
INDUSTRY OVERVIEW

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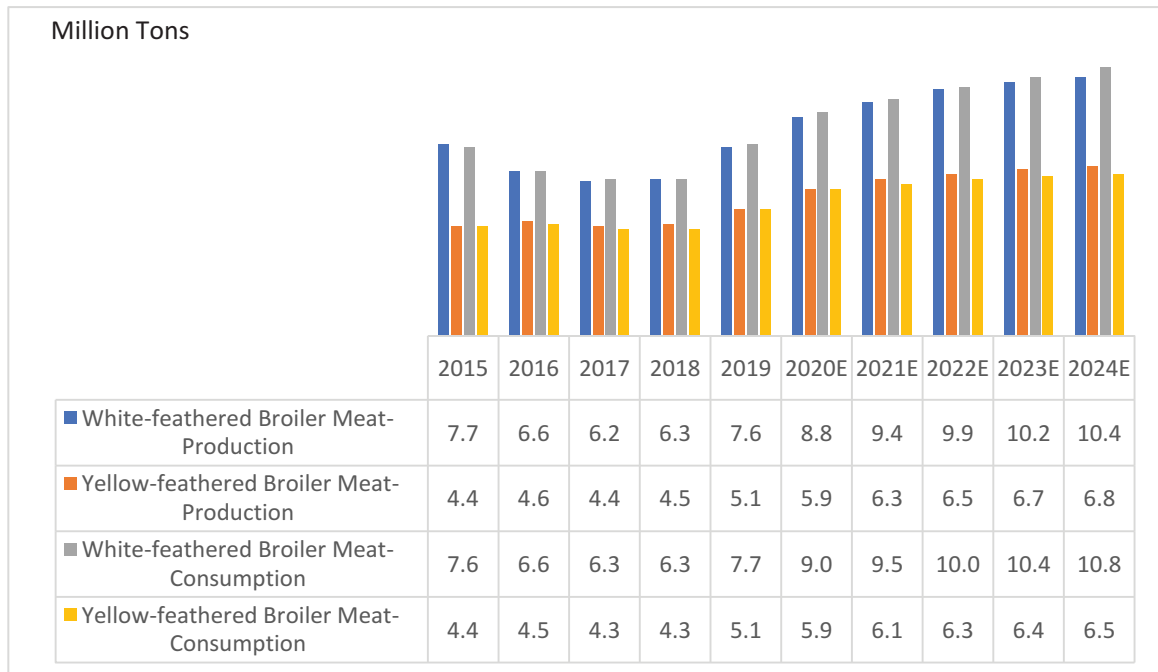
CHINA BROILER MARKET OVERVIEW

Historically, white-feathered broilers and yellow-feathered broilers have dominated China's broiler meat production, wherein white-feathered broilers are quickly replacing yellow-feathered broilers as they grow faster and their breeding process involves lower costs. Broiler meat production in China decreased sharply in 2014 due to the outbreak of H7N9 avian influenza. The ban on importing United States sourced Grandparent Stock Chicks of white-feathered broiler in China since 2015 resulted in the decrease in white-feathered broiler meat production levels in the subsequent years, as demonstrated by the decline of 14.3% and 7.0% in production volume in 2016 and 2017, respectively. Nevertheless, the market started to recover in 2018 and the production and consumption volume of broiler meat is expected to experience a substantial growth in 2019, stimulated by the substitution effect of protein sources caused by the outbreak of African Swine Fever in August 2018. Average feed conversion ratio ("**FCR**")^(Note) is around 1.7-1.8:1 for a 2kg white-feathered broiler, and 2.5:1 for a 1.5kg yellow-feathered broiler. In the years ahead, with the gradual recovery of Grandparent Stock Chicks import, including the lift of the ban on poultry imports from France in March 2019 and the United States in November 2019, white-feathered broiler meat is expected to regain market share from yellow-feathered broiler meat due to its cost advantage, higher FCR and adaptiveness to modernised production methods.

From 2011 to 2015, white-feathered broiler meat consumption maintained a steady growth driven by the popularity of fast food and quick service restaurants ("**QSRs**"). Due to the disruption of domestic white-feathered broiler production caused by the PRC Government's bans on the import of Grandparent Stock Chicks from the United States, the decline in white-feathered broiler meat supply resulted in a decrease in its consumption volume in 2016 and 2017. The yellow-feathered broiler meat maintained a relatively stable growth in production and consumption due to its stable domestic supply in the past years. In 2019, China has developed the first domestic white-feathered day-old chicks ("**DOCs**") for Grandparent Stock Chicks, that is expected to reduce the risk of short supply of Grandparent Stock Chicks and support a more stable growth of white-feathered broiler market in China.

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Breakdown of China Broiler Meat Production and Consumption, 2015 to 2024E



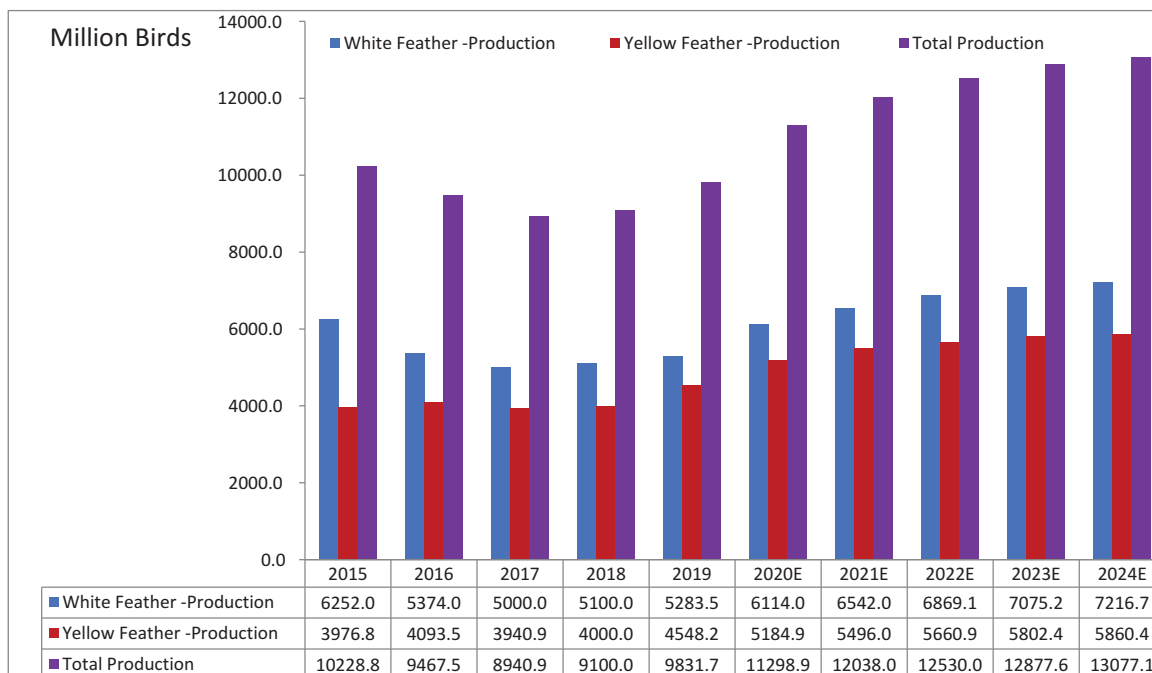
Note: In animal husbandry, FCR is a measure of an animal's efficiency in converting feed mass into increases of the desired output.

