2.2.3 Rest of South America

10.3 EUROPE

FIGURE 79 EUROPE: SMART AGRICULTURE MARKET SNAPSHOT

FIGURE 80 IMPACT OF COVID-19 ON SMAR AGRICULTURE MARKET IN EUROPE

TABLE 136 POST COVID-19: SMART AGRICULTURE MARKET IN EUROPE,

2017-2026(USD MILLION)

TABLE 137 SMART AGRICULTURE MARKET IN EUROPE, BY OFFERING, 2017–2020 (USD MILLION)

TABLE 138 SMART AGRICULTURE MARKET IN EUROPE, BY OFFERING, 2021–2026 (USD MILLION)

TABLE 139 SMART AGRICULTURE MARKET IN EUROPE, BY AGRICULTURE TYPE, 2017–2020 (USD MILLION)

TABLE 140 SMART AGRICULTURE MARKET IN EUROPE, BY AGRICULTURE TYPE, 2021–2026 (USD MILLION)

TABLE 141 SMART AGRICULTURE MARKET IN EUROPE, BY COUNTRY, 2017–2020 (USD MILLION)

TABLE 142 SMART AGRICULTURE MARKET IN EUROPE, BY COUNTRY,

2017-2026 (USD MILLION)

TABLE 144 SMART AGRICULTURE MARKET IN APAC, BY OFFERING, 2017–2020 (USD MILLION)

TABLE 145 SMART AGRICULTURE MARKET IN APAC, BY OFFERING, 2021–2026 (USD MILLION)

TABLE 146 SMART AGRICULTURE MARKET IN APAC, BY AGRICULTURE TYPE, 2017–2020 (USD MILLION)

TABLE 147 SMART AGRICULTURE MARKET IN APAC, BY AGRICULTURE TYPE, 2021–2026 (USD MILLION)

TABLE 148 SMART AGRICULTURE MARKET IN APAC, BY COUNTRY, 2017–2020 (USD MILLION)

TABLE 149 SMART AGRICULTURE MARKET IN APAC, BY COUNTRY, 2021–2026 (USD MILLION)

10.4.1 CHINA

10.4.1.1 Population growth in China to boost adoption of smart agriculture practices 10.4.2 JAPAN

10.4.2.1 Rise in urban farming practices to fuel growth of smart agriculture market 10.4.3 AUSTRALIA



10.4.3.1 Government support plays a major role in the growth of the market 10.4.4 INDIA

10.4.4.1 India to provide attractive growth opportunities in precision farming during the forecast period

10.4.5 SOUTH KOREA

10.4.5.1 Increasing investments by the key players and government support will fuel the market growth during the forecast period

10.4.6 REST OF APAC

10.5 ROW

TABLE 150 SMART AGRICULTURE MARKET IN ROW, BY REGION/COUNTRY, 2017–2020 (USD MILLION)

TABLE 151 SMART AGRICULTURE MARKET IN ROW, BY REGION/COUNTRY, 2021–2026 (USD MILLION)

TABLE 152 SMART AGRICULTURE MARKET IN ROW, BY OFFERING, 2017–2020 (USD MILLION)

TABLE 153 SMART AGRICULTURE MARKET IN ROW, BY OFFERING, 2021–2026 (USD MILLION)

TABLE 154 SMART AGRICULTURE MARKET IN ROW, BY AGRICULTURE TYPE, 2017–2020 (USD MILLION)

TABLE 155 SMART AGRICULTURE MARKET IN ROW, BY AGRICULTURE TYPE, 2021–2026 (USD MILLION)

10.5.1 AFRICA

10.5.1.1 Precision agriculture market in Africa is expected to grow at a significant rate 10.5.2 MIDDLE EAST

10.5.2.1 Rapid technological developments in big data analytics and cloud-computing platforms expected to drive market

10.5.3 RUSSIA

10.5.3.1 Russia expected to account for the largest share of the smart agriculture market in RoW during the forecast period

11 COMPETITIVE LANDSCAPE

11.1 OVERVIEW

11.2 REVENUE ANALYSIS OF TOP 4 COMPANIES

FIGURE 83 REVENUE ANALYSIS (USD BILLION), 2016–2020

11.3 MARKET SHARE ANALYSIS, 2020

TABLE 156 SMART AGRICULTURE MARKET: DEGREE OF COMPETITION

11.4 COMPANY EVALUATION QUADRANT

11.4.1 STAR



11.4.2 EMERGING LEADER

11.4.3 PERVASIVE

11.4.4 PARTICIPANT

FIGURE 84 SMART AGRICULTURE MARKET: COMPANY EVALUATION QUADRANT, 2020

11.4.5 COMPANY FOOTPRINT

TABLE 157 COMPANY FOOTPRINT: SMART AGRICULTURE MARKET
TABLE 158 COMPANY OFFERING FOOTPRINT: SMART AGRICULTURE MARKET
TABLE 159 COMPANY APPLICATION FOOTPRINT: SMART AGRICULTURE
MARKET

TABLE 160 COMPANY REGION FOOTPRINT: SMART AGRICULTURE MARKET 11.5 SMART AGRICULTURE MARKET STARTUP/SME EVALUATION QUADRANT, 2020

