

Smart Agriculture Market by Offering (Hardware, Software, Services), Agriculture Type, Farm Size (Large, Medium, Small), Application (Precision Farming, Livestock Monitoring) and Region (America, Europe, Asia Pacific, Row) - Global Forecast to 2028

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Abstracts

The smart agriculture market is projected to reach USD 25.4 billion by 2028 from an estimated USD 16.2 billion in 2023, at a CAGR of 9.4% from 2023 to 2028. Increasing global population creating pressure on food supply system and shortage of skilled labor in agriculture industry are among the key factors driving the growth of the smart agriculture market.

Precision farming segment to lead smart agriculture market from 2023 to 2028

The rapid adoption of state-of-the-art technologies and innovative devices to cultivate high-yield crops is expected to drive the growth of the precision farming market during the forecast period. Other factors that are facilitating the adoption of precision farming tools include accessibility of better education and training modules to farmers, data sharing facilities, easy availability of financial resources, as well as increasing consumer demand for organic food.

Services segment is expected to grow at the highest CAGR during forecast period

The services segment is expected to grow at the highest CAGR during the forecast period. The growing deployment and installation of precision feeding systems, field and livestock monitoring systems, and robotic systems in farms have led to a surge in demand for specialized services for smart agriculture.

In 2022, Americas held the largest share of the overall smart agriculture market

In 2022, the Americas held the largest share of the overall smart agriculture market, followed by Europe, Asia Pacific, and RoW. The significant presence of key companies offering smart agriculture solutions, increasing scarcity of water, the growing demand for food, and medium and large farms in the region are the major factors driving the market growth in America. In addition, North America is the largest contributor to the growth of the smart agriculture market owing to the support of governments for the utilization of smart irrigation tools by offering rebates and subsidies to farm owners.

Breakdown of primary participants:

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%, Asia Pacific = 20%, and RoW = 10%

Some of the key companies operating in the smart agriculture market are Deere & Company (US), Trimble Inc. (US), AGCO Corporation (US), Topcon Positioning Systems (US), DeLaval (Sweden), and so on.

Research Coverage:

In this report, the smart agriculture market has been segmented on the basis of Offering, Agriculture Type, Farm Size, Application, and Region. The report also discusses the drivers, restraints, opportunities, and challenges pertaining to the market. It gives a detailed view of the market across four main regions—Americas, Europe, Asia Pacific, and RoW. Supply chain analysis has been included in the report, along with the key players and their competitive analysis in the smart agriculture ecosystem.

Key Benefits to Buy the Report:

This report includes statistics for the smart agriculture market based on Offering, Agriculture Type, Farm Size, Application, and Region, along with their respective market sizes.

Supply chain analysis and key industry trends have been provided for the market.

Major drivers, restraints, opportunities, and challenges for the smart agriculture market have been provided in detail in this report.

This report would help stakeholders to understand their competitors better and gain more insights to enhance their position in the market. The competitive landscape section includes the competitor ecosystem and the recent development strategies adopted by the key players in the market, such as product launches, contracts, collaborations, agreements, alliances, acquisitions, joint ventures, expansions, investments, and partnerships.

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TABLE 63 LIVESTOCK MONITORING HARDWARE: SMART AGRICULTURE MARKET, BY HARDWARE TYPE, 2023–2028 (MILLION UNITS)

8.2.2.2 RFID tags and readers

8.2.2.2.1 Help track and monitor livestock, crops, and farm assets' location and health

8.2.2.3 Sensors

8.2.2.3.1 Help improve livestock monitoring applications

8.2.2.4 Transmitters and mounting equipment

8.2.2.4.1 Used to send wireless video and audio signals from barn to livestock owner's house

8.2.2.5 GPS

8.2.2.5.1 Aids in animal management

8.2.2.6 Others

8.2.3 PRECISION FORESTRY HARDWARE

8.2.3.1 Help optimize efficiency and accuracy of forest management operations

TABLE 64 PRECISION FORESTRY: SMART AGRICULTURE MARKET, BY OFFERING, 2019–2022 (USD MILLION)

FIGURE 61 HARDWARE SEGMENT TO LEAD PRECISION FORESTRY APPLICATIONS IN SMART AGRICULTURE MARKET IN 2023

TABLE 65 PRECISION FORESTRY: SMART AGRICULTURE MARKET, BY OFFERING, 2023–2028 (USD MILLION)