	CAGR 2015-2019	CAGR 2019-2024E
White-feathered Broiler Meat—Production	-0.3%	6.5%
Yellow-feathered Broiler Meat—Production	3.8%	5.9%
White-feathered Broiler Meat—Consumption	0.3%	7.0%
Yellow-feathered Broiler Meat—Consumption.....	3.8%	5.0%

Source: Frost & Sullivan

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Breakdown of Production Volume for White-feathered Broilers and Yellow-feathered Broilers (China), 2015 to 2024E

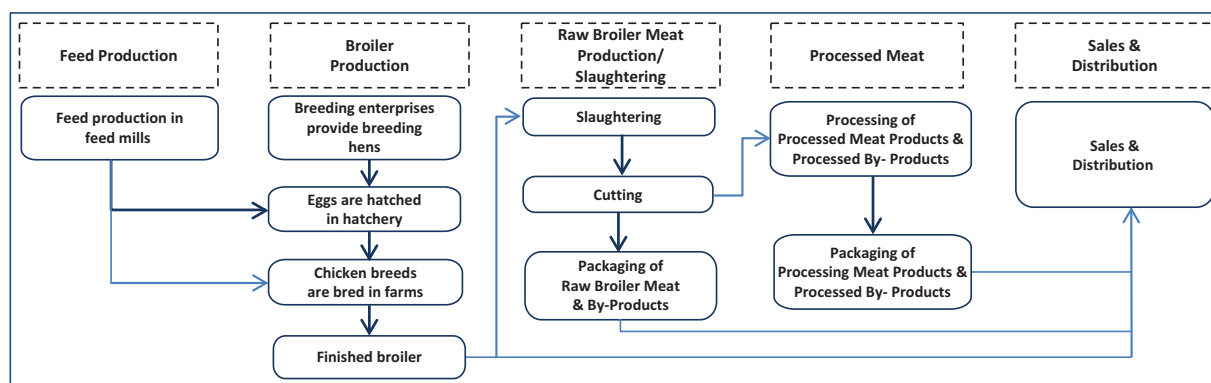


	CAGR 2015-2019	CAGR 2019-2024E
White Feather—Production	-4.1%	6.4%
Yellow Feather—Production	3.4%	5.2%
Total Production	-1.0%	5.8%

Source: Frost & Sullivan

CHINA WHITE-FEATHERED BROILER MARKET

Value Chain Analysis of White-feathered Broiler Market



Source: Frost & Sullivan

Broiler Breeding Cycle

As the domestic white-feathered broiler breeders do not have the capability to breed ancestor broilers, broiler breeders in China mainly rely on imports, particularly those from the United States,

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France, New Zealand and other countries. It takes about 14 months from the introduction of the ancestral broiler to commercial slaughter. After the DOCs for the Grandparent Stock Chicks were introduced, it takes around 23 weeks for it to grow into an adult broiler and enter into the egg producing period which lasts for 41 weeks before the broiler is eliminated. Eggs are incubated and hatched in hatcheries. Three weeks after the eggs are laid, Parent Stock Day-old Chicks are hatched and can be sold to parent breeders' farms. The parent breeders' farms rear the Parent Stock Day-old Chicks until they are 23 weeks old and enter the laying phase for 41 weeks. It takes three weeks to hatch chicken breeds and another six weeks for them to become finished commercial broilers. As an industry practice, China's white-feathered broiler breeding companies usually purchase Parent Stock Day-old Chicks from domestic agents commissioned by breeders from abroad for breeding, rather than importing Grandparent Stock Chicks from overseas directly.

Broiler Breeding Methods

There are mainly three types of breeding methods, namely ground littering rearing, cage rearing and above-grid rearing. Ground littering rearing has been adopted widely around the world, while cage rearing is increasingly utilised by industrial broiler producers.

In ground littering rearing, the floor of the rearing house is layered by dried leaf, chopped straw, hay, rice husk or sawdust, constituting the litter bed of 5 to 10 cm thick. To maintain a comfortable, hygienic and safe environment for broilers, the litter bed must always be kept dry and the rearing house must be well ventilated. While the ground littering rearing requires low upfront investment and technology barrier and provides better animal welfare, the rearing efficiency is relatively low as the number of broilers reared per unit area is less.

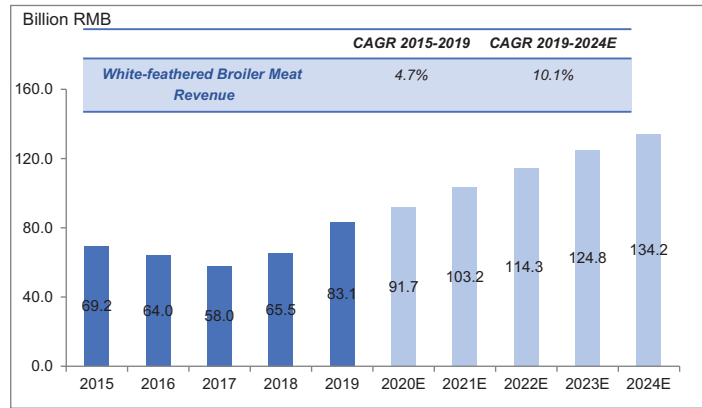
On the other hand, cage rearing is widely adopted by leading players, because it enables more organised, efficient and intensive production by keeping several broilers in one cage and piling up cages in multiple rows. Cage rearing not only saves space of broiler breeding, but, with proper automation can also simplify feeding and manure cleaning process, reducing feed waste and disease incidence due to manure contact. In addition, FCR is generally higher compared to other traditional methods. Nevertheless, as broilers can hardly move in cage rearing, certain diseases caused by lack of motion, such as leg problem, cage layer fatigue and fatty liver syndrome, could occur. This potential shortcoming can be minimised and further resolved by a sophisticated design of rearing system, and maintenance of a high level of hygiene in the rearing farm.

Above-grid rearing is a distinctive rearing method in China. In above-grid rearing, a grid of 60 cm above the ground is set up, covered by a net made of metal, plastic or bamboo. The broiler chicken lives above the grid, and chicken manure falls to the ground through the mesh or the gap between the grids. This method is equipped with an automatic conveyor belt to clean up the chicken manure which can effectively reduce harmful gases and increase the broiler survival rate. The output of above-grid rearing is similar to ground littering rearing, but the operation cost is higher.

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Market Size of White-feathered Broiler Meat

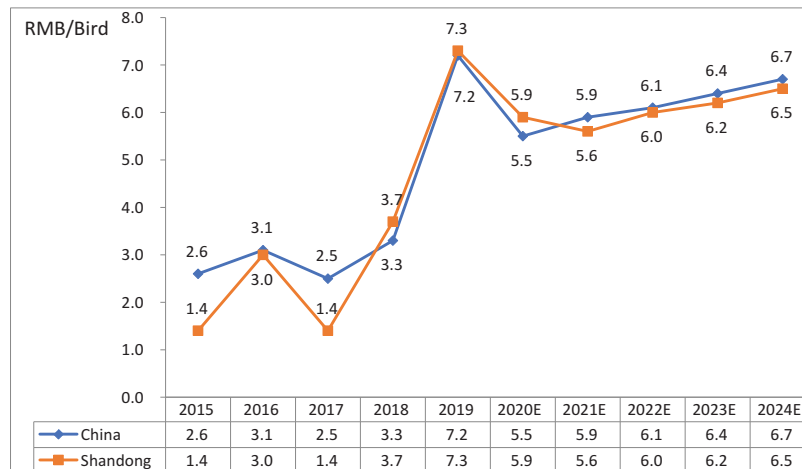
Market Size of White-feathered Broiler Meat by Revenue (China), 2015 to 2024E



Source: Frost & Sullivan

White-feathered broiler meat is mainly sold directly or further processed to various kinds of processed meat products. Environmental concerns have led to the reducing sales of live broilers and encouraged a shift to frozen/chilled meat products. The market size of white-feathered broiler meat by sales revenue increased from RMB69.2 billion in 2015 to RMB83.1 billion in 2019, realised an CAGR of 4.7% over the past five years. In the long term, the market is projected to increase with a CAGR of 10.1% from 2019 to 2024 with the increased demand and recovery of domestic productions.

Average Chicken Breeds Prices and Forecast (China and Shandong Province), 2015 to 2024E



Source: Ministry of Agriculture of China; Frost & Sullivan

Note: Average commercial white-feathered chicken breeds prices include VAT.

Since 2015, the import of Grandparent Stock Chicks from major countries (such as the United States and France) was banned, leading to a reduced supply of commercial broilers. Due to the expectations of insufficient introduction of Grandparent Stock Chicks, the price of chicken breeds rose in 2016. Then due to the impact of H7N9 avian influenza reported in 2017, the price declined. After that, the price has been gradually recovering, especially with the reduced import from some exporters such as the Netherlands and the outbreak of African Swine Fever. Chicken breeds price

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rose and reached RMB3.1 per bird in 2016 and soar to RMB7.2 per bird due to the short supply in China in 2019. With the growing demand for broiler meat, in the next few years, price of chicken breeds is expected to continually increase.