11.5.1 PROGRESSIVE COMPANIES

11.5.2 RESPONSIVE COMPANIES

11.5.3 DYNAMIC COMPANIES

11.5.4 STARTING BLOCKS

FIGURE 85 SMART AGRICULTURE MARKET, STARTUP/SME EVALUATION QUADRANT, 2020

11.6 COMPETITIVE SITUATIONS AND TRENDS

11.6.1 PRODUCT LAUNCHES AND DEVELOPMENTS

TABLE 161 PRODUCT LAUNCHES AND DEVELOPMENTS, 2019–2021

11.6.2 DEALS

TABLE 162 DEALS, 2019-2021

12 COMPANY PROFILES

12.1 INTRODUCTION

(Business overview, Products/Services offered, Recent developments & MnM View)* 12.2 KEY PLAYERS

12.2.1 JOHN DEERE

TABLE 163 JOHN DEERE: BUSINESS OVERVIEW FIGURE 86 JOHN DEERE: COMPANY SNAPSHOT

12.2.2 TRIMBLE

TABLE 164 TRIMBLE: BUSINESS OVERVIEW FIGURE 87 TRIMBLE: COMPANY SNAPSHOT 12.2.3 TOPCON POSITIONING SYSTEMS

TABLE 165 TOPCON POSITIONING SYSTEMS: BUSINESS OVERVIEW

12.2.4 DELAVAL



TABLE 166 DELAVAL: BUSINESS OVERVIEW FIGURE 88 DELAVAL: COMPANY SNAPSHOT

12.2.5 AKVA

TABLE 167 AKVA: BUSINESS OVERVIEW FIGURE 89 AKVA: COMPANY SNAPSHOT

12.2.6 ANTELLIQ (SUBSIDIARY OF MERCK & CO., INC.)

TABLE 168 ANTELLIQ: BUSINESS OVERVIEW

12.2.7 AFIMILK

TABLE 169 AFIMILK: BUSINESS OVERVIEW

12.2.8 INNOVASEA SYSTEMS

TABLE 170 INNOVASEA SYSTEMS: BUSINESS OVERVIEW

12.2.9 HELIOSPECTRA

TABLE 171 HELIOSPECTRA: BUSINESS OVERVIEW FIGURE 90 HELIOSPECTRA: COMPANY SNAPSHOT

12.2.10 LUMIGROW

TABLE 172 LUMIGROW: BUSINESS OVERVIEW

12.2.11 ABACO GROUP

TABLE 173 ABACO GROUP: BUSINESS OVERVIEW

12.2.12 USE CASES

12.2.13 RIGHT TO WIN

*Details on Business overview, Products/Services offered, Recent developments & MnM View might not be captured in case of unlisted companies.

12.3 OTHER PLAYERS

12.3.1 TREEMETRICS

12.3.2 RAVEN INDUSTRIES

12.3.3 AG LEADER TECHNOLOGY

12.3.4 AGJUNCTION

12.3.5 THE CLIMATE CORPORATION (SUBSIDIARY OF MONSANTO)

12.3.6 NEDAP

12.3.7 BOUMATIC

12.3.8 FANCOM (SUBSIDIARY OF CTB INTERNATIONAL CORP.)

12.3.9 AQUABYTE

12.3.10 STEINSVIK

12.3.11 VEMCO

12.3.12 NEXUS GREENHOUSE SYSTEMS

12.3.13 CERTHON

12.3.14 NV5 GEOSPATIAL

12.3.15 HITACHI CONSTRUCTION MACHINERY

12.3.16 AKUAKARE



- 12.3.17 GAMAYA
- 12.3.18 EC2CE
- 12.3.19 ERUVAKA TECHNOLOGIES
- 12.3.20 CROPX

13 APPENDIX

- 13.1 INSIGHTS FROM INDUSTRY EXPERTS
- 13.2 DISCUSSION GUIDE
- 13.3 KNOWLEDGE STORE: MARKETSANDMARKETS' SUBSCRIPTION PORTAL
- 13.4 AVAILABLE CUSTOMIZATION
- 13.5 RELATED REPORTS
- 13.6 AUTHOR DETAILS



I would like to order

Product name: Smart Agriculture Market with COVID-19 impact analysis by Offering, Agriculture Type

(Precision Farming, Livestock Monitoring, Precision Aquaculture, Precision Forestry, Smart Greenhouse), Application, Farm Size, & Geography – Global Forecast to 2026

Product link: https://marketpublishers.com/r/S4F8A101953EN.html

Price: US\$ 4,950.00 (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/S4F8A101953EN.html

To pay by Wire Transfer, please, fill in your contact details in the form below:

| First name: | |
|---------------|---------------------------|
| Last name: | |
| Email: | |
| Company: | |
| Address: | |
| City: | |
| Zip code: | |
| Country: | |
| Tel: | |
| Fax: | |
| Your message: | |
| | |
| | |
| | |
| | **All fields are required |
| | Custumer signature |
| | |
| | |

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at https://marketpublishers.com/docs/terms.html

To place an order via fax simply print this form, fill in the information below



and fax the completed form to +44 20 7900 3970