The information and statistics set out in this section and other sections of this document were extracted from different official government publications, available sources from public market research and other sources from independent suppliers, and from the independent industry report prepared by Frost & Sullivan (the "Frost & Sullivan Report"). We engaged Frost & Sullivan to prepare the Frost & Sullivan Report, an independent industry report, in connection with the [**REDACTED**]. *The information from official government sources has not been independently verified by us, the Sole Sponsor,* [**REDACTED**]*, the* [**REDACTED**]*, the* [**REDACTED**]*, the* [**REDACTED**]*, the* [**REDACTED**]*, any of the* [**REDACTED**]*, any of their respective affiliates and advisors, or any other persons or parties involved in the* [**REDACTED**]*, and no representation is given as to its accuracy.*

DATA SOURCE AND RELIABILITY

In connection with the [**REDACTED**], we engaged Frost & Sullivan, an independent market research consultant, to conduct an analysis of, and prepare an industry report on the industry we operate in with a commission fee of RMB450 thousand. Founded in 1961, Frost & Sullivan is an independent global consulting firm that conducts industry research and prepares industry reports on a variety of industries, among other services. The information from Frost & Sullivan disclosed in this document is extracted from the Frost & Sullivan Report with its consent. Our Directors confirm, to the best of their knowledge, and after making reasonable enquiries, that there have been no adverse changes in the industry since the date of the F&S report and up to the Latest Practicable Date which may qualify, contradict or have an impact on the information set out in this section.

In compiling and preparing the Frost & Sullivan Report, Frost & Sullivan used the following key methodologies to collect multiple sources, validate the data and information collected, and cross-check each respondent's information and views against those of others: (i) detailed primary research, involving discussions with leading industry participants and industry experts on the current industry situation; and (ii) secondary research, involving the review of company reports, independent research reports, and data using Frost & Sullivan's in-house research database.

In designing and preparing the Frost & Sullivan Report, Frost & Sullivan has assumed that the social, economic and political environment of the relevant markets will remain stable during the forecast period, so as to ensure the stable and healthy development of China's agricultural robotics industry and related industries. In addition, Frost & Sullivan's forecast is based on the following premises and assumptions: China's economy will maintain steady growth in the next decade, and the social, economic, and political environment will remain stable during the forecast period. In addition, China's agricultural robotics industry and other related industries are expected to develop in accordance with relevant macroeconomic assumptions.

OVERVIEW OF CHINA'S AGRICULTURE INDUSTRY

Overview

The development of agricultural machinery solved the problem of "the shortage of farm labor force" in the era of the Industrial Revolution

Agriculture is the primary industry and a fundamental industry underpinning the sustainable development of social and economic activities. With the outbreak of the Industrial Revolution, large-scale rural population migrated to cities for industrial production, and the problem of "the shortage of farm labor force" began to appear. In order to solve this problem, the countries that led the Industrial Revolution applied internal combustion engine technology to agriculture, and invented a number of agricultural machineries such as tractors and harvesters that are still in use up to now, detonating the technological revolutions and industrial revolutions.

Increasing demand for crops, limited labor supply, the aging population and the shrinking population are leading to the contemporary problem of "the collapse of farm labor force"

In 2024, the global gross output value of agriculture reached RMB32.8 trillion, with China contributing nearly 30%. As a major agricultural producer, China witnessed its global gross output value of agriculture grew from RMB6.6 trillion in 2019 to RMB9.0 trillion in 2024, at a CAGR of 6.3%. In a narrow sense, agriculture refers to the crop farming, which includes the production activities of crops such as food crops, cash crops, forage crops and green manures. In 2024, the gross output value of the China's crop farming accounted for approximately 55% of the gross output value of the national agriculture, forestry, animal husbandry, and fishery, maintaining its dominant position. China's large population has generated a huge and rigid demand for food, and agricultural production has been in a tight balance between supply and demand for a long time.