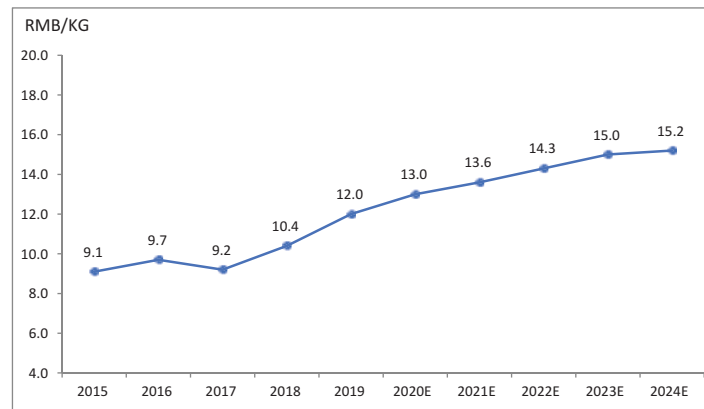
Due to the different breeding volume and breeding cost among areas in China, the price of chicken breeds vary from area to area. For example, the price of chicken breeds in Shandong was RMB3.7 per bird in 2018, which is higher than the average price in China. Due to the relatively low introduction of ancestral broiler in 2018, the broiler stocks in the first half of 2019 were still low. Meanwhile, with the increase demand from the downstream market, the demand for live broilers from slaughtering enterprises also increased, leading to a shortage of chicken breeds supply. In addition, with the improvement of breeding technology, the FCR of broiler is growing, thus even if the price of chicken breeds have increased to a certain level, the breeding companies are still profitable and have sustained demand for chicken breeds. With the recent recovery of broilers' consumption and supply shortage, the average white-feathered chicken breeds prices have increased overall, in particular, Shandong outpaced the national average level since 2018. Due to the favourable factors from both supply and demand support the price of chicken breeds in Shandong. The average price of chicken breeds in Shandong reached RMB7.3 in the 2019.

Due to the fact that Shandong is the centre of leading white-feathered broiler producers in China, the quality of their broiler products is highly recognised in the market. While and when the market is glorious such as in 2019, there will be growing demand for high quality chicken breeds provided by leading enterprises and most of them are located in Shandong. Further, white-feathered broiler companies in Shandong contribute a majority of the production volume of white-feathered broiler meat products in China, which leads to stronger bargaining power of the sellers and the average market price of chicken breeds will increase as a result. In addition, in light of the stricter environmental regulations in Shandong in 2019, a large number of small and medium-sized chicken breeding companies ceased operations to rectify and adapt its existing environmental protection facilities to meet the stricter regulations, which led to a periodical decline in chicken production capacity. Further, chicken breeding companies had to purchase environmental protection-related equipment, which should be one-off, to comply with the more stringent environmental protection regulations in Shandong. Due to the shortage of supply of chicken breeds and the increase in costs incurred by the chicken breeding companies in Shandong, the average price of white-feathered chicken breeds in Shandong was higher than the average price in China in 2019.

In 2020, as (i) the chicken breeding companies will be put into operation again after rectification and (ii) the costs incurred by chicken breeding companies to comply with environmental regulations were one-off, the production capacity of chicken breeds is expected to increase and accordingly, the price of chicken breeds in Shandong is expected to drop and will be closer to the average price in China, as indicated by the latest price trend.

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Average Price of White-feathered Broiler and Forecast (China), 2015 to 2024E



Source: Frost & Sullivan

Note: Average price of white-feathered broiler includes VAT.

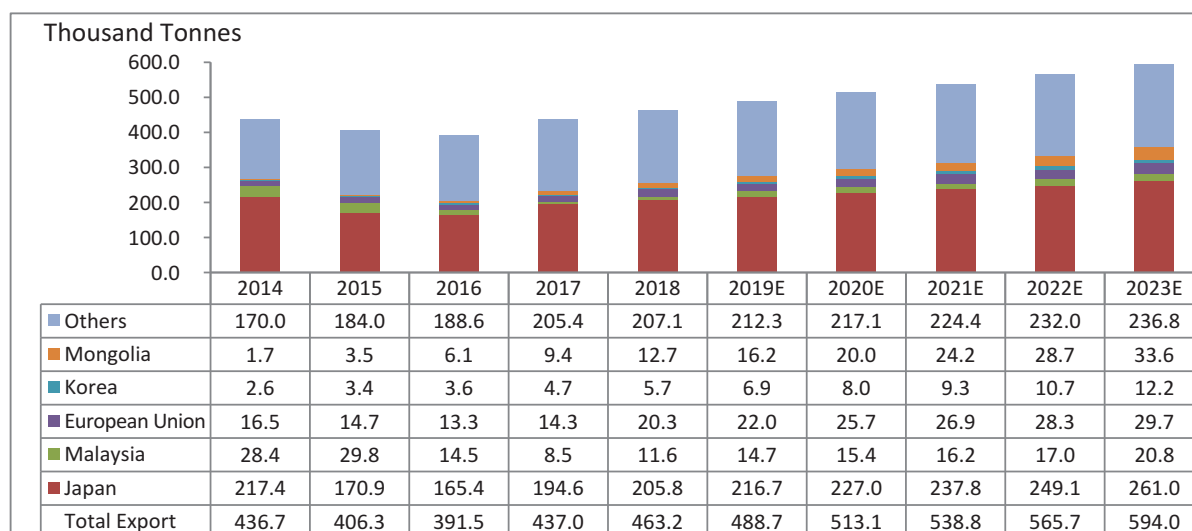
The white-feathered broiler industry in the PRC has historically been affected by certain factors that demonstrate cyclical, including outbreaks of avian influenza, African Swine Fever or similar diseases that occurred from time to time as well as the level of pork consumption and pork prices which is a cyclical industry. The average price of white-feathered broiler increased from RMB9.1 per kg in 2015 to RMB12.0 per kg in 2019. The price of white-feathered broiler is negatively influenced by the outbreak of H7N9 avian influenza at the beginning of 2017 but edged up to RMB10.4 per kg in 2018, stimulated by the substitution effect of protein sources caused by the outbreak of African Swine Fever in 2018. Further, compared with other protein sources, broiler meat has a relatively more competitive price in the PRC. In the long run, the price will be supported by the growing demand from downstream market, as a result of the following factors which would increase the demand for white-feathered broilers going forward: (i) distribution method modernisation and increasing popularity of e-commerce; (ii) the declining consumption of pork as another major protein source due to its higher prices; and (iii) increasing urbanisation in the PRC. However, as a result of the cyclical factors set out above, when large scale outbreaks of avian influenza or similar diseases occur in the future, the average price of white-feathered broiler may be adversely affected.

Export Trading in China Broiler Meat Market

The export volume of broiler meat increased at a CAGR of 1.5 % from 2014 to 2018 and is expected to further grow at a CAGR of 5.1% from 2018 to 2023.

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Export Volume of Broiler Meat and Forecast Split by Export Destinations (China), 2014 to 2023E

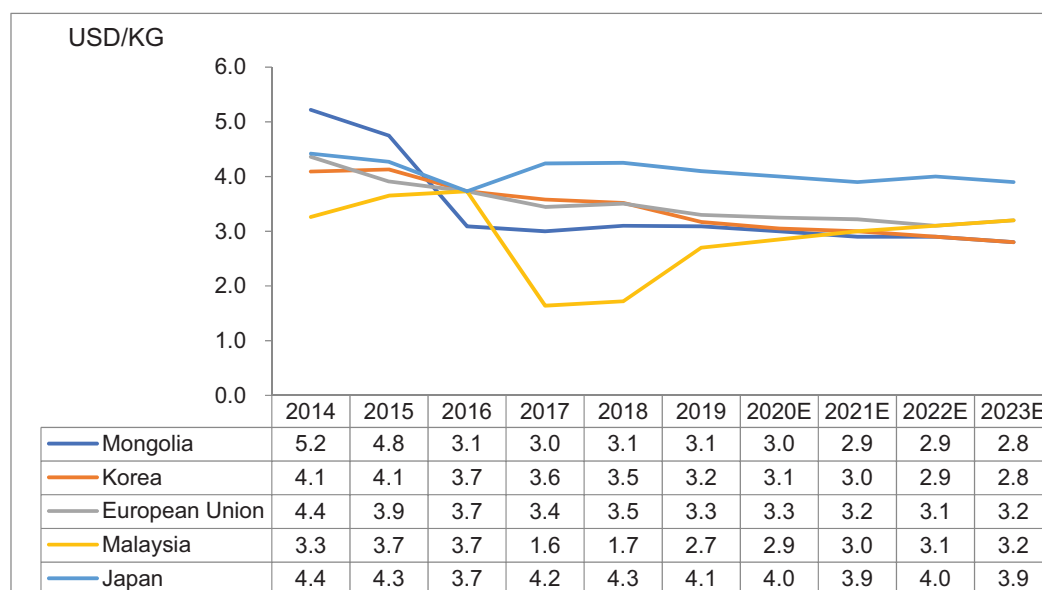


	CAGR 2014-2018	CAGR 2018-2023E
Total	1.5%	5.1%
Mongolia	64.1%	21.6%
Korea	22.3%	16.2%
European Union	5.3%	7.9%
Malaysia	-20.1%	12.4%
Japan	-1.4%	4.9%
Others	5.1%	2.7%

