
INDUSTRY OVERVIEW

The information and statistics set out in this section and other sections of this document were extracted from the report prepared by Frost & Sullivan, which was commissioned by us, and from various official government publications and other publicly available publications. 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, the [REDACTED], the [REDACTED], the [REDACTED], the [REDACTED], the [REDACTED], the [REDACTED], any of their respective directors and advisers, or any other persons or parties involved in the [REDACTED], and no representation is given as to its accuracy.

SOURCE AND RELIABILITY OF INFORMATION

We have commissioned Frost & Sullivan, an Independent Third Party, to conduct a study on China’s vegetable produce market and potted vegetable produce market. We agreed to pay Frost & Sullivan a fee of RMB1,240,000 for the preparation of the F&S Report, and our Directors consider that such fee reflects market rates and are of the view that the payment of such fee does not affect the fairness of conclusions drawn in the F&S Report. Founded in 1961, Frost & Sullivan has over 50 global offices with more than 3,000 industry consultants, market research analysts, technology analysts and economists.

RESEARCH METHODOLOGY

The methodology used by Frost & Sullivan in gathering the relevant market data in compiling the F&S Report included primary interviews and secondary research. Primary interviews are conducted with relevant institutions to obtain objective and factual data and prospective predictions. Secondary research involves information integration of data and publication from publicly available resources, including official data and announcements from PRC government departments, and market research on industry and enterprise player information issued by our chief competitors.

BASES AND ASSUMPTIONS

The F&S Report was compiled based on independent market assessment through both primary and secondary research and the following assumptions: (i) China’s economy is likely to maintain steady growth in the next decade; (ii) China’s social, economic, and political environment is likely to remain stable from 2023 to 2027; and (iii) increasing frequencies of dining out and growing concerns about food safety of China’s residents are likely to drive the future growth of the industry.

Based on above, our Directors are satisfied that the disclosure of future projects and industry data included in this section of the document is not misleading in material aspects.

Our Directors confirmed that, as at the Latest Practicable Date, after taking reasonable care, there had been no adverse change in the market information since the date of the F&S Report which may qualify, contradict or have an impact on the information in this section of the document.

INDUSTRY OVERVIEW

AN OVERVIEW OF CHINA MACRO ECONOMY

According to the National Bureau of Statistics of China, the Chinese economy grew at a CAGR of 7.8% from 2017 to 2022. Going forward, the Chinese authorities are likely to maintain the consistency and stability of macroeconomic policies so as to maintain macroeconomic stability. According to the International Monetary Fund (“IMF”), the Chinese economy is forecast to keep growing at a CAGR of 5.9% from 2022 to 2027.

Together with the continuous growth in economy and urbanisation, the average income level of Chinese urban households has been increasing continuously in recent years. The per capita annual disposable income of urban households has increased to RMB49.3 thousand in 2022 from RMB36.4 thousand in 2017, representing a CAGR of 6.3%.

The growth of Chinese per capita annual disposable income has demonstrated positive effect on the Chinese residents’ purchasing power. Frost & Sullivan estimates that by 2027, the per capita annual disposable income of urban households is forecast to increase to RMB66.0 thousand with a CAGR of 6.0% from 2022.

CHINA’S VEGETABLE AND POTTED VEGETABLE PRODUCE MARKETS

An overview of China and Shandong province’s vegetable produce market

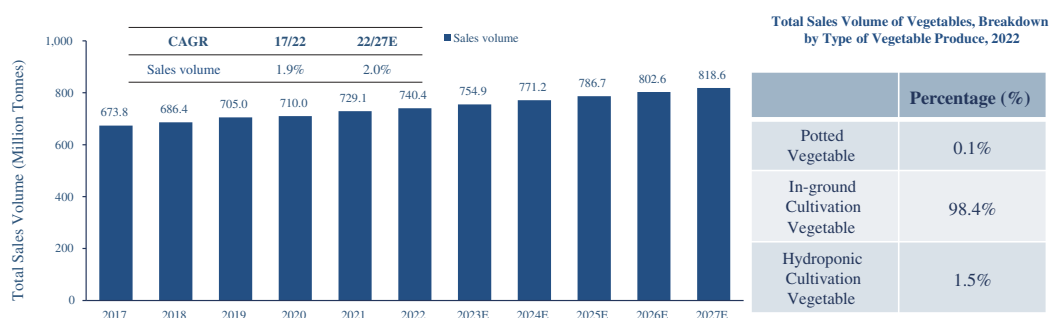
Vegetable is necessary for human being’s daily diet. The huge population of China and increasing overseas demand for Chinese vegetable produce support growth of the PRC vegetable industry. Major vegetable cultivation methods are in-ground vegetable cultivation, hydroponic, in-pot cultivation, etc.. In-ground vegetable cultivation refers to growing vegetable in soil and is the most common vegetable cultivation method in the PRC. Hydroponic is an alternative to in-ground vegetable cultivation which uses water-soluble nutrients to cultivate vegetables while in-pot cultivation refers to growing vegetable produce in pots filled with nutritious substrates. This method has become more popular in the PRC for improving productivity and freshness of vegetable produce.

