

# Sweeteners China News

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## Headline

China's monetary policy turns to be moderate, indicating that the sugar price is to be decided by supply-demand relation. In 2016/17 extracting season, the sugar price will fall, given increases in domestic sugar output and foreign sugar supply, and the auction of state's stocked sugar.

On 4 Jan., 2017, the MEP released the Policy about Sugar Making Industrial Pollution Prevention and Control Technology, which is aimed at offering technical guidance regarding pollution treatment capability and equipment, and furthermore helping phase out obsolete sugar making enterprises, optimising sugar making business structure and regulating business operation.

China's sugar alcohol business witnessed fine development in 2016, with the scope of applications expanding and market recognition improving. CCM expects good prospects in 2017.

In 2016/17 extracting season, China's sugar price rises will be restricted, since users, bearing cost in mind, may seek for substitutes.

On 22 Dec., 2016, Anhui Jinhe announced the receipt of a notice from the local environmental protection bureau about the removal of its listing for rectification. This signalled that its succession of environmental problems were solved. This year, 2017, will see increasing prices of ace-K and sucralose and the company's fine financial performance as a consequence, due to the limited production caused by increasingly strict environmental policies.

On 29 Dec., 2016, New Francisco officially applied for listing on the NEEQ, which is expected to strengthen its competitiveness, improve recognition of its GOS and support its profit growth.

On 28 Dec., 2016, Shandong Longlive announced the launch of a XOS whey protein powder which uses its XOS, onto the US market. In addition, the company actively expanded its business and promoted its "Internet + Big Health" strategy, in a move to improve its profitability.

In H1 2016, China's xylitol price maintained stability. However in H2, it fluctuated greatly, mainly because of the decreased price of corn and the fairly tight supply based on strict environmental policies. It is expected that these two factors will continue working in 2017, and as a consequence, the xylitol price will be stable as a whole and increase slightly.

China's ex-works price of ace-K fluctuated greatly in 2016, due to the increased price of raw material and the improved industry concentration: a rise of 35%+ based on the highest / lowest price. Recent two years have witnessed the increasingly strict environmental policies, which is expected to continue restricting the production of ace-K and to push up the price accordingly.

China's exports of saccharin increased from Jan.-Nov. 2016, mainly because the government encouraged the export business and the RMB depreciated. It is expected that in 2017, the saccharin business will be oriented by export mainly and the export volume accordingly will rise, due to the increased inventory and the government policy.





## Editor's Note

Welcome to Jan. issue of *Sweeteners China News* (Vol. 7 Issue 01 2017)

Pollution treatment is a "normal" to industrial production. Last year, 2016, saw the impact of increasingly strict environmental policies on sweetener business.

HIS, segmented fine chemicals, was of course impacted by environmental policies. Specifically,

- Sucralose: many manufacturers were incapable of full operation and some were forced to suspend production, causing tight supply and sharp price rises (100%+ in 2016)
- Ace-K: tight supply of raw materials and ace-K resulting in a price rise of 35%+ in 2016

The production of xylitol was also influenced. The supply was fairly tight due to production limitation / suspension, which was a drive for price rises.

In 2017, environmental policies will continue working or will be issued.

In particular, the *Policy about Sugar Making Industrial Pollution Prevention and Control Technology* was released by the MEP on 4 Jan., to offer technical guidance regarding pollution treatment capability and equipment, and furthermore help phase out obsolete sugar making enterprises, optimise sugar making business structure and regulate business operation.

In Jan., the sugar price maintained high. However, its further rise will be limited, since downstream users, for cost saving and profit making, will seek for substitutes, and the sugar supply (incl. newly extracted sugar launched onto the market and the state's reserved sugar auctioned) will increase.

It is expected that sweetener manufacturers can increase input into pollution treatment, if they intend to ease the impact.

The USD/RMB exchange rate in this newsletter is USD1.00=RMB6.9498 on 3 Jan., 2017, sourced from the *People's Bank of China*. All the prices mentioned in this newsletter will include the VAT, unless otherwise specified.

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## Expert View

### China's sugar price to fall

Summary: China's monetary policy turns to be moderate, indicating that the sugar price is to be decided by supply-demand relation. In 2016/17 extracting season, the sugar price will fall, given increases in domestic sugar output and foreign sugar supply, and the auction of state's stocked sugar.

*The Chinese article was written by Zhang Zihai, from Avic Futures Co., Ltd.*

Last year, 2016, saw sharp growths in the commodity market, turnarounds over the sluggish market in 2015. Specifically, the rise in agricultural produce overall was significant. Take Wenhua index as an example, the figure rose by nearly 30% to USD1,055.86/t (RMB7,338/t) at the end of Nov.

However, recently, the sugar price has fluctuated and fell. This is mainly because the impact by financial feature has been weakened and the price has been mainly decided by supply-demand relation. Further, the supply will play a key role, since the demand is comparatively rigid.

#### [Macroeconomic conditions]

##### In China:

The central economic work meeting closed recently, highlighted 3 signals.

1. A prudent and neutral monetary policy for 2017: the monetary policy will gradually turn to be normal instead of being loose;
2. No mentions about rational economic operation – a showcase that the central tolerance to the slowdown in economic growth has been improved;
3. "Prevention and control" of financial risks, vs. only "prevention" of financial risks

The changes in the latter two mean that the financial feature will no longer impact the commodities greatly and instead, the supply-demand relation will play a role.

##### In the US:

Provided that the Federal Reserve System will increase the USD interest for 3-4 times in 2017, the US Dollar Index (USDIX) now has surpassed the "102" line set in late Nov. 2016, and is expected to reach the historic high of "121.02" in 2001. In this context, the speculations of bulk commodity will be restrained.