Source: China's General Administration of Customs, Frost & Sullivan

Note: Broiler meat exportation is dominated by white-feathered broiler meat. The above figures refer to all types of export broiler meats (include live chicken, frozen, fresh or chilled whole chicken and chicken portions and processed chicken).

Export Price of Processed White-feathered Broiler Meat Products Split by Export Destinations (China), 2014 to 2023E



Source: UN Comtrade, Frost & Sullivan

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The largest broiler meat product export market of China is Japan, accounting for 44.4% of total export volume of broiler meat product of China in 2018. The European Union were the second largest export markets of Chinese broiler meat. Export of broiler meat from China to the United States has been insignificant; thus the recent trade dispute between the United States and China has limited impact on the export volume of China's broiler meat.

Due to the decreased domestic production volume in recent years, China's export value of broiler meat decreased from USD1,610.3 million in 2014 to USD1,574.8 million in 2018, representing a CAGR of -0.6% from 2014 to 2018. The decrease of export value from 2014 to 2015 was largely due to the change of exchange rate and the export price. With the recovery of domestic production, the total export value of broiler meat from China has been growing rapidly driven by the increase in unit price of the broiler meat and is expected to reach to USD2,164.7 million in 2023, at a CAGR of 6.6%. It is expected that Japan will remain the largest single export market of China from 2018 to 2023.

Since the broiler meat export enterprises in China feature a vertical integration business model and strict control on food safety, companies around the world, especially countries in Asia, have long recognised food safety of China's broiler products. In particular, Malaysia, an Islamic country with strict rules on food preparation processes, generally only imports frozen broiler meat from companies with the Halal certification (a global-approved Islamic import licence for Muslims' foods). This poses a significant entry barrier against many companies around the world from entering into the Malaysian broiler market.

As European Union consumers are highly concerned with environmental protection, animal welfare and food safety, the legislation on local broiler meat producers is stricter, resulting in higher operation cost. To protect the benefits of local producers, European Union regulator has imposed tariff rate quota on imported broiler meat, granting preferential access and lower tariff only to certain markets within the limit of annual quota. In November 2018, after years of negotiation, the European Union has agreed to grant a low-tariff quota to Chinese broiler meat, effective from the first quarter of 2019. As a result, it is expected the export volume of broiler meat from China to the European Union will experience an uptick in 2019 and grow steadily in the near future.

CHINA BROILER PROCESSING MARKET OVERVIEW

Definitions and Classification of Processed Broiler Meat Products

Processed broiler meat products refer to broiler meat preserved by smoking, curing or salting, or by the addition of chemical preservatives, such as chicken sausages, chicken ham, chicken nuggets, canned chicken chunks, etc. Processed broiler meat products can be classified into semi-cooked products and ready-to-eat products, thus mainly targeting at individual consumers. By processing technique, processed broiler meat products can also be classified into cured cooked meat, sauced broiler meat products, roasted broiler meat products, dried broiler meat floss and deep fried broiler meat products.

Market Size of Processed White-feathered Broiler Meat Products

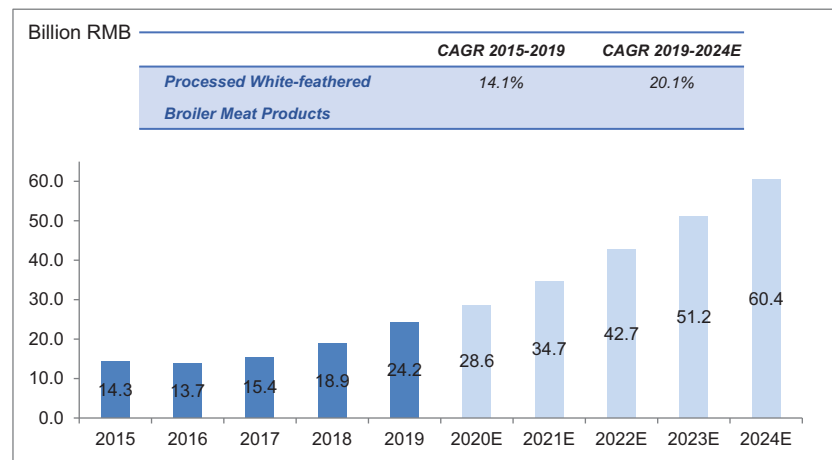
Chinese people have had a dietary preference for live broiler or chilled meat (preservation method in which raw or processed food is cooled to a temperature between zero degree and five degree Celsius (0°C-5°C)). The demand for processed white-feathered broiler meat products accounted for a small part of total white-feathered broiler meat consumption in China. However, the processed white-feathered broiler meat market is poised for a big leap, mainly driven by its increasing popularity among young generation, as it is more convenient to cook and more suitable to

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fit in their fast-paced lifestyle. In addition, the outbreak of avian influenza worldwide depressed overall demand for live broiler meat and general consumers have also been turning to processed broiler meat products.

The market size of processed white-feathered broiler meat products in China increased from RMB14.3 billion in 2015 to RMB24.2 billion in 2019, at a CAGR of 14.1%. It is projected that the total market size will continue to grow steadily at a CAGR of 20.1% from 2019 to 2024 along with a more diverse products portfolio, boosted by the growing popularity among young generation seeking convenience and diversity.

Market Size of Processed White-feathered Broiler Meat Products by Revenue (China), 2015 to 2024E

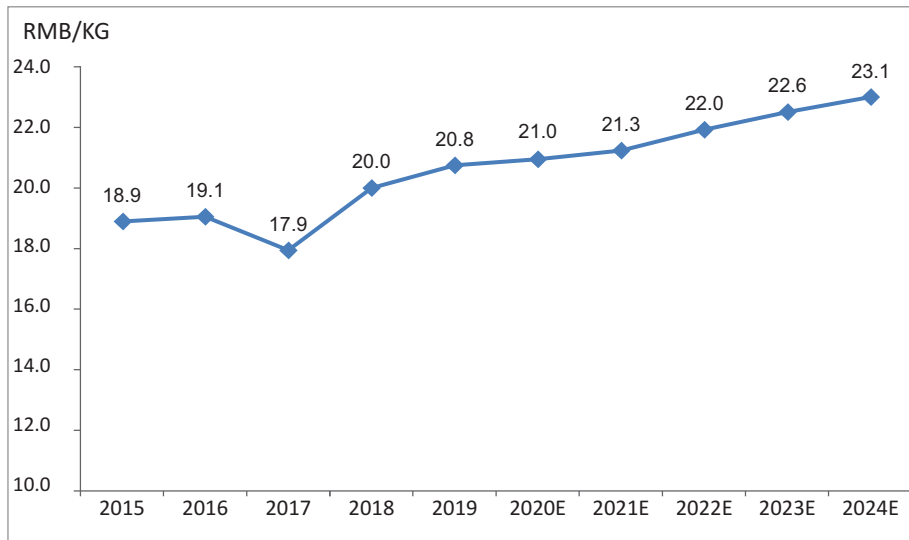


Source: Frost & Sullivan

The increasing product diversity will be a future trend in processed broiler meat products market so as to cater various consumer needs in flavour, packaging, nutrition content etc. In addition, market players will likely enhance the promotion of food hygiene and the concept of organic farming as the consumers' concerns on food safety and quality continue to increase.

