

Supply and Demand of Modified Food Starch in China

The Third Edition

April 2017

Researched & Prepared by:

Kcomber Inc.

Copyright by Kcomber Inc.

Any publication, distribution or copying of the content in this report is prohibited.



Contents

1 Executive summary	1
2 Introduction and methodology	3
3 Overview of corn processing industry chain in China	7
3.1 China's corn processing industry chain overview by volume.....	7
3.2 Supply and demand of corn starch by-products in China	16
4 Modified food starch supply and demand in China in 2011-2016	19
4.1 Overview of modified food starch supply and demand in China in 2011–2016	19
4.2 Production and price of modified food starch in China in 2011–2016	21
4.3 Production of modified food starch based on different raw materials in China	36
4.4 Development trends of China's modified food starch based on different raw materials	50
4.5 Import of modified food starch in China in 2014–2016.....	51
4.6 Export of modified food starch in China in 2014–2016.....	61
4.7 Consumption of modified food starch in China in 2016	67
4.7.1 Modified food starch consumption in China by application.....	67
4.7.2 Modified food starch consumption in China by product	72
4.8 Forecast on modified food starch supply and demand in China to 2022	76
4.9 Factors influencing China's modified food starch supply and demand to 2022	78
5 Profiles of key modified food starch manufacturers in China	80
5.1 Profiles of key overseas modified food starch manufacturers in China	80
5.1.1 Roquette China Co., Ltd.	80
5.1.2 Cargill Bio-Chemical Co., Ltd.	82
5.1.3 Ingredion China Limited	83
5.1.4 Tate & Lyle Plc.	84
5.2 Profiles of key local modified food starch manufacturers in China	85
5.2.1 Ting Hsin International Group	85
5.2.2 Suzhou Gaofeng Fine Chemical Co., Ltd.	86
5.2.3 Shandong Fuyang Biotechnology Co., Ltd.	87
5.2.4 COFCO Biochemical (Anhui) Co., Ltd.	88

LIST OF TABLES

Table 2-1 Exchange rate of USD against RMB, 2006–Mar. 2017
Table 3.1-1 Output, import and export of corn in China, 2011–2016
Table 3.1-2 Output, import and export of corn starch in China, 2011–2016
Table 3.2-1 Introduction of major corn starch by-products in China
Table 4.1-1 Growth rates of China's modified food starch supply and demand by volume, 2011–2016
Table 4.2-1 Regional distribution of modified food starch producers in China by key raw material, 2016



Table 4.2-2 Basic information of major active modified food starch producers in China, as of April 2017

Table 4.2-3 Concentration rate change of top modified food starch producers in China by output volume, 2009, 2015 and 2016

Table 4.2-4 Modified food starch capacity (by raw material) in 2016 and output during 2014–2016 of China's active producers

Table 4.2-5 Average ex-works price of modified food starch in China by raw material, 2016

Table 4.2-6 Average import price of modified food starch in China by raw material, 2016

Table 4.2-7 Main application fields of modified food starch by raw material and key modified food starch products in China, as of April 2017

Table 4.3-1 Output of modified food starch by different raw materials in China, 2011–2016, tonne

Table 4.3-2 Comparison between output CAGR and import CAGR of modified food starch by different raw materials in China, 2011–2016

Table 4.3-3 Top 5 producers of corn modified food starch by output volume in China, 2016

Table 4.3-4 Top 5 producers of cassava modified food starch by output volume in China, 2016

Table 4.3-5 Top 5 producers of potato modified food starch by output volume in China, 2016

Table 4.3-6 Output, import and export of corn in China, 2008–2016

Table 4.3-7 Output, import and export of corn starch in China, 2008–2016

Table 4.3-8 Geographical distribution of waxy corn planted area and output in China, 2014 and 2016

Table 4.3-9 Price of waxy corn and waxy corn starch in China in 2015 and 2016

Table 4.3-10 Import and export of cassava starch in China, 2008–2016, tonne

Table 4.3-11 Output, import and export of potato starch in China, 2008–2016, tonne

Table 4.5-1 China's import price of modified food starch by different raw materials, 2014–2016, USD/t