INDUSTRY OVERVIEW

Market size of China and Shandong province’s vegetable produce market

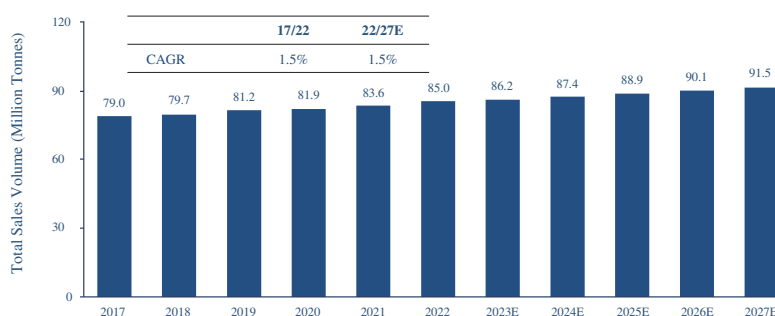
The PRC vegetable market recorded a total sale volume of 740.4 million tonnes in 2022, representing a CAGR of 1.9% between 2017 and 2022. The market has experienced relatively moderate growth which is generally in line with the population growth in China. In 2022, the sales volume of potted vegetable produce accounted for approximately 0.02% of total sales volume of vegetable in China. Similar trend is expected to continue in the forecast period from 2022 and 2027, the growth of the total sales volume of vegetables is forecast to increase steadily with an anticipated CAGR of 2.0% for the period from 2022 to 2027 and is expected to reach 818.6 million tonnes by 2027. Meanwhile, Shandong province is the largest vegetable producing province in China in 2022. The total sales volume of vegetables in Shandong province increased from 79.0 million tonnes in 2017 to 85.0 million tonnes in 2022, representing a CAGR of approximately 1.5%. The number is likely to grow at a CAGR of approximately 1.5% from 2022 to 2027, reaching 91.5 million tonnes in 2027.

Total Sales Volume of Vegetables (China), 2017 — 2027E



Source: Frost & Sullivan

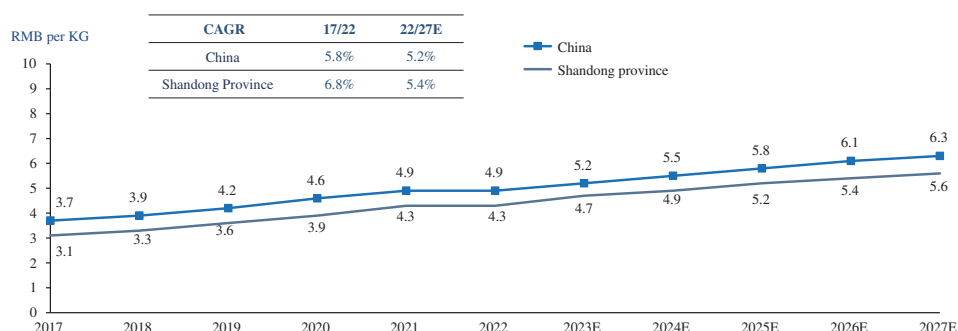
Total Sales Volume of Vegetables (Shandong Province), 2017 – 2027E



Source: Frost & Sullivan

INDUSTRY OVERVIEW

Average Wholesale Price of Vegetables (China and Shandong Province), 2017 – 2027E



Source: National Bureau of Statistics, MOA, Frost & Sullivan

Different Kinds of Vegetable Produce in China and Shandong Province

The table below sets forth the major differences among different type of vegetable produce:

	Traditional in-ground cultivation	Hydroponic cultivation	In-pot cultivation
Major steps of cultivation process	<ol style="list-style-type: none"> 1. Tilling or loosening soil on cultivation bed to prepare it for planting; 2. Sowing; 3. Growth management which mainly includes watering, adding chemical fertilisers and pesticides and weeding; and 4. Harvesting upon maturity 	<ol style="list-style-type: none"> 1. Formulating nutrient-rich water; 2. Seedling; 3. Transplanting to hydroponic farming system; 4. Growth management which mainly includes control over temperature and humidity, regular replacement of nutrient solution and pumping equipment maintenance; and 5. Harvesting upon maturity 	<ol style="list-style-type: none"> 1. Premix organic substrates; 2. Sowing; 3. Growth management which mainly includes watering, control over temperature, humidity and carbon dioxide density and pest control 4. Sale in pot (without harvesting) once reach maturity
Major limitations	<ul style="list-style-type: none"> ● Require large and flat growing area ● Time and cost requirements for soil preparation ● Expose to harmful external factors 	<ul style="list-style-type: none"> ● Vulnerable to water and power supply shortage ● High setup and maintenance cost ● Risk of disseminate of water-borne disease as vegetable produce share the same nutrient solution 	<ul style="list-style-type: none"> ● Relatively high initial investment cost ● High delivery cost for matured vegetable produce as it is transported in pot

INDUSTRY OVERVIEW

	Traditional in-ground cultivation	Hydroponic cultivation	In-pot cultivation
Initial investment cost	Relatively low, while the land cost being major cost item	Relatively high, as construction of greenhouse, the set-up of hydroponic system and research and development in the composition of nutrient solutions are required	Relatively high, as construction of greenhouse, research and development in the composition of substrates and the acquisition of raw materials are required
Suitable species	Basically all species	not suitable for some of the leafy-vegetable species	almost all kinds of short-lived leafy vegetables species.
Technical requirements	Minimal; the cultivation process can be completed with basic equipment and facilities	High; the composition of nutrient solution varies during different growing stages of vegetable produce	High; horticultural techniques are required in the preparation of the best suit the organic substrates.
Sales method	The matured vegetable produce will undergo harvesting, packaging and transporting before sale. In general, such vegetable produce shall stay fresh for 3–5 days	The matured vegetable produce will undergo harvesting, packaging and transporting before sale. In general, such vegetable produce shall stay fresh for 3–5 days with better packaging.	The matured vegetable produce will not be harvested before sale. In general, such vegetable produce shall stay fresh and alive for 10–14 days after delivery