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Average Price of Processed White-feathered Broiler Meat Products and Forecast (China), 2015 to 2024E



Source: Frost & Sullivan

The white-feathered broiler meat products industry in the PRC has historically been affected by certain factors that demonstrate cyclicity, including outbreaks of avian influenza, African Swine Fever or similar diseases that occurred from time to time as well as the level of pork consumption and pork prices which is a cyclical industry. The average price of processed white-feathered broiler meat products increased from RMB18.9 per kg in 2015 to RMB20.8 per kg in 2019 and is expected to reach RMB23.1 per kg in 2024. In 2017, due to the outbreak of H7N9 avian influenza, there is declining consumption willingness for broiler meat, resulting in a price drop for broiler meat products. In addition, the price decline of raw chicken meat also led to the cost reduction for processed broiler meat products. The price of processed white-feathered broiler meat products increased in 2018 due to the outbreak of African Swine Fever, which led to an increase in consumption demand for chicken meat products. It is projected that the average price of processed white-feathered broiler meat products will continue to gradually increase, as a result of the following factors which would increase the demand for processed white-feathered broiler meat products going forward: (i) distribution method modernisation and increasing popularity of e-commerce; (ii) the declining consumption of pork as another major protein source due to its higher prices; (iii) increasing urbanisation in the PRC both through e-commerce platforms and offline channels; and (iv) increasing diversification of processed broiler meat products. The largest export market of processed white-feathered broiler products of China is Japan. The export volume from China to Japan is 209.9 thousand tonnes, and it accounts for 78% of the total export volume in 2018. Other major export markets include Hong Kong (9.6%), New Zealand (4.2%), the United Kingdom (2.6%) and Korea (2.6%) in 2018. However, as a result of the cyclicity factors set out above, when large scale outbreaks of avian influenza or similar diseases occur in the future, the average price of processed white-feathered broiler meat products may be adversely affected.

The unit prices of processed broiler meat products are generally much higher than the raw ones, incorporating the added-value of processing and brand premium. By extending downstream along the value chain, broiler meat producers selling processed broiler meat products directly to end consumers are able to obtain a higher profit margin than the ones providing only raw broiler meat products to business customers. Moreover, the addition of B2C business mitigates the disadvantage

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in bargaining power against large business customers, which also helps improve the profit margin of broiler meat producers.

The major sales and distribution channels for processed broiler meat products include online e-commerce platforms and offline channels, such as supermarkets, convenience stores and specialty stores. The online channel has experienced vibrant growth in recent years in China, attributable to the established e-commerce infrastructure, users' well-cultivated online shopping habits and enhanced cold-chain logistics facilities.

Due to the different nature of B2C business, the success of processed broiler meat products business heavily relies on brand name, especially brand awareness and brand reputation. When choosing processed broiler meat products, end consumers generally prioritise food safety over other factors, such as price and packaging. Typically, first-time consumers tend to pick products with better brand awareness and reputation such as those they have come across either through advertisement or word-of-mouth recommendations. As such, market players targeting at end consumers are obliged to adopt a stricter standard of safety and quality control and allocate more resources for end consumer marketing than raw meat producers.

White-feathered broiler is suitable for slaughtering, cutting, chilled or frozen storage. It has relatively strong industrial properties and is more suitable for fired roast and used as raw materials for most processed meat. Due to its cost competitiveness in comparison to alternative broilers, consumption of white-feathered broilers is mainly concentrated in the fast food restaurants, schools, enterprise canteens and in processed products. Therefore, white-feathered broiler is normally raised by medium and large-scale companies. In comparison, yellow-feathered broiler is normally sold fresh or processed and chilled as a whole and mainly targets at family consumption in China. Despite a lower production efficiency, the flavour of yellow-feathered broiler is more suitable for traditional Chinese cuisine such as stewed or cooked in soup. Therefore, yellow-feathered broiler is normally raised by small-scale companies and individual farmers. One of the distinguishing features is that white-feathered broilers are those that are generally sold chilled or frozen whereas yellow-feathered broilers are those that are generally traded live at wet markets. As different groups of people have different consumption preference and habits, white-feathered broilers and yellow-feathered broilers have their respective targeted consumer groups and are catered for different consumption scenario. Overall, there is not much competition between white-feathered broilers and yellow-feathered broilers. It is only when the supply of white-feathered broilers is obviously deficient, consumers would then turn to yellow-feathered broilers for substitution.

OVERVIEW OF CHINA BLACK BONE BROILER MARKET

Market Size of Raw Black Bone Broiler Meat

Black-bone chicken is a rare bird and one of the ancient chicken breeds in China, which skin, meat, bones and most of its internal organs are black. It has medicinal, edible and ornamental value. Black bone broiler is a local breed originated from Taihe, Jiangxi. It has a compact body and is also suitable for large-scale farming due to its high disease-resistant ability. Xingwen black bone broiler is one of the major varieties of high quality. Xingwen black bone broiler has a long history and is mainly produced in Sichuan. It has been protected by National Protection of Geographical Indications since 2013. As a premium product, black bone broiler has a relatively niche market mainly targeting at high-income customers in the past. While they are more expensive in price, black-bone broiler has higher nutrition and medicinal value. In recent years, as per capita income in China increases and amid growing awareness on healthy diet, black bone broiler consumption increased rapidly. The market size of the black bone broiler meat in China grew from RMB1.4 billion in 2015 to RMB2.1

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billion in 2019 at a CAGR of 12.1% and it is projected the market size will further expand to RMB3.6 billion in 2024 with a CAGR of 11.3% from 2019.

Average Wholesale Price of Black Bone Broiler

As a tonic product, black bone broilers are mainly served in restaurants. The limited consumption channel leads to the price volatility of black bone broiler meats within a year. However, the average wholesale price of black bone broiler has been increasing steadily prompted by a growing consumption group. The average wholesale price of black bone broiler increased steadily from RMB17.4 per kg in 2014 to RMB22.7 per kg in 2019. In the next five years, it is expected that the increasing purchase power and health awareness of customers will push up the demand for black bone broiler products and support its price to grow continually. It is expected that the average wholesale price will grow up to RMB25.9 per kg in 2024 with a CAGR of 2.7% from 2019.

There are certain major differences in breeding white-feathered broilers and black-bone broilers: (i) white-feathered broilers breeding is mainly concentrated in northern part of China, whereas black-bone broilers are more suitable to be reared in regions with mild climate, such as southern part of China area. Currently, black bone broilers production bases are mainly located in Guangzhou, Fujian, Jiangxi and Sichuan with Sichuan being the major rearing region for black bone broilers and (ii) large-scale intensive rearing methods, such as cage rearing, are widely applied for white-feathered broiler breeding, whereas black-bone broilers breeding requires free-range backyard rearing and are not suitable for industrial breeding. As a result, the breeding of black bone broilers cannot be closely integrated into the Group's existing white-feathered broiler breeding business, and the Group's competitive strengths in white-feathered broiler business cannot be effectively translated into the success in black bone broilers business.

DRIVERS IN CHINA BROILER MARKET

Increasing urbanisation

Currently, per capita meat consumption of rural residents is around half of urban residents. Increasing urbanisation increases disposal incomes of rural citizens which will in turn increase the spending power of rural residents. Given the relatively low urbanisation rate in China (59.6% in 2018) compared to developed countries, the potential of meat demand is still large as the urbanisation in China continues in the near future. In addition, urbanisation is expected to create more demand for broilers following the development of more supermarkets and QSRs.

Increasing exportation

Since the broiler meat export enterprises in the China feature the vertical integration of the whole industry, food safety for China's broiler products has long been globally-recognised and the export value of broiler meat from China to major exporting countries grows rapidly. Thus, the broiler meat market in China can maintain a healthy growth despite fluctuating domestic demand.