In recent years, the major industrial and agricultural countries including China, have been generally experiencing aging and shrinking population trend. The working population's desire to be relieved from heavy agricultural work is also growing stronger. Filling the labor shortages and solving the problem of "the collapse of farm labor force" have become historical needs of global agricultural industry in the coming decades. With the rapid urbanization in China, more and more rural people are migrating to cities for work. China's rural population will shrink from approximately 510 million in 2020 to approximately 460 million in 2024. Most of those left behind in rural areas are over 65 years old. The aging rate of China's rural population has increased from 17.7% in 2020 to 18.7% in 2024. The number of people employed in China's primary industry has decreased from approximately 180 million in 2020 to approximately 160 million in 2024, and is expected to fall to less than 140 million by 2029, by 2050, the related employment will further decrease to approximately 30 million.

The problem of "the collapse of farm labor force" that needs to be solved urgently in the post-planting management stage is an important development direction of the agricultural robotics industry

Agricultural production is divided into four stages: tillage, sowing, post-planting management, and harvesting. Since the Industrial Revolution, traditional agricultural machinery driven by internal combustion engines has rapidly replaced human labor in the three stages of tillage, sowing, and harvesting. At present, the average mechanization rate at these three stages exceeds 70%. However, as in the fields of self-driving vehicles and humanoid robots, traditional agricultural machinery with internal combustion engines and hydraulic drive cannot meet the unique needs of "precise operation" in agricultural management stage. The mechanization rate at post-planting management stage is still at a low level in China and even globally, and the mechanization application degree at this stage is less than half that at other stages, thus it is the agricultural production stage with the largest labor shortage in the future.

With the further integration of artificial intelligence, big data, Internet of things, cloud computing, modern information technology and new energy technology with agricultural production, the research and development and application of autonomous operation performance of agricultural machinery develop rapidly, and agricultural robots are expected to be widely used in all stages of agricultural production. It will inject growth impetus into the transformation, upgrading and high-quality development of China's modern agriculture. The advancement of smart agriculture represents the strategic direction for China's agricultural development.

OVERVIEW OF AGRICULTURAL ROBOTICS INDUSTRY

Overview

As defined by the International Federation of Robotics (IFR), a robot is an electrically driven mechatronic system with a certain degree of autonomy and programmability, capable of moving autonomously in its environment and performing assigned tasks. The term "autonomy" refers to a robot's ability to complete predetermined tasks based on its current state and sensor data, either without human intervention or through human-robot interaction (including physical or information interaction) via user interfaces. Service robots mainly consist of personal service robots and professional service robots, with agricultural robotics being an important part of professional service robots.

Agricultural robotics encompasses the application of robotic systems in agricultural operations, including field preparation, planting, fertilization, plant protection and harvesting. A robotic system comprises robots, end effectors, and any machinery, equipment, devices, or sensors that support robots in performing their tasks. Unlike traditional agricultural practices that rely on manual labor or manually operated machinery, agricultural robotics is characterized by integrated capabilities in environmental perception, information analysis, autonomous decision-making, and task execution, enabling partial or full automated operations.

Global research on agricultural robotics emerged in the 1980s. Early studies focused primarily on picking robots, which utilized early visual recognition technology and had low efficiency. By the 21st century, with the rapid development of technologies such as artificial intelligence, the Internet of Things, and big data, R&D into agricultural robotics entered a stage of rapid growth. As technology advances, agricultural robotics are being applied in an expanding range of agricultural scenarios and operational processes.

Tillage, sowing, post-planting management, and harvesting are the four key stages of agricultural production, and also represent the primary application areas for agricultural robotics. According to the Ministry of Agriculture and Rural Affairs and Frost & Sullivan, in 2024, the overall mechanization rate of China's agriculture was approximately 75%, with the mechanization rates for the four stages of "tillage, sowing, post-planting management, and harvesting" reaching around 87%, 65%, 12%, and 70% respectively in 2024. The management process necessitates a high level of operational accuracy. The farming season of this process is approximately 70%, whereas the mechanization rate within this process stands at only about 12%. This disparity highlights the current industry characteristic of being heavily reliant on manual operations. Targeting the operational characteristics of these four key stages of agricultural production, agricultural robotics upgrades agricultural machinery with intelligent and autonomous capabilities, and rolls out adaptive robotic products, significantly reducing agricultural production costs and boosting agricultural production efficiency.