TABLE 66 PRECISION FORESTRY HARDWARE: SMART AGRICULTURE MARKET, BY HARDWARE TYPE, 2019–2022 (USD MILLION)

TABLE 67 PRECISION FORESTRY HARDWARE: SMART AGRICULTURE MARKET, BY HARDWARE TYPE, 2023–2028 (USD MILLION)

8.2.3.2 Harvesters and forwarders

8.2.3.2.1 Play crucial role in precision forestry operations

8.2.3.3 UAVs/drones

8.2.3.3.1 Used for planting trees and reducing associated costs

8.2.3.4 GPS

8.2.3.4.1 Used for site-specific tree management with high precision

8.2.3.5 Cameras

8.2.3.5.1 Help users monitor trees in forests

8.2.3.6 Sensors and RFID tags

8.2.3.6.1 Help prevent illegal cutting and smuggling of trees

8.2.3.7 Variable rate controllers

8.2.3.7.1 Beneficial in application of herbicides and fertilizers

8.2.3.8 Others

8.2.4 PRECISION AQUACULTURE HARDWARE

8.2.4.1 Enable effective management of aquaculture farms

TABLE 68 PRECISION AQUACULTURE: SMART AGRICULTURE MARKET, BY OFFERING, 2019–2022 (USD MILLION)

TABLE 69 PRECISION AQUACULTURE: SMART AGRICULTURE MARKET, BY OFFERING, 2023–2028 (USD MILLION)

TABLE 70 PRECISION AQUACULTURE HARDWARE: SMART AGRICULTURE MARKET, BY HARDWARE TYPE, 2019–2022 (USD MILLION)

FIGURE 62 MONITORING DEVICES TO LEAD PRECISION AQUACULTURE

HARDWARE MARKET FROM 2023 TO 2028

TABLE 71 PRECISION AQUACULTURE HARDWARE: SMART AGRICULTURE MARKET, BY HARDWARE TYPE, 2023–2028 (USD MILLION)

8.2.4.2 Monitoring devices

8.2.4.2.1 Help increase aquatic farm efficiency and productivity

8.2.4.2.2 Temperature and environmental monitoring devices

8.2.4.2.2.1 Ensure water temperature remains within optimal range for aquatic species

8.2.4.2.3 pH and dissolved oxygen sensors

8.2.4.2.3.1 Ensure good health and growth of aquaculture species

8.2.4.2.4 Others

8.2.4.3 Camera systems

8.2.4.3.1 Used to monitor feeding response, feeding rate, and fish behavior

8.2.4.4 Control systems

8.2.4.4.1 Provide comprehensive control over aquaculture operations

8.2.4.5 Others

8.2.5 SMART GREENHOUSE HARDWARE

8.2.5.1 Improve plant growth, increase yields, and reduce waste

TABLE 72 SMART GREENHOUSE: SMART AGRICULTURE MARKET, BY OFFERING, 2019–2022 (USD MILLION)

TABLE 73 SMART GREENHOUSE: SMART AGRICULTURE MARKET, BY OFFERING, 2023–2028 (USD MILLION)

TABLE 74 SMART GREENHOUSE HARDWARE: SMART AGRICULTURE MARKET, BY HARDWARE TYPE, 2019–2022 (USD MILLION)

TABLE 75 SMART GREENHOUSE HARDWARE: SMART AGRICULTURE MARKET, BY HARDWARE TYPE, 2023–2028 (USD MILLION)

8.2.5.2 HVAC systems

8.2.5.2.1 Provide improved indoor environment in smart greenhouses

8.2.5.3 LED grow lights

8.2.5.3.1 Used as supplemental lighting source where natural sunlight is insufficient for plant growth

8.2.5.4 Irrigation systems

8.2.5.4.1 Help in proper and timely watering of each zone in greenhouses

8.2.5.5 Material handling equipment

8.2.5.5.1 Used for mechanization of greenhouses

8.2.5.6 Valves and pumps

8.2.5.6.1 Help maintain an optimal flow of water in greenhouses

8.2.5.7 Control systems

8.2.5.7.1 Help ease heating and cooling operations

8.2.5.8 Sensors and cameras

8.2.5.8.1 Provide quantitative information to guide farm owners

8.2.6 OTHERS

TABLE 76 OTHERS: SMART AGRICULTURE MARKET, BY OFFERING, 2019–2022 (USD MILLION)