Distribution method modernisation and increasing popularity of e-commerce

Distribution method modernisation (e.g. use of cold-chain logistics) facilitates the transportation of fresh and frozen meat products. Benefitting from modern distribution chain, leading players begin to adopt online channel to sell broiler product to end consumers directly. The market size of processed meat and seafood by retail value by internet retailing in the China witnessed a rapid growth in the past few years, that increased from RMB1,354.4 million in 2015 to RMB5,507.8 million

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in 2019, representing a CAGR of 42.0%. The successful implementation of online channels by leading players promotes more and more companies to adopt online channel. Thus, there will be an increasing demand from modern retail outlets and fresh food e-commerce platforms for raw and processed meat. Modernisation of the distribution chain and e-commerce will help promote broiler meat demand and is likely to change the consumption patterns of broiler products.

QSR development

QSR development is a major driver of broiler consumption. KFC was established in China in 1987 and is now operating over 5,000 restaurants in over 1,100 cities across China. McDonald's opened its first outlet in China in 1990 and now has over 2,800 outlets, with plan to open another 1,500 outlets in China in the next five years. Other branded chains QSR have also been very popular among the younger generation and have been expanding rapidly in recent years.

Declining consumption of other major protein source

The consumption demand for chicken meat has increased sharply following the outbreak of African Swine Fever, hence consumers are turning towards other protein sources to compensate for the abrupt drop of pork consumption. Furthermore, consumers are pursuing a healthier lifestyle that they tend to choose white meat over dark meat, and chicken breast is the major type of white-meat, so broiler gradually becomes the major protein source. Consequently, the market price of chicken meat has experienced a surging increase. Meanwhile, since domestic production capacity cannot be built up immediately, imports of chicken meat are expected to rise substantially.

Shift in consumer lifestyle

To accommodate the changing lifestyle and eating habits of Chinese consumers, leading players have invested a large amount of fund in research and development to create new products. The increasing product diversity drives the growth of processed broiler meat products market so as to cater various consumer needs in flavour, packaging, nutrition content, etc.

KEY THREATS IN CHINA BROILER MARKET

Fluctuations in the domestic and global economy

China's broiler meat industry may be adversely affected by changes in national or global economic conditions, including changes in GDP growth, inflation, government policies, interest rates, employment, etc. For example, weak economic conditions could contribute to the reduction in demand, bankruptcy of suppliers and higher cost for production. Increased exchange rate may erode the competitiveness of export enterprises and reduce their revenue.

Outbreak of diseases

Avian influenza or other similar diseases may occur during the breeding of broilers. Tens of thousands of broilers could be killed and buried for preventing the spread of avian influenza, which can significantly affect broiler production. Outbreak of diseases in importing countries will also lead to decreasing introduction of Grandparent Stock Chicks which will result in the shrinking supply of broilers. Outbreaks and adverse publicity of these diseases will have negative impact in consumers' confidence, resulting in shrinking market demand and profitability of enterprises.

Rising cost of feeds

The main operating cost of broiler production is the cost of feeds. Feeds are mainly consisted of corn, soybean meal, wheat, sorghum, which in the short term are difficult to be replaced with other

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materials. Drastic reduction in sown area, climate anomalies and changes in national agricultural policy will result in the reduced production of the abovementioned agricultural products and lead to the increase in price.

FUTURE TREND IN CHINA BROILER MARKET

Expansion of processed broiler meat products

Processed broiler meat products have numerous advantages compared to raw broiler meat products. Firstly, by using different types of raw materials and different processing methods, a variety of processed broiler meat products tailor-made for different consumer groups can be produced. Secondly, producers can control the level of fat, cholesterol, salt, additives and other content in the processed broiler meat products, to provide nutritionally balanced products by adjusting the raw materials used in the process. Finally, processed broiler meat products are generally ready-to-eat products and are gaining popularity among consumers seeking convenience.

Processed broiler products have been very popular in Europe, the United States, Japan and other developed countries, where advanced broiler meat processing technology and equipment are widely used. On the contrary, processed broiler meat product market in China is still at its development stage with processed broiler meat products accounting only for about 14% of the total broiler meat consumption in the country, which is well below the average level of 40-70% in the developed countries. Domestic broiler meat processing is constantly moving towards standardisation, mechanisation and automation, and the processed broiler meat market in China has great potential for development.

More concentrated and integrated market

Commercial broiler farms in China are expanding gradually in their production capacity. The farms with production capacity of 50,000 broilers per day or below are reducing. On the other hand, large enterprises with their own complete production line have an increasing market share. Compared with companies which only focus on one stage of the production process, these relatively large enterprises have stronger risk resistance ability. Vertical integration helps such enterprises eliminate the risks from upstream to downstream of the production process, avoid fluctuations in business performance and safeguard the quality of upstream raw materials and the ultimate outputs to downstream consumers. With the trend of increasing vertical integration, the competition between enterprises is spanning over the entire value chain.

Change of business model

“Company + farmer” model was widely used in broiler production. This model helps companies to tackle difficulties that they may encounter during daily business operation and development, including lack of finance, land availability, environmental regulation cost, etc. However, this model is not conducive to the monitoring of the entire production, making it difficult to ensure the quality of the final products. As the outbreak of avian influenza is still reported occasionally, customers have paid greater attention to the safety of broiler meat products, which will push more domestic broiler enterprises to extend their business to transit from “company + farmers” model to integrated industrial chain model in the future, which could effectively reduce the occurrence of diseases and food safety events.

Less trade in live birds market

The outbreak of H7N9 avian influenza in 2013 caused enormous losses to the broiler market, especially to the yellow-feathered broiler market which relies heavily on live bird sales in wet

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markets. As an effort to control the spreading of avian influenza, governments have strengthened the control on live broiler trading market. Despite the traditional dietary preference for live broilers, it is expected that chilled or frozen broiler products will gradually take up the market share of live yellow-feathered broilers in the future.

Adopt B2C business model

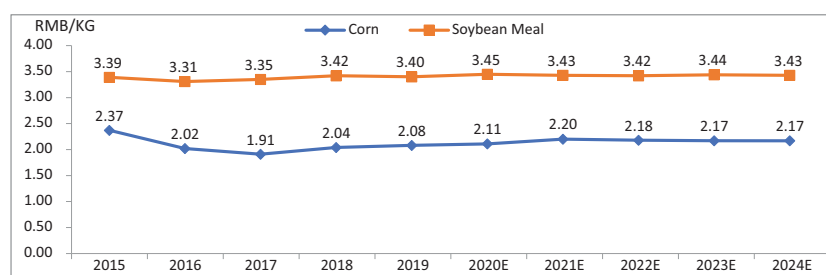
More and more industry participants are motivated to adopt the B2C model, that enables them to sell broiler products to end consumers directly, because it creates a higher profit margin and is also beneficial for building brand image. However, since these participants used to sell broiler products through B2B, that their B2C brands are relatively new to end consumers. Therefore, they need to proactively advertise their products to attain wider brand exposure to end consumers. Yet, with the increasing cost of advertisement (for example, an effective advertisement on a leading media platform could cost at least few million RMB), companies aiming to penetrate into the B2C market need to retain a large amount of funding for marketing.

It is an industry practice for poultry processors and traders to cooperate or enter into collaboration agreements with integrated foodservice providers, who act as intermediaries for offline sales platforms reaching end consumers. These intermediaries provide value-added services to offline sales platforms such as convenience stores and supermarkets, including sourcing, logistics and distribution services of food products. On most occasions, the intermediaries first settle purchase with poultry processors and traders, and then on-sell the products to offline sales platforms. As intermediaries generally have strong coverage of offline sales platforms (including convenience stores and supermarkets) spanning over different regions in the PRC, collaboration with integrated foodservice providers allows poultry processors and traders to broaden their end-consumer reach across the PRC and enhance their brand awareness in a time-effective and cost-effective way. To enable intermediaries to serve their offline sales platforms, the intermediaries usually collaborate with poultry processors and traders to ensure supply of the goods required.

PRICE AND RAW MATERIAL OF BROILER MARKET

Main Feeds Price and Forecast

Average Price of Main Feeds and Forecast (China), 2015 to 2024E



Source: Ministry of Agriculture of China; Frost & Sullivan

Note: Average price of main feeds includes VAT.

In March 2016, as temporary storage of corn reaches a high volume, the PRC Government announced its termination of the stockpiling policy along with new direct subsidy policy and the corn market was under selling pressure.