Post-planting Management

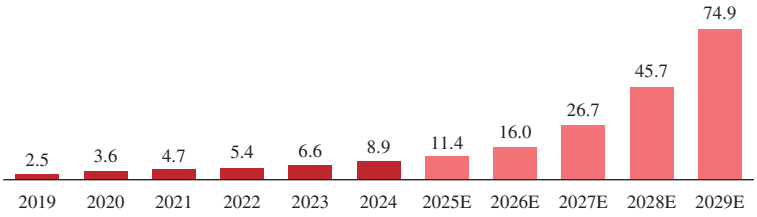
Post-planting management, as a critical stage in agricultural production, directly impacts crop yield, quality, and economic efficiency. It is the stage in agricultural production where labor and agricultural input are most concentrated, with extremely high labor intensity — especially under traditional farming models, which rely heavily on manual operations. Irrigation, fertilization, pesticide application, and agricultural inspection constitute the key components of post-planting management. Tasks such as pest, disease and weeds control, fertilization, and irrigation require repeated operations, particularly during peak crop growth periods. The complex operational processes have resulted in a relatively low level of mechanization application in the post-planting management stage. To date, XAG is the only agricultural robotics company that comprehensively covers the irrigation, fertilization, pesticide application, and patrol aspects of post-planting management.

Market Size of Global Agricultural Robotics Industry

Agricultural robotics are characterized by standardized and automated operation. Building upon traditional mechanization, they integrate cutting-edge technologies such as sensors, automatic control, machine vision and artificial intelligence (AI), enabling them to perform efficiently in unstructured agricultural operation environments. According to Frost & Sullivan, the global agricultural robotics industry, in terms of revenue, grew from RMB2.5 billion in 2019 to RMB8.9 billion in 2024, representing a CAGR of 29.3%. Among the current major product types of agricultural robotics, agricultural drones are more commercially mature and have been deployed across a wide range of application scenarios, with functions expanded from pesticide spraying to seeding, fertilizer spreading and field monitoring. Meanwhile, a growing number of agricultural robotics companies are developing and applying corresponding agricultural robotics products in more agricultural processes such as plowing, planting and harvesting, including autonomous rice transplanters and harvesting robotics. It is expected that the market size of global agricultural robotics industry will grow at a CAGR of 53.3% to RMB74.9 billion by 2029.

Market Size of Global Agricultural Robotics Industry, In terms of Revenue, RMB in Billion, 2019-2029E

CAGR	2019-2024	2024-2029E
Agricultural Robotics Industry	29.3%	53.3%



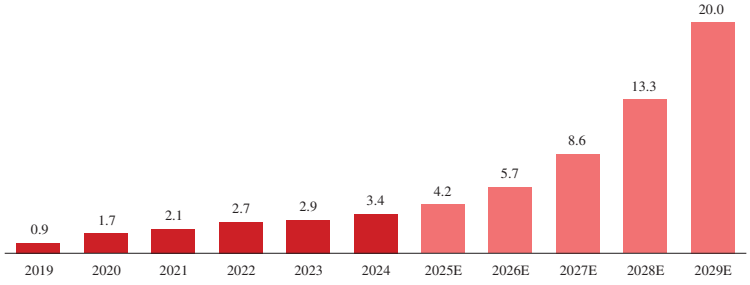
Source: China Association of Agricultural Machinery Manufacturers, U.S. Department of Agriculture, Frost & Sullivan

Market Size of China's Agricultural Robotics Industry

According to Frost & Sullivan, the market size of agricultural robotics industry in China, in terms of revenue, grew from RMB0.9 billion in 2019 to RMB3.4 billion in 2024, representing a CAGR of 29.8%. In recent years, China has been accelerating agricultural mechanization and enhancing the development of modern agriculture. It is expected that the agricultural robotics market in China will grow at a CAGR of 42.3% to reach RMB20.0 billion by 2029. Moving forward, agricultural robotics are expected to be introduced into a wider range of scenarios, such as breeding, weeding, operations in orchards, hilly areas and mountainous regions, further accelerating the rapid development of the agricultural robotics industry in China.