TABLE 77 OTHERS: SMART AGRICULTURE MARKET, BY OFFERING, 2023–2028 (USD MILLION)

8.3 SOFTWARE

TABLE 78 PRECISION FARMING SOFTWARE: SMART AGRICULTURE MARKET, BY DEPLOYMENT TYPE, 2019–2022 (USD MILLION)

TABLE 79 PRECISION FARMING SOFTWARE: SMART AGRICULTURE MARKET, BY DEPLOYMENT TYPE, 2023–2028 (USD MILLION)

TABLE 80 LIVESTOCK MONITORING SOFTWARE: SMART AGRICULTURE MARKET, BY DEPLOYMENT TYPE, 2019–2022 (USD MILLION)

TABLE 81 LIVESTOCK MONITORING SOFTWARE: SMART AGRICULTURE MARKET, BY DEPLOYMENT TYPE, 2023–2028 (USD MILLION)

TABLE 82 PRECISION AQUACULTURE SOFTWARE: SMART AGRICULTURE MARKET, BY DEPLOYMENT TYPE, 2019–2022 (USD MILLION)

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TABLE 87 SMART GREENHOUSE SOFTWARE: SMART AGRICULTURE MARKET, BY DEPLOYMENT TYPE, 2023–2028 (USD MILLION)

TABLE 88 OTHER SOFTWARE: SMART AGRICULTURE MARKET, BY DEPLOYMENT TYPE, 2019–2022 (USD MILLION)

TABLE 89 OTHER SOFTWARE: SMART AGRICULTURE MARKET, BY DEPLOYMENT TYPE, 2023–2028 (USD MILLION)

8.3.1 ON-PREMISES SOFTWARE

8.3.1.1 Offer lower cost of ownership

8.3.2 ON-CLOUD

8.3.2.1 Provide shared processing of resources and data to users

8.3.2.2 Software-as-a-Service (SaaS)

8.3.2.2.1 Allow users to connect to cloud-based applications over internet

8.3.2.3 Platform-as-a-Service (PaaS)

8.3.2.3.1 Help organizations to reduce upfront costs

8.3.3 AI & DATA ANALYTICS

8.3.3.1 Help improve harvest quality and accuracy

8.3.3.2 Farm management software

8.3.3.2.1 Used to optimize and manage farm operations and production activities

8.4 SERVICES

TABLE 90 PRECISION FARMING SERVICES: SMART AGRICULTURE MARKET, BY TYPE, 2019–2022 (USD MILLION)

TABLE 91 PRECISION FARMING SERVICES: SMART AGRICULTURE MARKET, BY TYPE, 2023–2028 (USD MILLION)

TABLE 92 LIVESTOCK MONITORING SERVICES: SMART AGRICULTURE MARKET, BY TYPE, 2019–2022 (USD MILLION)

TABLE 93 LIVESTOCK MONITORING SERVICES: SMART AGRICULTURE MARKET, BY TYPE, 2023–2028 (USD MILLION)

TABLE 94 PRECISION AQUACULTURE SERVICES: SMART AGRICULTURE MARKET, BY TYPE, 2019–2022 (USD MILLION)

TABLE 95 PRECISION AQUACULTURE SERVICES: SMART AGRICULTURE MARKET, BY TYPE, 2023–2028 (USD MILLION)

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TABLE 97 SMART GREENHOUSE SERVICES: SMART AGRICULTURE MARKET, BY TYPE, 2023–2028 (USD MILLION)

TABLE 98 OTHER SERVICES: SMART AGRICULTURE MARKET, BY TYPE, 2019–2022 (USD MILLION)

TABLE 99 OTHER SERVICES: SMART AGRICULTURE MARKET, BY TYPE, 2023–2028 (USD MILLION)