INDUSTRY OVERVIEW

	Traditional in-ground cultivation	Hydroponic cultivation	In-pot cultivation
Retail price	The retail price generally remains in the low end of the range of the consumer’s acceptable prices, nonetheless, the retail price of certain vegetable produce may fluctuate in different seasons, in particular those which are temperature-sensitive, due to the limited supply.	The retail price is similar to those vegetables grown under traditional in-ground cultivation method	The retail price is expected to be in the high-end of the customer’s acceptable price range, which can be four times to five times of those from traditional in-ground cultivation method. As potted vegetable produce is cultivated in greenhouses and targeted to the commercial sector of the catering industry, the supply shall remain stable, whilst demand is relatively inelastic. Therefore, the retail price will remain relatively stable throughout the year.
Number of yields per year	<ul style="list-style-type: none"> ● Due to the negative effects of continuous cropping, the output rate will gradually deteriorate. ● It is common to adopt a rest period or cultivate other crops for soil recovery between each cultivation. ● Vegetable producers can only complete two yields to six yields of cultivation per year. 	<ul style="list-style-type: none"> ● Hydroponic cultivation is favourable to the growth of certain water-hungry vegetable, such as lettuce, purple lettuce and romaine lettuce. ● On average, six yields to ten yields per year can be achieved. 	<ul style="list-style-type: none"> ● With the use of greenhouses, single-use substrates and not being affected by the negative effects of continuous cropping, vegetable producers using the in-pot cultivation method will generally achieve high productivity. In general, it is able to cultivate a maximum of ten yields to 14 yields per year, subject to the conditions of greenhouses and the optimal use of cultivation time.

An Overview of China’s Potted Vegetable Produce Market

Potted vegetable produce refers to vegetables that are cultivated in pots instead of being cultivated on the ground. Potted vegetable produce is a small segment of the vegetable market as a whole which is predominantly cultivated under traditional in-ground cultivation method. Major species of potted vegetable produce are leafy vegetables and solanaceous vegetables, including spinach, lettuce, water spinach, Chinese chives and tomatoes. More and more restaurants display the fresh potted vegetable to arouse consumers’ interest and for consumers to choose and order from around 2010. Along with a rising awareness in personal wellness and concerns about food safety, potted vegetable produce is becoming increasingly popular among urban residents and restaurants as a direct access to quality and fresh vegetables.

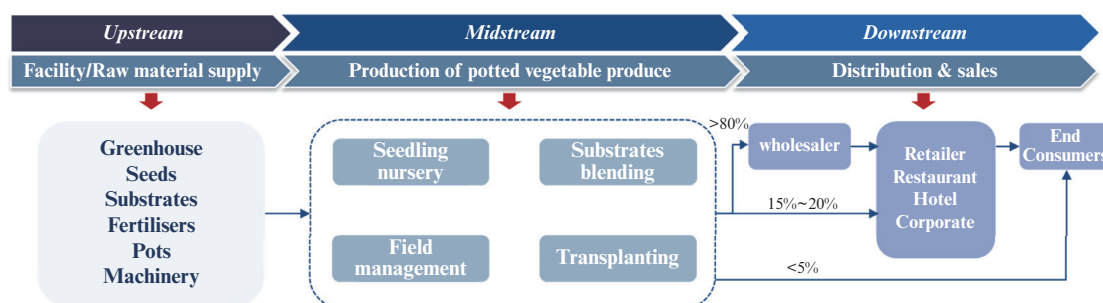
INDUSTRY OVERVIEW

Essential facilities and raw materials for producing potted vegetable produce include, among others, greenhouses, seeds, substrates, fertilisers, pots and machinery. Cultivating potted vegetable produce in a greenhouse allows for growth in optimal climatic conditions as if ideal cultivation seasons were extended, allowing a year-round fresh supply of potted vegetable produce.

Seedling nursery, substrates blending, transplanting and field management are four key steps of production of potted vegetable produce. Potted vegetable producers with long operating history, scientific expertise and knowledgeable employees are more likely to achieve higher production rates.

After maturation, fresh potted vegetable produce reach domestic consumers through wholesalers and retailers or through direct sales. With the development of communication technology, customers are able to place orders for potted vegetable produce online via personal computers, tablets, or mobile phones.