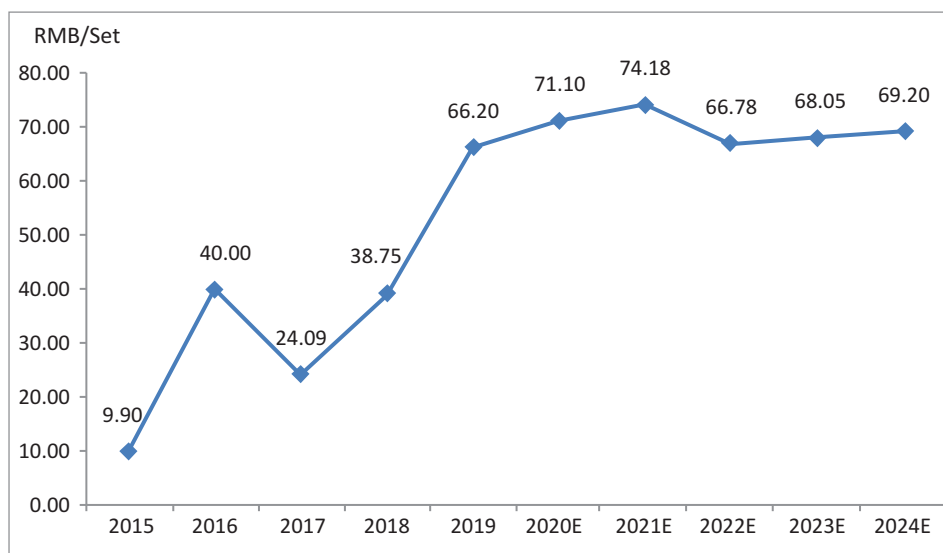
On the other hand, as China's domestic soybean meal production rely highly on imports, the price of soybean meal is mainly affected by the prices of soybean meal from major producing areas

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abroad. For example, in the first half of 2016, domestic prices of soybean meal increased sharply due to the reduction of output in the United States and Brazil. In recent periods, the prices of corn and soybean meal have remained stable at around RMB1.9 to 2.1 per kg and RMB3.2 to 3.5 per kg, respectively. The corn and soybean meal companies in Yanggu, Shandong are typically small trading companies, they are usually set up when the profits are good and close when the profits turn bad.

Parent Stock Day-old Chicks Price and Forecast

Average Parent Stock Day-old Chicks Prices and Forecast (China), 2015 to 2024E



Source: Frost & Sullivan

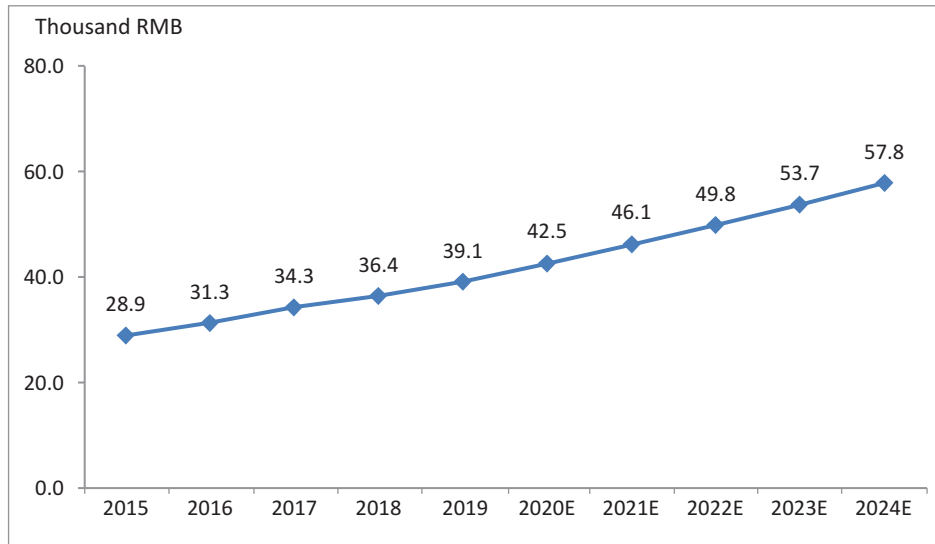
Note: One set of Parent Stock Day-old Chicks includes a cock and around 7 hens.

Due to the insufficient introduction of Grandparent Stock Chicks, the price of Parent Stock Day-old Chicks rose in 2016. In 2017, due to the impact of H7N9 avian influenza, the price of chicken breeds declined, thus breeding enterprises reduced the purchase of Parent Stock Day-old Chicks, which led to a decline in the price of Parent Stock Day-old Chicks. In 2018, the price of chicken breeds gradually recovered and the market confidence increased. As a result and coupled with the shortage in supply, the price of Parent Stock Day-old Chicks rose and reached RMB66.2 per set in 2019. It is expected that in the short-term, with the outbreak of African Swine Fever, the price of Parent Stock Day-old Chicks will remain high and stable. After which, with the emergence of domestic Grandparent Stock Chicks breeders, the price is expected to fall in the future.

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Annual Per Capita Wage in China Broiler Market

Annual Per Capita Wage in the Broiler Market (China), 2015 to 2024E



Source: Frost & Sullivan

The annual per capita wage in the broiler market in China increased from RMB28.9 thousand in 2015 to RMB39.1 thousand in 2019 and is expected to reach RMB57.8 thousand in 2024.

COMPETITIVE LANDSCAPE OF CHINA BROILER MARKET

Differences between fully integrated white-feathered broiler producers and other white-feathered broiler producers

	<u>Fully integrated</u>	<u>Others</u>
Business model	The fully integrated business model extends across the entire poultry industry value chain, including feed processing, chicken breeding, slaughtering and processing, distribution and sales of poultry products.	Other white-feathered broiler producers take charge of one or a few parts of the entire value chain. Majority of them adopt “company + farmers” or “company + broker + farmers” model in the chicken breeding process, which means that white-feathered broiler producers provide farmers with standardised resources, while the farmers are responsible for breeding the commercial generation broilers and sell them to the producers after the commercial generation broilers mature. Compared to “company + farmer” business model, “company + broker + farmer” business model ensures that the company can receive negotiated volume at pre-determined price, and assure farmers’ benefits and rights at the same time.

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	Fully integrated	Others
Gross profit level	Approximately 11% to 15%, fully integrated broiler producers can adjust production level and selling price based on market demand to better control their gross profit level.	Approximately 7% to 10%, non-fully integrated broiler producers' gross profit level is highly affected by upstream and downstream of the industrial value chain.
Business scale	Most of the fully integrated white-feathered broiler producers are large-scale enterprises. Although they account for a small share in terms of number of broiler farms, they account for a certain share of China's poultry meat output.	Most of the farms are small family units with an average farm size of 1,000 to 2,000 birds' capacity.
Development strategy	Fully integrated white-feathered broiler producers aim to develop all parts of the business as a whole, which includes expanding production capacities, growing product portfolio with a focus on B2C products, strengthening research and development capacities, expanding sales and distribution networks and tapping into new markets, and pursuing merger and acquisition opportunities.	Other white-feathered broiler producers aim to establish a partnership with more farmers to achieve economies of scale, and to keep the supply volume and cost from farmers under their control.

Top 5 Fully Integrated White-feathered Broiler Producers in China by Commercial Broiler Production Volume, 2019⁽¹⁾

Ranking	Company	Production Volume (Million Birds)	Market Share
1	Company A ⁽²⁾	505.2	9.5%
2	The Group	162.3	3.1%
3	Company B ⁽³⁾	140.0	2.6%
4	Company C ⁽⁴⁾	128.2	2.4%
5	Company D ⁽⁵⁾	120.0	2.3%
Top 5		1,055.7	19.9%
Total		5,293.5	100.0%

Source: Frost & Sullivan

Notes:

- (1) Fully integrated means the enterprises taking charge of the full commercial breeding process, as opposed to the "company + farmer" production.
- (2) Company A specialises in the production of white-feathered broilers. It is one of the leading fully integrated broiler producers in China covering all aspects from production to sales, which includes breed incubation, broiler breeding, broiler hatching, feed processing, broiler processing, food processing, sales, etc.
- (3) Company B is one of the leading fully integrated broiler producers in China which covers broiler breeding, feed production, slaughtering, cold storage, food processing, export, etc.
- (4) Company C covers broiler slaughtering, segmentation, food processing, refrigeration and sales and its main products include frozen and chilled chicken products, etc.