8.4.1 SYSTEM INTEGRATION AND CONSULTING SERVICES

8.4.1.1 Involved in troubleshooting and diagnosing farm management issues

8.4.2 MANAGED SERVICES

8.4.2.1 Provide suggestions to farmers to enhance production

8.4.2.2 Farm operation services

8.4.2.2.1 Help generate records and integrate unstructured data

8.4.2.3 Data services

8.4.2.3.1 Provide common platform to meet demand and supply requirements

8.4.2.4 Analytics services

8.4.2.4.1 Provide right calls and alerts on farming operations

8.4.3 CONNECTIVITY SERVICES

8.4.3.1 Ensure proper communication between devices and end users

8.4.4 ASSISTED PROFESSIONAL SERVICES

8.4.4.1 Help improve and implement standards of projects

8.4.4.2 Supply chain management services

8.4.4.2.1 Help mitigate frequent hardware system failures

8.4.4.3 Climate information services

8.4.4.3.1 Help plan farming activities better

8.4.4.4 Others

8.4.5 MAINTENANCE AND SUPPORT SERVICES

8.4.5.1 Ensure farm operations run smoothly and efficiently

8.4.5.2 Installation and deployment services

8.4.5.2.1 Ensure optimal machine performance

9 SMART AGRICULTURE MARKET, BY FARM SIZE

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FIGURE 63 SMART AGRICULTURE MARKET, BY FARM SIZE

TABLE 100 SMART AGRICULTURE MARKET, BY FARM SIZE, 2019–2022 (USD MILLION)

FIGURE 64 MEDIUM-SIZED FARMS TO CAPTURE LARGEST SHARE OF SMART AGRICULTURE MARKET DURING FORECAST PERIOD

TABLE 101 SMART AGRICULTURE MARKET, BY FARM SIZE, 2023–2028 (USD MILLION)

9.2 LARGE FARMS

9.2.1 HEAVILY RELY ON HIRED LABOR TO MANAGE THEIR OPERATIONS

TABLE 102 LARGE FARMS: SMART AGRICULTURE MARKET, BY REGION, 2019–2022 (USD MILLION)

FIGURE 65 AMERICAS EXPECTED TO LEAD SMART AGRICULTURE MARKET FOR LARGE FARMS FROM 2023 TO 2028

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9.3 MEDIUM-SIZED FARMS

9.3.1 POTENTIAL TO LOWER LABOR COSTS AND IMPROVE PRODUCTIVITY

TABLE 104 MEDIUM-SIZED FARMS: SMART AGRICULTURE MARKET, BY REGION, 2019–2022 (USD MILLION)

FIGURE 66 ASIA PACIFIC TO REGISTER FASTEST GROWTH RATE FOR MEDIUM-SIZED FARMS FROM 2023 TO 2028

TABLE 105 MEDIUM-SIZED FARMS: SMART AGRICULTURE MARKET, BY REGION, 2023–2028 (USD MILLION)

9.4 SMALL FARMS

9.4.1 SMALL FARMS TO RECORD HIGHEST GROWTH RATE DURING FORECAST

PERIOD

TABLE 106 SMALL FARMS: SMART AGRICULTURE MARKET, BY REGION, 2019–2022 (USD MILLION)

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TABLE 107 SMALL FARMS: SMART AGRICULTURE MARKET, BY REGION, 2023–2028 (USD MILLION)

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10.1 INTRODUCTION

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10.2 PRECISION FARMING

10.2.1 HELPS OPTIMIZE AGRICULTURAL PRODUCTION

TABLE 110 PRECISION FARMING: SMART AGRICULTURE MARKET, BY SUB-APPLICATION, 2019–2022 (USD MILLION)