Value chain of potted vegetable produce market



Source: Frost & Sullivan

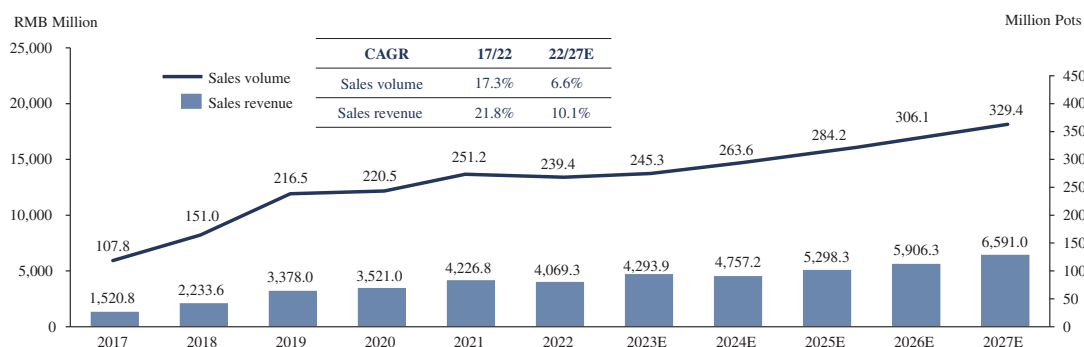
Market size of China’s potted vegetable produce

In line with the increasing rate of vegetable consumption of residents in China due to the increasing total population and disposable income, the sales volume of potted vegetable produce increased from 107.8 million pots in 2017 to 239.4 million pots in 2022, representing a CAGR of approximately 17.3%. Since (i) potted vegetable produce will not be harvested at the time of sale; (ii) due to the difference in species; and (iii) depending on the maturity of the vegetable produce, there will be variation in weight of each potted vegetable produce upon sale, the measurement of potted vegetable produce by pots is commonly acknowledged in the industry and is applied to each market player in the industry. As advised by Frost & Sullivan, it is widely recognised across the potted vegetable produce industry that each pot of vegetable produce shall contain approximately net weight of 0.7 kg to 1.0 kg of vegetable produce.

In 2022, total sales revenue of potted vegetable produce accounted for less than 0.1% of total sales revenue of vegetable produce in China. It is an industry practice for vegetable producers and potted vegetable producers to sell their products through wholesalers and distributors in China. In 2022, approximately 70% of potted vegetable produce is sold through wholesale channel. Meanwhile, the sales revenue of potted vegetable produce increased from RMB1,520.8 million in 2017 to RMB4,069.3 million in 2022 with a CAGR of approximately 21.8%. In 2022, affected by the recurrence of COVID-19 epidemic in many cities like Shanghai, Shenzhen, Chengdu, Qingdao, the supply and sales of potted vegetable were interrupted more heavily comparing to that in 2021. As a result, the sales volume and sales revenue of potted vegetable produce in 2022 is lower than 2021.

INDUSTRY OVERVIEW

Sales volume and sales revenue of potted vegetable produce (China), 2017–2027E



Source: Frost & Sullivan

Going forward, as potted vegetable produce is increasingly popular in China, the market is expected to keep an upward trend. In addition, assuming that the operation of restaurants are to be back to normal since 2023 if the restriction measures of COVID-19 are gradually alleviated, the demand for potted vegetables is expected to be back to the rising channel. The sales volume of potted vegetable produce is likely to reach 329.4 million pots in 2027 with a CAGR of approximately 6.6%. The sales revenue is also expected to grow to RMB6,591.0 million in 2027, representing a CAGR of approximately 10.1%.

The outbreak of COVID-19 in early 2020 has impacted the catering market in the first four months in 2020. For instance, in February, Qingdao Administration for Market Regulation issued COVID-19 Prevention and Control Measures on Food Safety of Catering Services (餐飲服務疫情防控食品安全工作細則), which suggested residents to reduce the on-site dining in restaurants. Most of the restaurants and hotels reopened by the end of March 2020. In February, Dalian Command Centre for COVID-19 Control and Prevention issued Notice of Strengthening the Control on Citywide Catering Services during the Period of Prevention and Control of the COVID-19 Outbreak (關於加強新冠肺炎防控期間全市餐飲服務經營管控的通告), which required restaurants stop providing on-site dining services. However, as the spread of COVID-19 alleviates in China, restaurants reopened and the economy recovered gradually. The decline of catering market in China had slowed down since March 2020. By 8 April 2020, the lockdown of Wuhan had come to an end. By 15 May 2020, over 20 provinces in China had adjusted the Public Health Emergency Response to the third level. Despite the total revenue of catering industry in April 2020 witnessed a year-on-year drop of 29.7%, it is noted that in October 2020, the total revenue of catering market

INDUSTRY OVERVIEW

in China witnessed a slight increase comparing to the previous year. Due to the subsequent outbreak of COVID-19 epidemic in Dalian between December 2020 and January 2021, the Municipal Government of Dalian had implemented some lockdown measures between the middle of December 2020 and the middle of January 2021. In 2022, there were several recurrence of COVID-19 epidemic in many cities like Shanghai, Shenzhen, Chengdu, Qingdao, where lockdown measures are taken to prevent the spread of the epidemic. People are increasingly concerned about the safety and quality of food, which may drive the demand for quality vegetable produce and potted vegetable produce among the residents of China. On 7 December 2022, the PRC authorities announced the “Ten New Guidelines”, which followed “The 20 Measures” released on 11 November 2022 to accelerate the economic recovery and resume normal operations of the society. The relaxation of rules, which include allowing infected people with mild or no symptoms to quarantine at home and dropping testing for people travelling within the country, is a strong sign on promoting economic recovery since the outbreak of COVID-19 in 2020. According to the “Ten New Guidelines”, low-risk areas are not allowed to control movement or suspend any services, work, or production. Local economy has gradually returned to normal operation. Hence, the negative impact on potted vegetable produce market in China has been gradually diminishing.

