

# **PepsiCo Foods (China) Co., LTD.,**

## **Beijing Quaker Plant**



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## **Chapter 1: Companies and Plants**

### **1.1 Company Profile**

#### **PepsiCo**

PepsiCo is the world leading foods and beverage company, with more than 1 billion consumers in more than 200 countries and regions enjoying its products every single day. PepsiCo owns various favorite brands with more than \$1 billion of annual retail sales. Benefits from the complementary categories of foods and beverage products, including Lays, Doritos, Cheetos, Gatorade, Pepsi, Mountain Dew, Quaker, and SodaStream sparkling. In 2023, PepsiCo achieved a net income of over \$91 billion.

As from 2006, PepsiCo has embarked on the sustainable development journey. In Launched in 2021, "PepsiCo Positive (pep+)" means the sustainable development and talent development will be core strategies of the PepsiCo entire business strategy. PepsiCo also commit to run by the law of earth ecosystem, bring positive change to human and the earth, thereby achieving the value creation and growth, and realizing the vision of "Human and Earth Nature can both prosper and live in harmony"

#### **PepsiCo Corporation in Greater China**

As one of the first tier global corporate to enter China after the reform and opening, Since 1981, PepsiCo deeply cultivate in China, and is honored to become a participant and witness of China great developing. The products of PepsiCo are widely loved by Chinese consumers. "Rooted in China, Serve for China, Work for China." PepsiCo joins the hands of China Economic growth as well as the food & beverage business. The overall business scope is including more than 70 farmers, 60+bottleing plant, 10+food plant, 1 Asia R&D center, with 20,000+Chineses employees, nearly 100% meets the localization. PepsiCo provides 170,000+working opportunities, covers the numbers upstream and downstream industries of agriculture, manufacturing, sales and logistics etc.

### **1.2 Plant Overview**

#### **1.21 Plant History**

PepsiCo Foods (China) Co., LTD., Beijing Quaker Plant is one of the wholly owned subsidiary of PepsiCo group, which devotes to build the benchmark of Can chips industry, located in Qingyundian town, Daxing District, Beijing which is an crucial connection spot in Beijing/Tianjin/Hebei, with 37,000m<sup>2</sup> plant area, 13,300 m<sup>2</sup> construction area, the total investment of RMB188 million since the foundation. At the present, the existing 3 global advanced automation potato chips

production line is working for the production of canned potato chips 40 tons per day, in 2023, the total output is 8,500 tons, annual output value of RMB700M. There are 14 various flavors of canned potato chips to provide the national market.

## 1.22 Plant production process

Products processing technology:

the production of canned potato chips is divided into two parts,

Part I: the empty cans of potato chips, the original paper of food-grade paper cup and the inner membrane are rolling to the paper tube by automatic winding equipment, the paper tube will be outer labeled by the labeling machine, and then cut into the standard empty tank according to the standard product size, after that, they will be transferred to the top mold machine which must be attached the top mold and yellow lid to one end of the empty cans, and finally enter the drying room for making the qualified empty cans for the loading in HSM automatic canning machine of the potato chip;

The second part is the production of potato chips. Potato Flake powder and other related raw materials are mixed evenly by a dry mixing system according to the ratio, and then transported to a wet mixing system to be mixed with water to form a qualified dough. The qualified dough is then sent to a tablet press for compression. The qualified dough is then cut into standard shaped potato slices by a special cutter and sent to a deep fryer for deep frying. After frying, the potato chips are sprayed with different flavors by the seasoning system and then sent to the HSM automatic canning system for canning. After canning, they are cooled, filled with nitrogen, sealed with tinplate, and date printed. Finally, they are transported to the automatic packing machine and delivery to the storage.

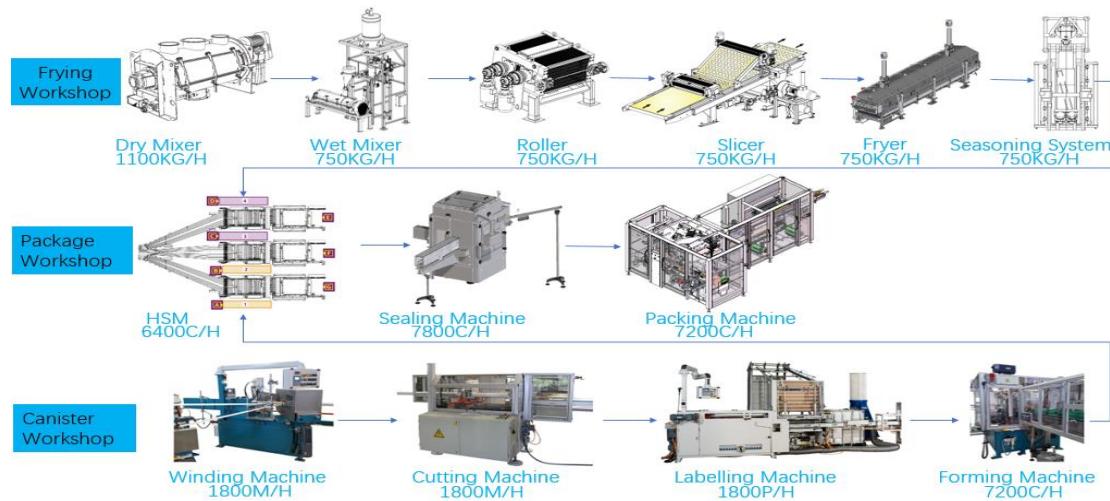
(See Figure Figure 1.1)