Table 4.5-2 China's import volume, value and price of modified food starch by different raw materials in 2014

Table 4.5-3 China's import volume, value and price of modified food starch by different raw materials in 2015

Table 4.5-4 China's import volume, value and price of modified food starch by different raw materials in 2016

Table 4.5-5 China's import volume, value and price of modified food starch by import origin in 2014

Table 4.5-6 China's import volume, value and price of modified food starch by import origin in 2015

Table 4.5-7 China's import volume, value and price of modified food starch by import origin in 2016

Table 4.5-8 China's import volume, value and price of modified food starch by importer in 2014

Table 4.5-9 China's import volume, value and price of modified food starch by importer in 2015

Table 4.5-10 China's import volume, value and price of modified food starch by importer in 2016

Table 4.6-1 China's export volume, value and price of modified food starch by export destination in 2014



- Table 4.6-2 China's export volume, value and price of modified food starch by export destination in 2015
- Table 4.6-3 China's export volume, value and price of modified food starch by export destination in 2016
- Table 4.6-4 China's export volume, value and price of modified food starch by exporter in 2014
- Table 4.6-5 China's export volume, value and price of modified food starch by exporter in 2015
- Table 4.6-6 China's export volume, value and price of modified food starch by exporter in 2016
- Table 4.7.1-1 Main application fields of modified food starch used in and their consumption volume in China, 2016
- Table 4.7.2-1 13 kinds of modified food starches in China, 2014
- Table 4.7.2-2 Main products of modified food starch and their consumption volume in China, 2016
- Table 4.7.2-3 Price of modified food starch in China, March 2017
- Table 5.1-1 Modified food starch supplied in China by major producers
- Table 5.1.1-1 General introduction to Roquette China Co., Ltd.
- Table 5.1.2-1 General introduction to Cargill China Limited
- Table 5.1.3-1 General introduction to Ingredion China Limited
- Table 5.2.1-1 General introduction to Ting Hsin
- Table 5.2.1-2 Output of modified food starch in Ting Hsin, 2016
- Table 5.2.2-1 General introduction to Suzhou Gaofeng

LIST OF FIGURES

- Figure 3.1-1 The value chain of corn processing industry in China, 2016
- Figure 3.1-2 The corn and grain planted area in China, 2011–2016
- Figure 3.1-3 China's average annual market price of corn, 2001–2016
- Figure 3.1-4 Output of corn in China, 2011–2016
- Figure 3.1-5 Monthly market price of corn in China, 2011–2016
- Figure 3.1-6 Consumption structure of corn in China by volume, 2016
- Figure 3.1-7 Output of corn starch in China, 2011–2016
- Figure 3.1-8 Consumption structure of corn starch in China by volume, 2016
- Figure 3.1-9 Monthly ex-works price of corn starch in North China, 2011–2016
- Figure 3.2-1 Monthly market price of corn gluten meal, corn germ meal and corn gluten feed in China, 2016
- Figure 4.1-1 Consumption of modified starch and modified food starch in China, 2011–2016
- Figure 4.1-2 Output of modified starch and modified food starch in China, 2011–2016
- Figure 4.1-3 Output, consumption, import and export of modified food starch in China by volume, 2011–2016
- Figure 4.2-1 Capacity and Output of modified food starch in China, 2011–2016
- Figure 4.2-2 Geographic distribution of modified food starch capacity in China, 2016, '000 t/a
- Figure 4.2-3 Capacity of modified food starch in different regions of China by raw material, 2016
- Figure 4.2-4 Share of modified food starch capacity in China by region, 2016
- Figure 4.2-5 Share of modified food starch output in China by region, 2016
- Figure 4.2-6 Price changes of key raw materials for China's modified food starch, 2011-2016



Figure 4.3-1 Output share of modified food starch by different raw materials in China, 2011–2016

Figure 4.3-2 Import share of modified food starch by different raw materials in China, 2011–2016

Figure 4.3-3 Prices of corn, corn starch and cassava starch in China, 2008–2016

Figure 4.5-1 China's import volume of modified starch and modified food starch, 2014–2016