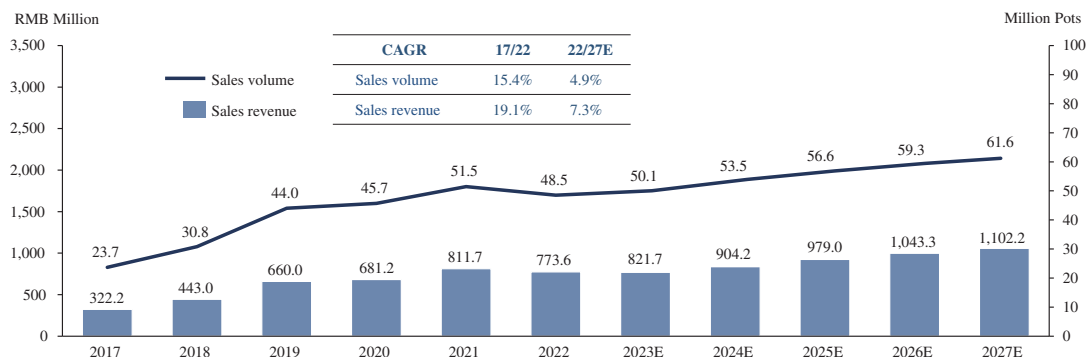
As one of the major vegetable producing provinces in China, Shandong province has a long history of vegetable cultivation and has large greenhouse areas, providing a development basis for potted vegetable produce. With increasing disposable income and rising population in Shandong province, the sales volume of potted vegetable produce in Shandong province increased from 23.7 million pots in 2017 to 48.5 million pots in 2022, representing a CAGR of approximately 15.4%. Meanwhile, the sales revenue of potted vegetable produce increased from RMB322.2 million to RMB773.6 million during the same period with a CAGR of approximately 19.1%. The Group recorded revenue growth of approximately 4% from FY2020 to FY2022 which underperformed the market as the revenue growth of potted vegetable produce in Shandong province was approximately 14% during the same period. This is mainly due to the fact that, notwithstanding the increase in our revenue by approximately 28% between FY2020 and FY2021, our business was materially affected in FY2022 by the temporary suspension of business activities of our Laixi Facility as a result of the resurgence of COVID-19 cases in Shandong province between March 2022 to April 2022, leading to decline of revenue by approximately 18.2% between FY2021 and FY2022. The impact caused by COVID-19 in Qingdao area where our Laixi Facility situated, is more severe than other areas in Shandong province, such as Shouguang and Qingzhou where most of our peers are located, thus we underperformed the potted vegetable produce market in China and Shandong province in terms of the revenue growth.

The PRC government has substantially lifted its COVID-19 prevention and control policies since December 2022. Our business has recovered from the impact of COVID-19 outbreak in 2023 and returned to 2021 level, as our business operation was no longer affected by COVID-19 epidemic. We recorded a revenue of approximately RMB121.3 million for the nine months ended 30 September 2023, which slightly exceeded the revenue of approximately RMB117.2 million for the nine months ended 30 September 2021.

Looking forward, the sales revenue of potted vegetable produce in Shandong province is likely to maintain a growing trend with a CAGR of approximately 7.3%, reaching RMB1,102.2 million in 2027. Meanwhile, the sales volume of potted vegetable produce is expected to reach 61.6 million pots in 2027, representing a CAGR of approximately 4.9% from 2022 to 2027.

INDUSTRY OVERVIEW

Sales volume and sales revenue of potted vegetable produce (Shandong province), 2017–2027E



Source: Frost & Sullivan

As one of the most developed cities in Shandong province, Qingdao is highly urbanised and has relatively higher household income, which brings about a higher frequency of dining out and increasing demands for high-quality vegetables. The sales revenue of potted vegetable produce increased from RMB54.2 million in 2017 to RMB144.5 million in 2022, with a CAGR of approximately 21.7%.

With continuous economic development in Qingdao, the sales revenue of potted vegetable produce is expected to continue growing at a CAGR of approximately 8.0%, reaching RMB212.4 million in 2027.

Sales Revenue of Potted Vegetable Produce (Qingdao, Yantai, Weifang, Xi’an, Dalian and Langfang), 2017–2027E, in RMB Millions

City	Province	2017	2018	2019	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	CAGR	CAGR
													(%)	(%)
Qingdao	Shandong	54.2	76.0	115.5	121.0	146.3	144.5	152.0	166.8	182.0	197.2	212.4	21.7%	8.0%
Yantai	Shandong	19.1	26.0	37.0	37.5	43.9	40.9	42.8	46.6	49.9	52.7	55.1	16.4%	6.1%
Weifang	Shandong	34.7	51.1	79.4	82.5	98.5	89.7	94.7	103.7	111.6	118.0	123.4	20.9%	6.6%
Xi’an	Shaanxi	19.7	27.0	42.0	43.4	54.5	53.7	58.1	64.5	70.5	75.8	80.7	22.2%	8.5%
Dalian	Liaoning	47.1	59.2	87.4	91.1	113.1	112.5	119.0	130.9	141.4	149.3	155.0	19.0%	6.6%
Beijing	Beijing	33.7	41.6	54.1	56.3	72.8	73.8	77.2	84.6	92.6	102.2	111.8	17.0%	8.7%
Hebei	Hebei	164.3	226.9	329.8	343.9	440.2	452.0	470.5	514.6	561.8	620.1	685.1	22.4%	8.7%
Jiangsu	Jiangsu	230.1	320.0	475.2	500.0	635.5	636.8	689.4	782.4	885.9	997.5	1,124.3	22.6%	12.0%
Jinan	Shandong	56.9	74.8	99.5	102.0	116.0	116.8	120.4	130.6	141.0	150.9	159.7	15.5%	6.5%
Tianjin	Tianjin	12.7	17.5	26.1	26.4	34.7	35.4	37.9	42.8	48.7	54.2	60.5	22.8%	11.3%
Langfang	Hebei	24.5	33.3	48.7	50.1	64.5	66.2	70.5	77.3	86.2	96.0	106.1	22.0%	9.9%