Market Size of Agricultural Robotics Industry in China, in terms of Revenue RMB Billion, 2019-2029E

CAGR	2019-2024	2024-2029E
Agricultural Robotics Industry	29.8%	42.3%



Source: China Association of Agricultural Machinery Manufacturers, Frost & Sullivan

ANALYSIS OF DRIVING FACTORS AND DEVELOPMENT TRENDS

As urbanization accelerates and rural population ages, the agricultural workforce continues to decline, making traditional labor-intensive farming practices unsustainable. According to the National Bureau of Statistics, China's urbanization rate rose from 63.9% in 2020 to 67.0% in 2024. Such accelerated urbanization process has contributed to a continuous outflow of labor from agricultural production. Coupled with the effects of an aging population, the size of the agricultural workforce has sharply decreased from approximately 180 million in 2020 to approximately 160 million in 2024. According to pertinent literature young labor force in China continued to flow to cities, and a large amount of farming work mainly depended on the elderly. The transformation of the age structure of the population in rural areas had brought about the plight of "the collapse of farm labor force", and agricultural robotics were poised to play a critical role in addressing labor shortages and promoting sustainable agricultural development by leveraging their automation and intelligent capabilities.

Advancements in modern science and new energy technologies are providing robust support for the development of agricultural robotics. New-generation information technologies, represented by artificial intelligence, the Internet of Things (IoT), BeiDou Navigation, image recognition and edge computing, are accelerating the empowerment of agricultural equipment, which enhance agricultural robotics' capabilities in environmental perception, path planning, autonomous decision-making and precise control, thereby driving continuous improvements in the intelligence and automation of agricultural production. Furthermore, progress in new energy technologies is expanding the applicable scenarios of agricultural robotics, and improving their performance, endurance, and environmental adaptability, thereby enhancing their operational stability and economic viability in complex field conditions.

The government has introduced strategic documents to support the intelligent transformation of agriculture. In recent years, strong governmental support for agricultural digitalization and intelligence-oriented transformation has driven rapid growth in the agricultural robotics industry. In 2026, the No. 1 Central Document was released, proposing the integration of artificial intelligence into agricultural development and the expansion of application scenarios such as drones, the Internet of Things, and robotics. Plan for Accelerating the Construction of China into an Agricultural Powerhouse (2024-2035) (《加快建設農業強國規劃(2024-2035年)》) proposed to promote the innovation of agricultural science and technology equipment in all fields, and accelerate the realization of high-level self-reliance and self-improvement of agricultural science and technology. The 14th Five-Year Plan for the Development of National Agricultural Mechanization (《"十四五"全國農業機械化發展規劃》) promotes the adoption of intelligent equipment such as plant protection drones, autonomous agricultural machinery, and smart irrigation systems. The Digital Village Development Strategy encourages the application of IoT, big data, and artificial intelligence in building smart farms.

ANALYSIS OF MARKET ENTRY BARRIERS

Industry know-how barriers. Due to the diversity of crop types, climate conditions, soil properties, terrains and farming practices, China's agriculture is characterized by highly complex farmland environments and varied agricultural scenarios. Agricultural robots are required not only to possess strong environmental adaptability and precision operation capabilities, but also seasonal and long-term high-intensity operational capabilities. This places high demands on robotics manufacturers. With accumulated experience, robotics companies specializing in agriculture field have a deeper understanding of pain points in agricultural production, and knowledge of crop growth patterns under different environments, crop types and climatic conditions. This enables robotics companies to develop targeted product features that effectively meet customer needs and continuously enhance brand recognition. New market entrants lack experience in the agricultural sector, making it difficult for them to rapidly develop high-performance products and gain market acceptance.