Figure 4.5-2 Share of import volume in China's total modified food starch supply, 2014–2016

Figure 4.5-3 China's import volume share of modified food starch by different raw materials, 2014–2016

Figure 4.6-1 China's export volume of modified starch and modified food starch, 2014–2016

Figure 4.6-2 China's export price of modified food starch, 2014–2016

Figure 4.7.1-1 Consumption of modified food starch in China, 2011–2016

Figure 4.7.1-2 Consumption of modified food starch in China by application, 2014–2016

Figure 4.7.1-3 Consumption of modified food starch in China by application, 2016

Figure 4.7.2-1 Consumption structure of modified food starch in China by product, 2016

Figure 4.8-1 GDP growth in China, 2012–2022

Figure 4.8-2 Forecast on modified food starch supply and demand in China, 2017–2022

Figure 4.8-3 Forecast on modified food starch supply and demand based on expected growth in China, 2017–2022

1. Introduction

To reveal the latest dynamics of China's modified food starch industry, in Q1 and Q2 2017, CCM updated its systemic research on *Supply and Demand for Modified Food Starch in China* completed in March 2016. The updates cover modified food starch's raw materials, production, consumption, import and export, etc., and CCM has given forecasts on China's modified food starch industry to 2022, which will be beneficial for both existing players and new entrants.

Supply and Demand for Modified Food Starch in China, finished in April 2017, is CCM's third edition report on China's modified food starch industry. This intelligent report has attached importance to the following parts:

- Overview of China's corn processing industry chain in 2016 and its development trend, covering volume flow from corn to corn starch, sweeteners and eventually modified starch; corn starch by-products' supply and demand and their pricing mode
- Supply (capacity, output and key producers) of modified food starch in China, 2011–2016;
- Consumption by application and by product, 2016;
- Import and export of modified food starch, 2014–2016;
- Forecast on China's modified food starch supply & demand and analysis of key influencing factors.

2. Approach for the report

This report has been drafted by diverse methods which are as follows,

✓ **Desk research**

Desk research includes access to published magazines, journals, government statistics, industry statistics, customs statistics, association seminars as well as information on the Internet. Lots of work has gone into the compilation and analysis of the information obtained. Where necessary, information has been checked and discussed internally related to market structure and performance characteristics as key producers, key end users, production levels, end user demand and so on.

✓ **Telephone interviews**

CCM has conducted extensive telephone interviews and site visits in order to survey the market for modified food starch in China.

The interviewees include the following groups:

- Key producers
 - Key traders
 - Raw material suppliers
 - Associations involved
 - Industry experts
- ✓ **Data processing and presentation**

The data collected and compiled was variously sourced from:

- CCM's database
- Published articles from periodicals, magazines, journals and third party databases
- Statistics from governments and international institutes
- Telephone interviews with domestic producers, joint ventures, service suppliers and government agencies
- Third-party data providers
- Customs statistics
- Comments from industrial experts
- Professional databases
- Information from the Internet

The data has been combined and cross-checked to ensure that this report is as accurate and methodologically sound as possible. Throughout the process, a series of discussions were held within CCM to systematically analyse the data and draw appropriate conclusions.

3. Executive summary

China's modified food starch has witnessed faster growth in both output and consumption than modified starch during 2011–2016, with consumption CAGR of XXX and output CAGR of XXX in this period. Accordingly, the share of modified food starch in modified starch has been expanding in both output and consumption during 2011–2016.

However, after years of fast growth, China's modified food starch consumption growth has slowed down since 2013. At the same time, its output growth speed was not only slower than consumption CAGR (XXX), but also much slower than import CAGR (XXX) during 2011–2016, because domestic products are less competitive either in price or in quality compared to imported products. The share of domestic supply in total consumption kept on dropping during 2011–2016, accounting for less than XXX of China's total consumption in 2016.

China's modified food starch capacity utilization rate, which has been increasing since 2014, stayed around XXX during 2011–2016. The low operation rate was mainly caused by the small producers' low operation rates, which was around or below XXX in recent years. The capacity utilization rate is expected to improve with more and more small producers being phased out. However, with more small producers to be eliminated and China's continuously growing demand, it is likely that big producers might expand their current capacity, or some new producers, especially big corn, potato or cassava processing enterprises, might join modified food starch production, like Cargill, Roquette, and Baolingbao in 2016.