(See Figure Figure 1.1)

## 1.23 Plant equipment and products

There are 3 world advanced lines in the workshop, producing 40 tons of canned potato chips per day.(See Equipment Figure 1.2)



(See Equipment Figure 1.2)

## 1.24 Plant organization

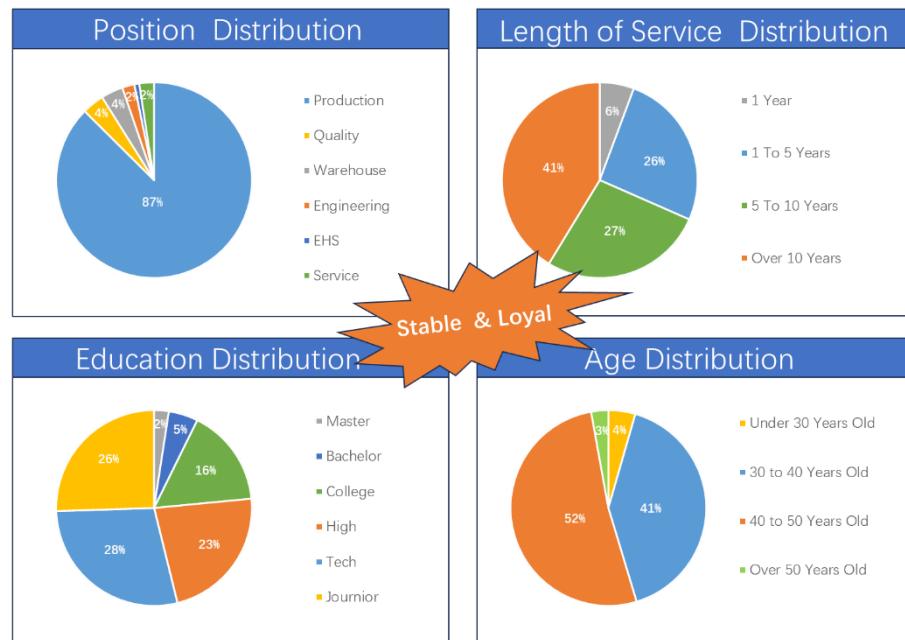
The plant management organization is composed of Plant Manager and 8 other functional departments, including manufacturing department (production Department + Maintenance Department), Quality Department, Human Resources Department, EHS Department, Storage and Transportation Department, Finance Department and TPM Promotion Group.(See Organization Architecture Chart 1.3)



Organization structure Figure 1.3

## 1.25 Employee files

There are 247 employees, of which 45% are under 40 years old, 23% have college degree or above, 68% have more than 5 years of working experience, and 85% are direct workers. The team is very stable with high satisfaction (see Figure 1.4)



(Figure 1.4)

## Chapter II: The Background and History of the TPM

### 2.1 Background Introduction of TPM

According to the vision and goals of PepsiCo Group, combined with the current situation of the Plant, SWOT analysis was conducted. Based on both of the internal and external environment, the strategy of PepsiCo Food (China) Co., LTD. Beijing Quaker plant is to meet the vision "to build a world-class plant of produce the leisure and health foods which are widely loved by consumers" We transplanted TPM management system, the company started advanced continuous improvement system, and achieved continuous improvement, zero loss and prevention philosophy through full participation. We will continue to apply TPM as a tool fulfill the Plant strategy (see Figure 2.1).