Technical barriers. Agricultural robotics integrate multiple disciplines spanning agriculture, computer science, artificial intelligence and IoT, imposing stringent requirements on production technology, software development proficiency and processes. Agricultural robotics incorporate various advanced technologies such as intelligent sensing, decision-making and control, machine learning, dexterous manipulation, and multi-robot collaboration. For instance, operating under harsh and variable conditions, agricultural robotics are often exposed to fluctuations in temperature and humidity that can reduce sensor accuracy and lead to unreliable data. This necessitates agricultural robotics companies to understand agricultural production processes, and master core R&D technologies to deliver high-performance products accordingly. Leading agricultural robotics companies have accumulated cutting-edge technology and hold extensive patents covering robotic design, collaborative components, operation systems and software architecture. New entrants will find it difficult to achieve breakthrough technological results in the short term.

Funding barriers. The agricultural robotics industry is a technology- and capital-intensive sector. Significant R&D investment is required throughout the entire product lifecycle from initial development and experimental testing to final commercialization, with a typical development cycle of 3 to 5 years from laboratory prototype to field deployment. As the performance of agricultural robotics continues to improve, the adoption of more high-precision components further drives up production costs. New entrants find it difficult to raise substantial upfront funding.

OVERVIEW OF AGRICULTURAL DRONES INDUSTRY

Overview

Drones, a type of aircraft, are technological innovations arising from advancements in communication technology, information processing technology, and sensor technology. They are powered, controllable aircraft capable of carrying payloads to perform a variety of designated tasks. According to the Civil Aviation Administration of China, in 2023, there were

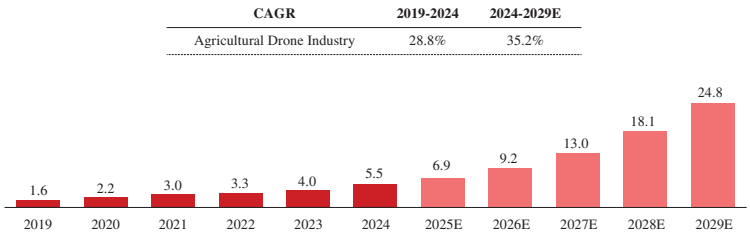
2.967 billion pieces of valid data on the UAV cloud exchange system, which translated to 4.1205 million flight hours, representing an increase of 2.1809 million hours over the previous year. Among them, the operation volume of agricultural drones was the largest, accounting for 98.3% of the total operation volume. Agricultural drones were the most mature field of low-altitude economic development. The development of agricultural drones had promoted agricultural innovation and the development of low-altitude economy, and promoted the upgrading of agricultural mechanization.

With significant technological advancements in recent years, agricultural drones have become deeply integrated into the modern agricultural industry, playing an important role in an increasing number of farming scenarios. They have established three major application scenarios spanning production management and service provision: precision seeding, plant protection operations and smart field monitoring.

Market Size of Global Agricultural Drones Industry

According to Frost & Sullivan, the global agricultural drone industry, in terms of revenue, grew from RMB1.6 billion in 2019 to RMB5.5 billion in 2024, with a CAGR of 28.8%. The rapid development of the agricultural drone industry has driven the modern agriculture towards greater energy efficiency, environmental sustainability, and higher efficiency. It is expected that the global agricultural drone industry will grow at a CAGR of 35.2%, reaching RMB24.8 billion by 2029.

Market Size of Global Agricultural Drone Industry, in terms of Revenue
RMB Billion, 2019-2029E

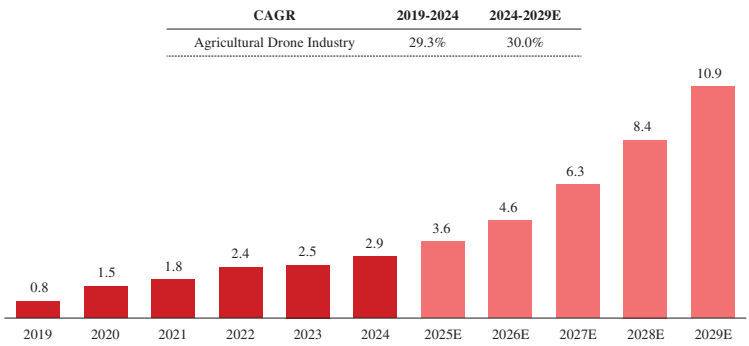


Source: China Association of Agricultural Machinery Manufacturers, Frost & Sullivan