Source: Frost & Sullivan

The sales revenue of potted vegetable produce in Beijing increased from RMB33.7 million in 2017 to RMB73.8 million in 2022. There were approximately 50 potted vegetable producers in Beijing in 2022. In 2022, there were approximately 6 thousand chained restaurants in Beijing. With potential demand from restaurants on potted vegetable produce, the sales revenue of potted vegetable produce in Beijing is expected to increase to RMB111.8 million with a CAGR of 8.7% from 2022 to 2027.

INDUSTRY OVERVIEW

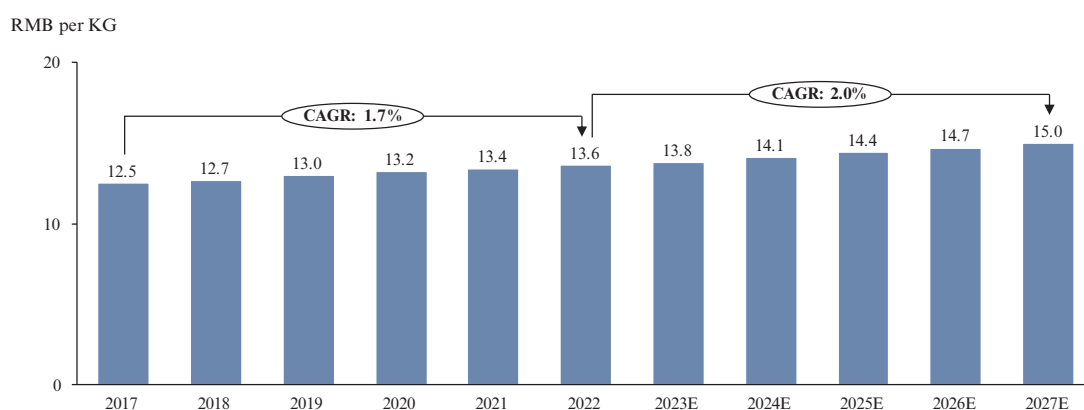
Langfang locates near to Beijing and Tianjin, and is one of the fastest growing economies in Hebei province. The sales revenue of potted vegetable produce in Langfang increased from RMB24.5 million in 2017 to RMB66.2 million in 2022. There were approximately 30 to 50 potted vegetable producers and approximately 500 to 800 chained restaurants in Langfang in 2022. With potential demand from restaurants for potted vegetable produce, the sales revenue of potted vegetable produce in Langfang is expected to increase to RMB106.1 million with a CAGR of 9.9% from 2022 to 2027.

Historical price trend of raw materials and potted vegetable produce

Major raw materials of potted vegetable produce includes, among others, substrates, seeds, fertilisers and pots. The cost of foliar fertilisers is an important part of total cost of vegetable producer and potted vegetable producers. The average price of foliar fertilisers in Shandong province increased from RMB12.5 per kilogram in 2017 to RMB13.6 per kilogram in 2022, representing a CAGR of 1.7%.

The price of foliar fertilisers is expected to further increase to RMB15.0 per kilogram in 2027 with a CAGR of 2.0%.

Average price of foliar fertilisers (Shandong province), 2017–2027E



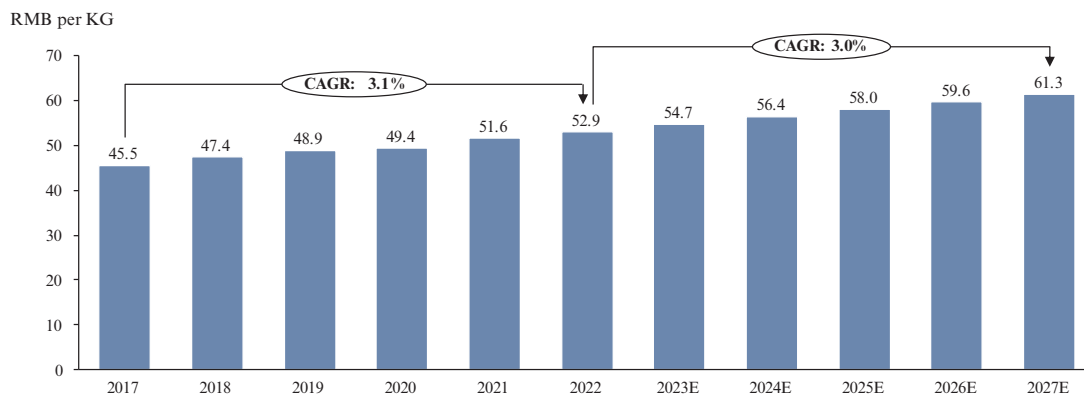
Source: Frost & Sullivan

Water spinach is a common type of vegetable that are widely cultivated by potted vegetable producers. The cost of water spinach seed in Shandong province has increased from RMB45.5 per kilogram in 2017 to RMB52.9 per kilogram in 2022, representing a CAGR of 3.1%.