FIGURE 70 YIELD MONITORING SEGMENT TO LEAD SMART AGRICULTURE MARKET FOR PRECISION FARMING APPLICATIONS FROM 2023 TO 2028

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10.2.2 YIELD MONITORING

10.2.2.1 Helps farmers maximize their yield

TABLE 112 BENEFITS OF YIELD MONITORING

10.2.2.2 On-farm yield monitoring

10.2.2.2.1 Accurately measures quantity of crop harvested at specific locations and times

10.2.2.3 Off-farm yield monitoring

10.2.2.3.1 Beneficial for analyzing health of yield after harvesting

10.2.3 CROP SCOUTING

10.2.3.1 Critical crop management tool important for making timely decisions during harvesting

10.2.4 FIELD MAPPING

10.2.4.1 Helps farmers in decision-making related to yield production

10.2.4.2 Boundary mapping

10.2.4.2.1 Creates digital representation of field boundaries

10.2.4.3 Drainage mapping

10.2.4.3.1 Helps minimize water costs

10.2.5 VARIABLE RATE APPLICATION

10.2.5.1 Optimize crop input for efficient farming

10.2.5.2 Precision irrigation

10.2.5.2.1 Reduces water wastage and improves soil fertility

10.2.5.3 Precision seeding

10.2.5.3.1 Leads to uniform and high-quality produce

10.2.5.4 Precision fertilization

10.2.5.4.1 Provides ideal combination of hydration and nourishment to plant roots

10.2.5.5 Pesticide VRA

10.2.5.5.1 Prevents overuse of pesticides on crops

10.2.6 WEATHER TRACKING & FORECASTING

10.2.6.1 Helps take precautionary measures for farm protection from natural calamities

10.2.7 INVENTORY MANAGEMENT

10.2.7.1 Used to track and organize materials, irrigation parts, chemicals, and others

10.2.8 FARM LABOR MANAGEMENT

10.2.8.1 Helps track various activities of farm workers

10.2.9 FINANCIAL MANAGEMENT

10.2.9.1 Helps farmers or growers make strategic decisions

10.2.10 OTHERS

10.3 LIVESTOCK MONITORING

10.3.1 ENABLES REAL-TIME MONITORING OF HEALTH AND WELL-BEING OF ANIMALS

TABLE 113 LIVESTOCK MONITORING: SMART AGRICULTURE MARKET, BY SUB-APPLICATION, 2019–2022 (USD MILLION)

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TABLE 114 LIVESTOCK MONITORING: SMART AGRICULTURE MARKET, BY SUB-APPLICATION, 2023–2028 (USD MILLION)

10.3.2 MILK HARVESTING MANAGEMENT

10.3.2.1 Reduces labor costs and increases milking efficiency through automated milk harvesting

10.3.3 BREEDING MANAGEMENT

10.3.3.1 Helps increase animal productivity in long term

10.3.4 FEEDING MANAGEMENT

10.3.4.1 Helps accurately formulate cow's diet

10.3.5 HEAT STRESS MANAGEMENT

10.3.5.1 Reduces cattle mortality rate due to improper ventilation

10.3.6 ANIMAL COMFORT MANAGEMENT

10.3.6.1 Helps ensure animal health and well-being

10.3.7 BEHAVIOR MONITORING AND CONTROL

10.3.7.1 Provides early detection of any deviations in animal behavior

10.3.8 OTHERS

10.4 PRECISION AQUACULTURE

10.4.1 HELPS OPTIMIZE AQUACULTURE PRODUCTION AND MANAGEMENT

TABLE 115 PRECISION AQUACULTURE: SMART AGRICULTURE MARKET, BY SUB-APPLICATION, 2019–2022 (USD MILLION)

FIGURE 72 FEEDING MANAGEMENT TO LEAD PRECISION AQUACULTURE MARKET FROM 2023 TO 2028

TABLE 116 PRECISION AQUACULTURE: SMART AGRICULTURE MARKET, BY SUB-APPLICATION, 2023–2028 (USD MILLION)

10.4.2 FEEDING MANAGEMENT

10.4.2.1 Helps avoid overfeeding

10.4.3 MONITORING, CONTROL, AND SURVEILLANCE

10.4.3.1 Minimize waste and environmental impact

10.4.4 OTHERS

10.5 PRECISION FORESTRY

10.5.1 HELPS IMPROVE SUSTAINABILITY OF FORESTRY PRACTICES

TABLE 117 PRECISION FORESTRY MARKET, BY SUB-APPLICATION, 2019–2022 (USD MILLION)

TABLE 118 PRECISION FORESTRY MARKET, BY SUB-APPLICATION, 2023–2028 (USD MILLION)

10.5.2 GENETICS AND NURSERIES

10.5.2.1 Use of UAVs in seed planting is highly efficient and time-saving

10.5.3 SILVICULTURE AND FIRE MANAGEMENT

10.5.3.1 Minimize damage and casualties due to wildfires

10.5.4 HARVESTING MANAGEMENT

10.5.4.1 Reduces damage to forests and maximizes yield of wood products

10.5.5 INVENTORY AND LOGISTICS MANAGEMENT

10.5.5.1 Diminishes manual error and enables quick reporting and data processing

10.6 SMART GREENHOUSE

10.6.1 BENEFICIAL FOR INDOOR CROPS

TABLE 119 SMART GREENHOUSE: SMART AGRICULTURE MARKET, BY SUB-APPLICATION, 2019–2022 (USD MILLION)

FIGURE 73 HVAC MANAGEMENT TO CAPTURE LARGEST SHARE OF SMART GREENHOUSE MARKET

TABLE 120 SMART GREENHOUSE: SMART AGRICULTURE MARKET, BY SUB-APPLICATION, 2023–2028 (USD MILLION)