# Vision

to build a world-class plant of produce the leisure and health foods which are widely loved by consumers

## Factory positioning: Benchmarking factory in canned potato chip industry

### **Faster** 更快

Driven by AM and PM, the pursuit of zero fault, efficient operation, to meet the diversified needs of consumers

### **Stronger** 更强

Driven by E&T and FI, full participation, agile innovation, with automation and digitalization to improve production line efficiency, reduce costs and increase efficiency

### **Better** 更好

Driven by QM and EHS, we pursue quality, safety and zero defects to provide consumers with healthy and safe products and contribute to improving the community environment



**People-oriented**  
E&T



**Cost lower and Efficiency up**  
AM, PM, FI



**Agile and innovation**  
FI



**Pepsi Positive**  
QM, EHS

## 2.2 Plant TPM history

Quaker Plant officially startup in 2020, in 2021 as the daily management method of the plant, TPM is transplanted into the plant to improve the overall performance. Since supply chain management and early management of products and equipment belong to the unified management of the group headquarters, the factory has no relevant functional departments, so in 2021, the factory will gradually introduce FI, E&T, AM, PM, QM, EHS six pillars. TPM going well in the plant, the performance improved steadily, employee morale is improved. We are aiming the TPM Excellence Award, as well as the all levels of TPM awards.

## Chapter 3: TPM Results

### 3.1 Tangible Results

#### Information (see Figure 3.1)

TPM management system is being implemented in the plant, the collaboration of each pillars get greatly improved and enhance its overall performance in the past three years. It has achieved outstanding results in production efficiency, production costs, product quality, environmental protection, equipment maintenance, and other aspects, especially in equipment maintenance with zero downtime and obtained 50% reduction in labor costs.



(see Figure 3.1)

### 3.2 Intangible results (see Figure 3.2)

- 3.2.1 Effectively improved the employees' understanding and practice ability of employees, and TPM improvement methods improve their own improvement awareness;
- 3.2.2 Closer cooperation between departments and stronger team cohesion;
- 3.2.3 Built a safe and comfortable working environment for the employees, and improved their morale;
- 3.2.4 The plant has initially established a sequence of management system for the continuous improvement of the management system;
- 3.2.5 Through the concerted efforts of all the members of the plant team, the plant has made outstanding achievements and contributions in food safety, product quality, environmental protection, employee satisfaction and other aspects, and has been recognized by relevant professional organizations.



## Chapter 4 The key points of Plant Success

- 4.1 The plant management attaches much weight to TPM, and insists on implementing TPM
- 4.2 The cooperation between departments is getting closer, and the teamwork is getting stronger
- 4.2 TPM improvement activities are closely integrated with daily work
- 4.4 Continuous improvement by standard methods
- 4.5 Establishing TPM reward system and personnel ability development system, which fully promote employees participation in TPM activities

## Chapter 5 Achievements

company	Pepsi Food (China) Co., Ltd
Factory name	Pepsi Food (China) Co., LTD., Beijing Quaker Branch factory
TPM slogan	People-oriented, cost lower and efficiency up, agile and innovation, Pepsi Positive

TPM Award activity results table

Category	Index	Unit	BM	Actual Status	Target
Enter the year →			2021	2024	2025
S	Near Miss	count	10.24	11.27	12
S	RIR ( Recordable Incident Rate)	%	0.29	0	0
S	LTIR (Lost time Incident Rate)	%	0.29	0	0
S	occupational disease	count	0	0	0
E	water consumption	Kg/Kg	2.112	1.14	1.1
E	power consumption	Kwh/Kg	0.566	0.56	0.55
E	fuel consumption	Kwh/Kg	0.0676	0.0593	0.05
E	environment event	case	0	0	0

<b>Q</b>	CPM (Consumer Per Million Bags)	CPM	0.69	0.58	0.55
<b>Q</b>	-Category A CPM	CPM	0.00	0.00	0.00
<b>Q</b>	-Category B CPM	CPM	0.21	0.15	0.14
<b>Q</b>	-Category C CPM	CPM	0.48	0.43	0.41
<b>Q</b>	-Non-Compliance%	%	0.65	0.32	0.25
<b>Q</b>	Product Qualification Ratio	%	99.30	99.70	99.75
<b>P</b>	TPP	Kg/man-hour	19.52	21.51	32
<b>P</b>	OEE	%	84.34%	86.77%	88%
<b>P</b>	Unscheduled Downtime	%	1.20%	0.03%	0
<b>C</b>	DL cost	Yuan/Kg	4.87	2.17	1.6
<b>C</b>	Main material yield	%	96.22%	96.50%	96.77%
<b>C</b>	Maintenance cost	Yuan/Kg	0.65	0.562	0.54
<b>M</b>	OPL	count	36	544	580
<b>M</b>	KAIZEN	count	97	412	450
<b>M</b>	Training Hours	Hr	3924	3970	4000
<b>M</b>	Turnover rate	%	3.57%	0.40%	0
<b>D</b>	Planned completion rate	%	100.27%	101.06%	101%

Note: Please list the important indicators of P, Q, C, D, S, and M. In the TPM program overview book, all indicators should be shown up. The indicators are not limited to the above indicators.