The price of water spinach seed is expected to further increase to RMB61.3 per kilogram in 2027 with a CAGR of 3.0%.

INDUSTRY OVERVIEW

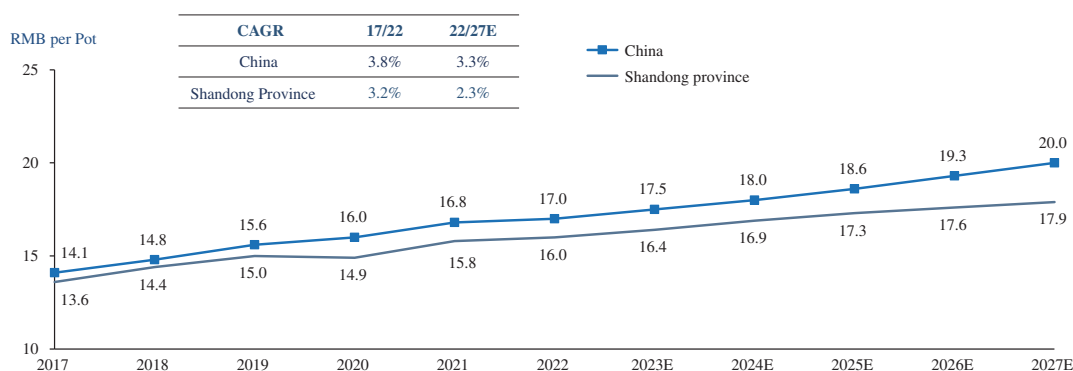
Average Price of Water Spinach Seeds (Shandong province), 2017–2027E



Price analysis of potted vegetable produce in China and in Shandong province

Due to the increasing consumption of potted vegetable produce in China, the wholesale price of potted vegetable produce in China increased from RMB14.1 per pot in 2017 to RMB17.0 per pot in 2022 with a CAGR of 3.8%. The wholesale price of potted vegetable produce is expected to increase to RMB20.0 per pot by 2027, representing a CAGR of 3.3% from 2022 to 2027. Meanwhile, the wholesale price of potted vegetable produce in Shandong province also increased from RMB13.6 per pot in 2017 to RMB16.0 per pot in 2022 with a CAGR of 3.2%. The wholesale price of potted vegetable produce is expected to increase to RMB17.9 per pot by 2027, representing a CAGR of 2.3% from 2022 to 2027. In 2022, the market price that distributors sold to hotel and restaurants in China and Shandong province was around RMB20.0 per pot.

Wholesale prices of potted vegetable produce (China and Shandong province), 2017–2027E



Source: Frost & Sullivan

Drivers of China and Shandong province’s potted vegetable produce market

Rising urbanisation and increasing health consciousness: Along with rising urbanisation and increasing health consciousness, an increasing number of people has begun to emphasize on personal wellness and are looking for measures to stay healthy. The per capita annual nominal GDP in Shandong province has increased from RMB63,900 in 2017 to RMB86,000 in 2022, with a CAGR of 6.1%. Meanwhile, the urbanization rate in Shandong

INDUSTRY OVERVIEW

province has increased from 60.6% in 2017 to 64.5% in 2022. Chinese residents have preference on quality and fresh vegetables in the city, thus leading to a growth in demand for vegetable market including potted vegetable produce in China.

Increasing frequency of dining out: With an upward trend of consumption upgrading in China and in Shandong province, consumers are more willing to dine out and spend more when dining at restaurants for better food quality. Potted vegetable produce is highly preferred by restaurants for their freshness, quality and safety. Therefore, the increasing frequency of dining out in China and in Shandong province rockets the demand for potted vegetable produce from restaurants.

Awareness of Food Safety: With the desire for higher living standards and improvements of the suboptimal health status, people in China and in Shandong province have begun paying more attention to personal health problems and consuming healthier food. As potted vegetable produce are generally cultivated with natural and organic substrates and fertilisers, eating potted vegetable produce can reduce the risk of eating vegetables that contain harmful chemicals. Therefore, potted vegetable produce has gradually become more welcomed by people in China and in Shandong province and is expected to continue in the near future.

Expanding Online Distribution Channels: As growing numbers of households, especially those youngsters, are ordering products through online distribution channels, leading vegetable and potted vegetable producers have already expanded their distribution channels from traditional wholesalers and retailers to online platforms, such as Taobao and WeChat.

Future trends of the China’s potted vegetable produce market

Application of cultivation technology: Compared with traditional in-ground cultivation, cultivating potted vegetable produce has various advantages, such as land-saving, higher productivity, quality and consistency. However, there are also higher requirements in cultivation and management. Potted vegetable produce needs to be planted in greenhouses or other protected areas, which should be equipped with micro-sprays or watering facilities. Along with the development of cultivation technology, potted vegetable producers are expected to conduct more stringent management on temperature, humidity, light, pest control, and also refined treatment such as thinning branches, in order to meet quality requirements.