10.6.2 HVAC MANAGEMENT

10.6.2.1 Regulates temperature for favorable plant growth

10.6.3 YIELD MONITORING AND HARVESTING

10.6.3.1 Improves efficiency and productivity of greenhouse operations

10.6.4 WATER AND FERTILIZER MANAGEMENT

10.6.4.1 Reduces water waste and production costs of greenhouses

10.6.5 OTHERS

10.7 OTHERS

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FIGURE 75 ASIA PACIFIC TO WITNESS HIGHEST CAGR IN SMART AGRICULTURE MARKET DURING FORECAST PERIOD

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TABLE 125 AMERICAS: SMART AGRICULTURE MARKET, BY OFFERING, 2019–2022 (USD MILLION)

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TABLE 129 NORTH AMERICA: SMART AGRICULTURE MARKET, BY COUNTRY,

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TABLE 132 NORTH AMERICA: SMART AGRICULTURE MARKET, BY OFFERING, 2023–2028 (USD MILLION)

11.2.1.1 US

11.2.1.1.1 Presence of key players to boost market growth

11.2.1.2 Canada

11.2.1.2.1 Government initiatives and investments to fuel market growth

11.2.1.3 Mexico

11.2.1.3.1 Government initiatives promoting use of remote sensing technology to accelerate market growth

11.2.2 SOUTH AMERICA

TABLE 133 SOUTH AMERICA: SMART AGRICULTURE MARKET, BY COUNTRY, 2019–2022 (USD MILLION)

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TABLE 136 SOUTH AMERICA: SMART AGRICULTURE MARKET, BY OFFERING, 2023–2028 (USD MILLION)

11.2.2.1 Brazil

11.2.2.1.1 Availability of large lands at low cost to propel market

11.2.2.2 Argentina

11.2.2.2.1 Highest CAGR during forecast period to lead to market growth

11.2.2.3 Rest of South America

11.3 EUROPE

FIGURE 79 EUROPE: SMART AGRICULTURE MARKET SNAPSHOT

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11.3.1 GERMANY

11.3.1.1 Presence of livestock farms to drive market growth

11.3.2 UK

11.3.2.1 Conducive environment to carry out innovations supports market growth

11.3.3 FRANCE

11.3.3.1 Increased adoption of smart agriculture technologies in country to drive market growth

11.3.4 ITALY

11.3.4.1 Gradual shift toward smart farming techniques to spur market growth

11.3.5 NETHERLANDS

11.3.5.1 Rising adoption of advanced technologies for harvesting processes to fuel market growth

11.3.6 REST OF EUROPE

11.4 ASIA PACIFIC

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TABLE 148 ASIA PACIFIC: SMART AGRICULTURE MARKET, BY AGRICULTURE TYPE, 2023–2028 (USD MILLION)

11.4.1 CHINA

11.4.1.1 Government to play key role in country's agriculture sector growth

11.4.2 JAPAN

11.4.2.1 Labor shortage to fuel demand for smart agriculture solutions

11.4.3 AUSTRALIA

11.4.3.1 Government support and presence of research organizations to play major role in market growth

11.4.4 INDIA

11.4.4.1 Government initiatives and players' contributions to increase adoption of smart agriculture solutions

11.4.5 SOUTH KOREA

11.4.5.1 Rising need to produce high-value agricultural products to fuel market growth

11.4.6 REST OF ASIA PACIFIC

11.5 ROW

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TABLE 154 ROW: SMART AGRICULTURE MARKET, BY AGRICULTURE TYPE, 2023–2028 (USD MILLION)

11.5.1 RUSSIA

11.5.1.1 Increasing awareness about benefits of smart agriculture in country to support market

11.5.2 AFRICA

11.5.2.1 Increasing awareness among farmers to contribute to market growth

11.5.3 MIDDLE EAST

11.5.3.1 Rapid developments in big data analytics and cloud-computing platforms to drive market growth

12 COMPETITIVE LANDSCAPE

12.1 OVERVIEW

12.2 MARKET EVALUATION FRAMEWORK

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12.7 STARTUPS/SMES EVALUATION MATRIX/QUADRANT, 2022

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12.7.3 RESPONSIVE COMPANIES

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*Details on Business overview, Products/Services/Solutions offered, Recent

Developments, MNM view might not be captured in case of unlisted companies.

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