China's modified food starch production, distributed geographically in 16 regions during 2014–2016, has been increasingly concentrated to two types of regions: firstly, regions with abundant supply of raw materials for modified food starch production, and secondly, regions where target clients of modified food starch are located.

Among China's total modified food starch output during 2011–2016, cassava-based and corn-based modified food starch have been the top two types by output volume, both accounting for around XXX of the total, while that of potato-based modified food starch, mainly used in high-end market in China, accounted for less than XXX in this period, only around 6% in 2016. Although China's total modified food starch output has been growing in recent years, the development trends for products produced with different raw materials varied largely. The output of cassava-based and corn-based both was growing in general during 2011–2016, while that of potato-based modified food starch was decreasing. Accordingly, the market share of potato-based modified food starch kept on shrinking in past six years, from more than XXX in 2011 to only about XXX in 2016.

As to import and export, China has witnessed a fast growth in the import of modified food starch in recent years. The imported products have posed a great challenge to domestic products, accounting for more than XXX of China's total consumption in 2016. However, attracted by China's huge and promising market, more and more overseas companies have chosen to set up production plants in China, and the import growth rate has slowed down.

Different from the important position of import in China's modified food starch supply, export only accounted for a small proportion of China's modified food starch output, around XXX during 2014–2016 by volume. That means the majority of China's local product was consumed in its domestic market. This implies that the competitiveness of China's local supply has remained weak in the global market by far, although its competitiveness has improved in recent years.

With the consumption volume of XXX tonnes in 2016, China's modified food starch consumption growth slowed down, with CAGR of less than XXX for 2014–2016 and more than XXX for 2011–2013. Among all application fields of modified food starch, noodles remained the largest one in China in 2016. The application areas that have expanded its shares by consumption volume in 2016 are meat products, bakery products, frozen food and dairy products compared to that in 2015. Noodles, seasoning products, snack food, and candies decreased their shares by consumption volume in 2016.

There are 13 kinds of modified food starches approved in the *National Food Safety Standard GB 2760-2014 for Uses of Food Additives* in China. Among them, there are 10 main kinds of modified food starch in China. Starch acetate, acetylated distarch adipate and hydroxypropyl distarch phosphate are the top three modified food starches used in China by consumption volume. Their consumption volume and application fields differ largely.

Boosted by its robust domestic demand and growing competitiveness of Chinese products, China's modified food starch output and import is forecasted to have a faster growth rate in 2017–2022, with CAGRs of about XXX and XXX respectively. It is forecasted that China's modified food starch output and import will grow to XXX tonnes and XXX tonnes respectively by 2022. So, the total supply of modified food starch will grow to XXX tonnes by 2022.

4. What's in this report?

Note: Key data/information in this sample page is hidden, while in the report it is not.

...

3.1 China's corn processing industry chain overview by volume

Major food crops in China include grain crops like corn, rice and wheat, bean crops like soybeans, and tuber crops like potatoes, with the output of corn, rice and wheat taking up over XXX of the total. Corn, the biggest grain crop in China, ranked first in both the planted area and output in 2016. According to the statistics from the National Bureau of Statistics of China (NBS), the planted area and output of corn in 2016 reached xx million ha and XXX million tonnes, accounting for XXX and XXX of the total respectively.

Figure 3.1-2 The corn and grain planted area in China, 2011–2016



Source: The National Bureau of Statistics of China (NBS) & CCM

...