Expanding varieties of potted vegetable produce: Existing species of potted vegetable produce consist mainly of ordinary leafy vegetables, supplemented by solanaceous vegetables species. In line with the growing consumption of potted vegetable produce from restaurants and households, as well as customers’ changing demand for more varied vegetable species, varieties of potted vegetable produce are likely to be more diversified in the future. Potted vegetable producers have been taking the healthiness of potted vegetable produce more into consideration, rather than just taste, to satisfy customers’ needs. It is expected that the expanding variety of potted vegetable produce is likely to drive further development of the market.

INDUSTRY OVERVIEW

Improving logistics capabilities: Logistics capabilities are key to the distribution of fresh vegetable produce and potted vegetable produce. Most of the vegetable produce needs to be circulated through a cold-chain system to keep fresh. Along with the development of the logistics industry in China, the improving logistics network, in particular cold-chain logistics network, is expected to assist in the expansion of the delivery scope of potted vegetable produce and is likely to create more opportunities for the potted vegetable produce market.

Entry barriers analysis

Potted vegetable produce cultivation know-how: Cultivation of potted vegetable produce requires potted vegetable producers to have the right know-how to ensure the supply of quality vegetables. Cultivation know-how mainly includes construction of greenhouses, seeds selection, sowing, vegetable growth management, formula of cultivation materials, as well as use of automated machineries and equipment. Existing players are likely to have accumulated sufficient know-how and abundant professionals. New entrants are likely to encounter difficulties in mastering such know-how in a short run.

Capital requirements: For potted vegetable producers, abundant capital is essential for expanding sown areas, developing techniques for cultivating new vegetable species, hiring experienced professionals and maintaining the greenhouses. Moreover, to achieve economies of scale in production, huge capital investment is required. It is not easy for the new players to enter into China’s potted vegetable produce market without abundant capital.

Brand recognition: Reputation of vegetable producers is often established by word of mouth, and customers are more inclined to choose reputable brands for guaranteed quality. So far, there are already some well-known brands in China’s vegetable produce and potted vegetable produce markets with large customer bases. Those companies can gain trust easier from customers and can reduce their cost of reaching new customers significantly. It is difficult for new entrants to compete with existing participants for customers. A huge amount of marketing expense will be necessary for a new player to enter into the market.

Competitive landscape of China’s vegetable produce and potted vegetable produce markets

China’s vegetable produce market was highly fragmented with around one million to two million vegetable producers in the market in 2022. There was no single vegetable producer that accounted for over 1% of the total market share in China’s vegetable produce market in terms of production volume. In 2022, the Group, with a sales revenue of RMB126.7 million, accounted for less than 0.01% of total sales revenue of vegetable producers in China.

China’s potted vegetable produce market was highly fragmented in 2022 with thousands of potted vegetable producers. In 2022, the Group, with a sales revenue of RMB126.7 million, accounted for approximately 3.1% of total sales revenue of potted vegetable producers in China.

INDUSTRY OVERVIEW

Competitive landscape of Shandong province’s potted vegetable produce market

The total sales revenue of Shandong province’s potted vegetable produce market was RMB773.6 million in 2022. There are over 500 potted vegetable producers in Shandong province in 2022.

Shandong province’s potted vegetable produce market was relatively fragmented in 2022 with top five players accounted for 16.8% of the total market share in Shandong province’s potted vegetable produce market in terms of sales revenue. In 2022, the Group, with a sales revenue of RMB114.5 million, accounted for 14.8% of total sales revenue of potted vegetable producers in Shandong province.

It is noted that the average selling price of the Group was within the range of the selling price of the industry players during the Track Record Period. The Group’s revenue in FY2022 from the sales of potted vegetable produce is approximately 14.5 times of the revenue of the second largest potted vegetable producer in Shandong province. The Group is the largest producer of potted vegetable produce in Shandong province, with a market share of 14.8% in terms of sales revenue in Shandong province in 2022, and is one of the potted vegetable producers in Shandong province which started large scale production of potted vegetable produce.

INDUSTRY OVERVIEW

Ranking of top five potted vegetable producers by sales revenue (Shandong province), 2022

Rank	Company	Total Sales Revenue (RMB Million)	Market Share (%)	Number of Vegetable Species	Average Selling Price of Potted Vegetable (RMB per Pot)
1	The Group	114.5	14.8%	29	15.1
2	Shouguang Seed	7.9	1.0%	15 to 20	~20
3	QiDi	3.7	0.5%	~5	~20
4	Liaoyuan	2.2	0.3%	~10	~15
5	Huikangyuan	1.4	0.2%	~10	15 to 20
Top 5 Subtotal		129.7	16.8%		
Others		643.9	83.2%		
Total		773.6	100.0%		

Source: Frost & Sullivan

Notes:

- (1) Established in 2011, Shouguang Seed is a non-listed company headquartered in Shouguang, Shandong province, China, primarily focusing on the cultivation and distribution of potted vegetable produce and vegetable seeds.
- (2) Established in 2017, QiDi is a non-listed company headquartered in Shouguang, Shandong province, China, primarily focusing on the production and sales of, among others, potted vegetable produce and seeds.
- (3) Established in 2002, Liaoyuan is a non-listed company headquartered in Shouguang, Shandong province, China, primarily focusing on the production and sales of vegetable and potted vegetable produce.
- (4) Established in 2016, Huikangyuan is a non-listed company headquartered in Qingzhou, Shandong province, China, primarily focusing on the production and sales of potted vegetable produce and substrates.