Market Size of China's Agricultural Drone Industry

According to Frost & Sullivan, the market size of the agricultural drone industry in China grew from RMB0.8 billion in 2019 to RMB2.9 billion by 2024 in terms of revenue, with a CAGR of 29.3%. As drones continue to achieve technological breakthroughs in areas such as battery endurance and intelligent features, they can be applied to a wider range of scenarios. The maturation of manufacturing processes has also further reduced the cost of drones, promoting their widespread adoption. It is expected that by 2029, China's agricultural drone industry will grow at a CAGR of 30.0% to reach RMB10.9 billion.

Market Size of Agricultural Drone Industry in China, in terms of Revenue
RMB Billion, 2019-2029E



Source: China Association of Agricultural Machinery Manufacturers, Frost & Sullivan

Analysis of Driving Factors and Development Trends

Refined farmland management has driven demand for the application of agricultural drones. As intelligent execution tools, agricultural drones can conduct high-frequency, large-scale and real-time sensing of farmland conditions, such as crop growth, pest and disease occurrence, soil moisture and nutrient distribution, and make rapid and precise agricultural decisions and take actions based on the relevant data. This significantly improves per-unit yield and resource utilization efficiency, optimizes crop growth environments, and reduces environmental pollution risks.

The deep integration of intelligent information technologies and applications is driving the development and upgrading of agricultural drones. With the development and integration of technologies such as cloud computing and artificial intelligence, agricultural drones are evolving toward greater intelligence. At the perception level, agricultural drones equipped with hyperspectral sensors and high-performance chips can identify pests and diseases for crops in real time, and by combining data delivered from soil sensors and weather stations, they establish an integrated monitoring network. At the decision-making level, agricultural drones, driven by AI model algorithms, can autonomously generate fertilization prescription maps for the current environment, forming a closed loop of monitoring, analysis and execution. In the future, agricultural drones will gradually evolve into highly autonomous decision-making assistants, driving agricultural production from standardized operations to dynamic optimization of farm management.

Globalization trends. With the policy support for the low-altitude economy, agricultural drone companies in China benefit from their advantages in independently developed core technologies, high supply chain integration and cost-effectiveness, and are accelerating their expansion into overseas markets. Market leaders are exporting their agricultural drone products to Southeast Asia, Latin America and other regions, helping local farmers achieve significant

cost reductions, efficiency improvements and achieve precise farm management. China's agricultural drone industry is expected to become a major contributor to the global transformation toward smart agriculture.

Competitive Landscape

Global and China's Agricultural Robotics Industry

The agricultural machinery industry is extensive, and the industry primarily encompasses companies involved in providing traditional heavy machines such as tractors, harvesting machines, mainly serves the land preparation, sowing and harvesting processes of agricultural production. Traditional agricultural machinery is typically large in size and primarily designed for extensive, large-scale operations. Agricultural drones are relatively compact and flexible, making them well-suited for precise operations that can effectively replace manual operations within management process. Currently, agricultural drones are predominantly utilized in the crop management for spraying pesticides or fertilizers. There is not competitive threat between traditional agricultural machinery players to agricultural drones players.

Top Five Companies in the Global Agricultural Robotics Industry in 2024, In terms of Revenue

Ranking	Company	Headquarter	Market share
1	Company A	China	36.6%
2	Our Company	China	10.7%
3	Company B	United States	6.8%
4	Company C	Japan	6.3%
5	Company D	Israel	5.5%

Source: Frost & Sullivan, public information or filings of respective companies

Notes: Company A is a private company established in China in 2006, which is mainly engaged in providing products and solutions relating to consumer drones, agricultural drones, handheld photography equipment. The registered capital is approximately RMB30 million.

Company B is a listed company on the New York Stock Exchange established in the U.S. in 1837, which is mainly engaged in providing products and solutions relating to agricultural machinery and engineering machinery. The registered capital is approximately RMB8 billion.