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- (5) Company D is a diversified multinational enterprise group integrating food, agriculture, financial and industrial products and services. In the agriculture sector, Company D provides grain, oilseed and other agricultural products procurement, processing and rationing services for food and animal nutrition product manufacturers.

White-feathered broiler production industry in China was still relatively scattered with top five producers taking only 19.9% of total market in 2019. The Group accounted for approximately 3.1% of China's total production volume in 2019.

In general, companies with sizeable operation adopt a fully integrated business model. Fully integrated business model allows the white-feathered broiler producers to improve operation efficiency and optimise its cost structure by reducing the intermediate segment and ensure the supply of raw materials for meat products. Moreover, it enables white-feathered broiler producers to better resist market risks, monitor product quality and provide safe and healthy meat products to customers in the market. Secondly, companies with different business models are not comparable. For example, some companies use the "company + farmer" model to entrust farming chickens. The business model, gross profit level, business scale, and the development strategy of those companies are different from the fully integrated producers such as the Group. Therefore, for the purpose of a fair comparison and a true reflection of the competitive landscape, it is sensible to compare the Group with companies with a similar operation scale.

Top 5 Fully Integrated White-feathered Broiler Meat Exporters in China by Export Revenue and Export Volume, 2018

Ranking	Company	Export Revenue (Million USD) ⁽¹⁾	Market Share	Export Volume (Thousand tonnes) ⁽¹⁾	Market Share
1	The Group	129.0	8.6%	44.2	10.4%
2	Company E ⁽²⁾	110.0	7.4%	25.2	5.9%
3	Company F ⁽³⁾	90.0	6.0%	17.9	4.2%
4	Company G ⁽⁴⁾	61.0	4.1%	18.9	4.5%
5	Company A	57.4	3.8%	15.8	3.7%
	Top 5	447.4	29.9%	121.9	28.7%
	Total	1,496.1	100.0%	424.7	100.0%

Source: General Administration of Customs; Frost & Sullivan

Notes:

- (1) The products include both raw broiler product line and processed broiler product line.
- (2) Company E covers the sale of crop seeds and has also gradually developed and expanded to form a complete modern agriculture and animal husbandry industry chain comprising of seed improvement, planting industry, feed industry, aquaculture industry, agricultural and animal husbandry product processing, food sales, import and export trade, etc.
- (3) Company F covers the business sectors of meat and poultry food, corn starch and natural pigment. Company F has formed pillar industries such as feed supply, breeding, slaughtering and segmentation, food processing, starch production, pigment extraction, etc.
- (4) Company G is one of the largest industrialisation group companies which covers broiler breeding, feed production, slaughtering and processing, condiment production, cooked food production, chicken bone condiment production, refrigerated distribution, commercial chain, international trade, etc.

The product categories of exported broiler meat products comprises raw broiler meat and processed broiler meat. Many broiler meat exporters in China focus on either raw broiler meat or processed broiler meat. Their focus on only one type of product pose risk to their future operations.

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For example, importing countries normally have stricter controls on the import of raw broiler meat. Thus, the demand of exports for raw broiler meat is policy-oriented, which could be ever-changing. Broiler meat exporters with both raw and processed meat product operations are more likely to maintain stable revenue.

Among the white-feathered broiler meat exporters, the Group held the first place in terms of export revenue in 2018 with a market share of 8.6% (measured by the export revenue generated) and export volume in 2018 with a market-share of 10.4% (measured by the export volume generated). The top five players accounted for 29.9% of the total Chinese export revenue in 2018 and 28.7% of the total Chinese export volume in 2018.

The Group's market share in the total production of white-feathered broilers and yellow-feathered broilers in China in 2019 is 1.7% in terms of number of birds produced and 1.4% in terms of tonnes produced.

Competitive Advantage of the Group

The Group is a leading vertically integrated white-feathered broiler and broiler meat producers, operating along the full value chain from feed production, chicken breeding, slaughtering, processing and sales of raw and processed broiler meat products. With years of industry experience and superior operation expertise, the Group has achieved large scale and high efficiency in production. The high standard for products quality and safety control has placed the Group at the forefront of the broiler meat industry and help the Group establish sound client relationship with major business customers.

The Group takes the leading position in broiler meat export market among white-feathered broiler producers, contributing 8.6% of the export revenue of broiler meat in 2018. With years of experience in supplying broiler products to blue-chip business customers, the Group has established a brand reputation in the broiler meat market and high standard of quality and safety control capability, which is favourable for the Group to expand its market share under B2C business model. The Group is well positioned to capture the growth opportunity in processed broiler meat products targeting at end consumers, which is expected to play a favourable role in enhancing overall profit margin in the future.

ENTRY BARRIERS

Fund

In broiler market, companies generally need sufficient areas of land for rearing broilers. Moreover, companies usually procure advanced equipment such as automatic feeding and slaughtering facilities to improve product quality and productivity. Installation of equipment requires massive amount of fund investments. This requirement of fund investments poses heavy financial burden to start-ups, especially to small and medium sized companies and hence deters new entrants from entering the industry and competing with existing players.

Talent

Control of the breeding environment, including the temperature, ventilation, etc. is crucial in the broiler breeding process. Therefore, professional management talents with relevant industry insights are paramount to ensure that the quality of broiler products meets the requirements of customers. Moreover, the efficient production of raw and processed meat products requires experienced workers in slaughtering and processing. However, professional management talents in

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the broiler breeding industry and experienced slaughtering and processing workers are in short supply and tend to be retained by large, well-established companies offering higher wages and reputation, depriving new entrants of crucial human capital to compete with existing players.

Technology

With increasing awareness of food safety among the general public, companies in the Chinese broiler market have to adopt advanced technique monitoring the real-time status of farms and slaughterhouses, in order to detect and control the outbreak of epidemic diseases timely. A substantial amount of time and investments are required to establish a comprehensive monitoring system, posing a barrier for new entrants.

Export permit and relevant capability

In order to export to overseas markets, broiler meat producers are required to obtain permit from destination countries. In the case where destination countries have stricter rules on the meat quality standard, broiler meat producers with limited capacity and capability to meet these regulations would not be able to compete in the export market.

Diversified business model

With extensive industry experience and sufficient fund, leading industry players in China have established an integrated business model, that enables them to produce diversified product types, such as raw broiler meat and processed broiler meat products, and chicken breeds. Moreover, these leading players have developed an effective quality control system through which their produced products can satisfy importing requirements of export destination and allow them to export their products overseas. The domestic and export markets of raw broiler meat and processed broiler meat products, and chicken breeds witnessed rapid growth in the past few years and are expected to further increase in the near future, and leading players with diversified business model are able to ride on the positive market trend.

SOURCE OF INFORMATION AND RESEARCH METHODOLOGY

The Company commissioned Frost & Sullivan, an independent industry consultant, to provide information on the PRC broiler market and other major overseas broiler markets. The Company had agreed to pay a fee of RMB1,300,000 to Frost & Sullivan for the report. The Directors are of the view that the fee reflects the market rate and the payment does not affect the fairness of the views and conclusions presented in the Frost & Sullivan Report.

In compiling and preparing the Frost & Sullivan Report, Frost & Sullivan conducted primary research including interviews with industry experts and participants and secondary research which involved reviewing the statistics published by the government official statistics, industry publications, annual reports of key market players and data on broiler markets in its own database. Frost & Sullivan made various market size projections on the basis of historical data analysis plotted against macroeconomic data, as well as data with respect to the related industry drivers and integration of expert opinions. Frost & Sullivan assumed that the social, economic and political environment in the PRC and major overseas countries do not experience material changes in the forecast period.

ABOUT FROST & SULLIVAN

Frost & Sullivan is an independent global consulting firm founded in 1961. It offers industry research, market strategies and growth consulting and corporate training services. Its industry

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coverage includes material and food, consumer products, finance, industrial and machinery, automotive and transportation, chemicals, commercial aviation, energy and power systems, environment and building technologies, healthcare, industrial automation and electronics and technology, media and telecom. The Frost & Sullivan Report includes information on data of the PRC broiler market and other major overseas broiler markets.

DIRECTORS' CONFIRMATION

After making reasonable enquiries, the Directors confirm that there has been no adverse change in the market information presented in the Frost & Sullivan Report since the date of the report which may qualify, contradict or have an impact on the information in this section.