4.2 Production and price of modified food starch in China in 2011–2016

Figure 4.2-6 Price changes of key raw materials for China's modified food starch, 2011-2016

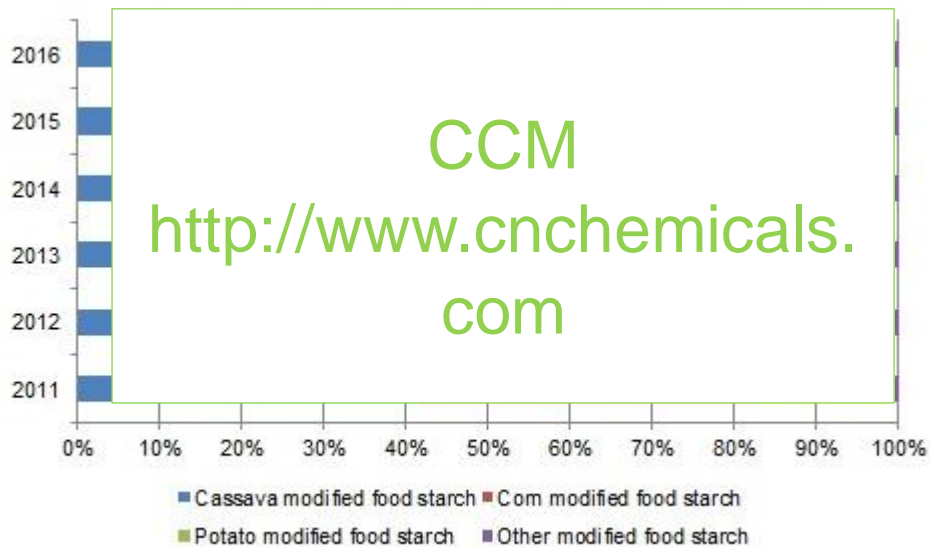


Source: China Customs & CCM

...

4.3 Production of modified food starch based on different raw materials in China

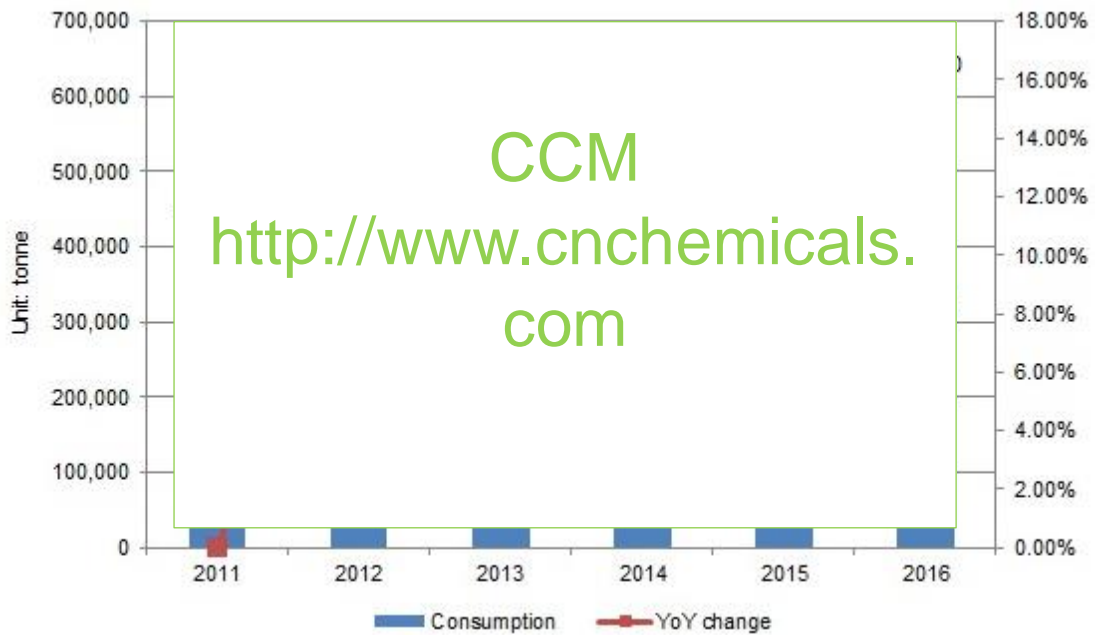
Figure 4.3-1 Output share of modified food starch by different raw materials in China, 2011–2016



...

4.7.1 Modified food starch consumption in China by application

Figure 4.7.1-1 Consumption of modified food starch in China, 2011–2016



...

If you want more information, please feel free to contact us

Tel: +86-20-37616606 Fax: +86-20-37616968

Email: econtact@cnchemicals.com