Company C is a private company established in Japan in 1912, which is mainly engaged in providing products and solutions relating to agricultural machinery and engineering machinery. The registered capital is approximately RMB400 million.

Company D is a private company established in Israel in 1965, which is mainly engaged in providing products and solutions relating to drip irrigation equipment and sprinkler systems, and related products and solutions. The registered capital is approximately billions yuan.

Top Five Companies in China's Agricultural Robotics Industry in 2024, In terms of Revenue

Ranking	Company	Market share
1	Company A	54.8%
2	Our Company	18.0%
3	Company E	2.8%
4	Company F	2.4%
5	Company G	2.3%

Source: Frost & Sullivan, public information or filings of respective companies

Notes: Company E is a private company established in China in 1998, which is mainly engaged in providing products and solutions relating to tractors and harvesting machinery. The registered capital is approximately RMB1 billion.

Company F is a private company established in China in 2016, which is mainly engaged in providing products and solutions relating to agricultural drones and intelligent detection systems. The registered capital is approximately RMB20 million.

Company G is a listed company on the Hong Kong Stock Exchange and the Shanghai Stock Exchange established in China in 1955, which is mainly engaged in providing products and solutions relating to tractors, harvesting machinery and tools. The registered capital is approximately RMB3 billion.

Global and China's Agricultural Drones Industry

The drone industry comprises industrial drone and consumer drone, each serving distinctly different application scenarios. Among industrial drones, the application scenarios are numerous and varied, primarily encompassing inspection, security, logistics, agriculture, and others. Each scenario imposes unique performance and functional requirements on drones. In China, the agricultural drone sector accounts for approximately 6.3% of the drone industry in terms of revenue in 2024. Consequently, companies operating in different drone sectors do not engage in direct competition with one another.

Top Three Companies in the Global Agricultural Drones Industry in 2024 In terms of Revenue

Ranking	Company	Headquarter	Market share
1	Company A	China	59.0%
2	Our Company	China	17.1%
3	Company F	China	2.2%

Source: Frost & Sullivan, public information or filings of respective companies

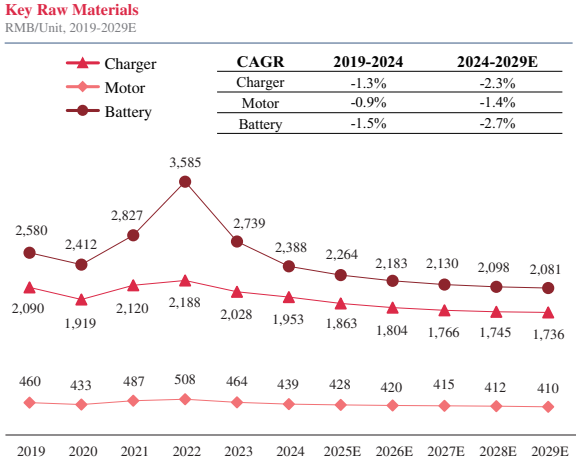
Top Three Companies in China's Agricultural Drones Industry in 2024
In terms of Revenue

Ranking	Company	Market share
1	Company A	63.9%
2	Our Company	20.8%
3	Company F	2.9%

Source: Frost & Sullivan, public information or filings of respective companies

Raw Material Analysis

The core systems of agricultural drone include the power system, flight control system, communication link system, and ground support system, among others. The power system comprises energy equipment such as motors, batteries, and chargers, providing support for the drones' endurance and load capacity.



Source: Frost & Sullivan, Public Information

From 2019 to 2024, chargers, motors, and batteries of agricultural drones experienced fluctuations, with CAGRs of -1.3%, -0.9%, and -1.5%, respectively. Nevertheless, temporary volatility occurred between 2020 and 2022 as public health events led to global supply chain disruptions, driving up raw material costs and the price of chargers, motors, and batteries. As supply chains normalized afterwards, the price recovered gradually. Looking forward, prices for chargers, motors, and batteries are expected to continue declining at a modest pace, as the manufacturing industry shifts toward maturity.