Besides, the USDIX is also influencing Brazilian currency, which has depreciated again (first in Oct. 2016). This will reduce the cost for sugar exports from Brazil, beneficial to global sugar supply.

#### [Supply of sugar]

##### In China:





1. Output: the overall sugar output will increase in 2016/17 extracting season (Oct. 2016-Sept. 2017), since the planting area in a key sugar producing area Guangxi Zhuang Autonomous Region has increased, the climate conditions are good and the beet output of Inner Mongolia Autonomous Region has risen.

The sugar output in Guangxi is expected to go up by 590,000 tonnes to around 5.70 million tonnes and nationwide up by about 800,000 tonnes. Due to the increased sugar yield of sugar plants, the sugar output may be increased further. This exerts pressure on the sugar price rises.

2. Auction of state's stocked sugar: a succession of auctions have been carried out since H2 2016, as restrictions on sugar price rises. This activity will continue, to significantly restrain the high price.

### In India and Brazil:

India: In 2015/16 extracting season, India was an importing country instead of a exporting one, which had a big impact on the global supply-demand relation. According to the India Sugar Mills Association, its sugar output will reach 23.40 million tonnes in 2016/17 and the total supply (incl. inventory) will hit 31.10 million tonnes, vs. a demand of 25.50 million tonnes. It is estimated that the inventory by the end of 2016/17 will amount to 5.60 million tonnes, which can meet the demand in the first 2.5 months of 2017/18. Hence, its imports may come to an end temporarily.

Brazil: The output will fall but maintain high. According to Conab, about 39.81 million tonnes of sugar will be produced in 2016/17, slightly lower than 39.96 million tonnes expected in Aug. Specifically, the output in middle and southern Brazil will reach 36.30 million tonnes, and in Northeast Brazil 3.50 million tonnes.

Table 1: Sugar output in selected regions in China, 2016/17 extracting season

Region	2015/16, thousand tonnes	2016/17, thousand tonnes	YoY change, thousand tonnes
Guangxi Zhuang Autonomous Region	5,110.00	5,700.00	590.00
Yunnan Province	1,910.40	1,750.00	-160.00
Guangdong Province	630.90	800-850	169.1-219.1
Hainan Province	150.90	180.00	29.10
Xinjiang Uygur Autonomous Region	432.30	490.00	57.70
Inner Mongolia Autonomous Region	284.00	350.00	66.00
Hebei Province	97.50	120.00	22.50
<b>Total</b>	<b>8,701.90</b>	<b>9,470-9,520</b>	<b>768.1-818.1</b>

Note: Extracting season: from Oct. this year to Sept. the following year.

Source: CCM

## Governmental Direction

### Policy about Sugar Making Industrial Pollution Prevention and Control Technology

Summary: On 4 Jan., 2017, the MEP released the *Policy about Sugar Making Industrial Pollution Prevention and Control Technology*, which is aimed at offering technical guidance regarding pollution treatment capability and equipment, and furthermore helping phase out obsolete sugar making enterprises, optimising sugar making business structure and regulating business operation.

On 4 Jan., 2017, the Ministry of Environmental Protection of the People's Republic of China (MEP) issued the *Policy about Sugar Making Industrial Pollution Prevention and Control Technology (Policy)* for the prevention and control of industrial wastewater



and air pollution. This is expected to offer technical support to the formulating of sugar making industry policy and pollution prevention and control plan, the implementation of pollutant discharge licensing system and the choosing of pollution prevention and control technology.

Here are key contents.

### 1. Air pollution treatment

- Low nitrogen burning technology and high effectiveness dedusting, desulphurisation and denitrification equipment should be adopted in boilers, in order to reduce the emissions of particle, sulphur dioxide (SO<sub>2</sub>) and nitrogen oxides
- Closed corridors should be constructed for the transport of bagasse, ash restraining equipment should be installed at all connections during the transportation, and dustproof equipment should be used at all bagasse yards

### 2. Water pollution

- Shunting of rainwater and sewage, and clean water and sewage, segregated pretreatment and recycling should be carried out, to ensure that the discharge of pollutants stably meet the standards
- Recycling rate of wastewater should be improved, by constructing recycling systems such as beet washing recycling system

### 3. Solid waste

- Bagasse can be used as fuel for boiling and raw material for other productions
- Beet pulp can be used for producing animal feed
- Molasses can be used for producing fermented products, feed, fertiliser and other products, according to industry policies and market demand

In accordance with the *Policy*, data regarding the operating of production facility and environmental protection equipment should be filed, and key pollutants such as SO<sub>2</sub> should be monitored online. Though it is just a directory document, having no mandatory measures, it is an indication that the government is intending to optimise the sugar making business structure, eliminating obsolete production capacity and improving the access threshold.

In 2015/16 extracting season (Oct. 2015-Sept. 2016), the sugar price maintained growths, beneficial to sugar makers: the total profits of all sugar makers amounted to USD130.94 million (RMB910 million), according to CCM's research. This attracted newcomers and sugar makers who suspended production before to restart the business.

As to 17 Jan. in 2016/17, all sugar plants in Guangxi Zhuang Autonomous Region started their extractings – the number of sugar plants was up by 11 YoY and the daily extracting capacity was up by 52,500 tonnes YoY. Specifically, Qinzhou Huayu Sugar Co., Ltd., through consigned processing, restarted the sugar extracting which was halted for over 1 year. Sugar plants in Hainan all operated as to 11 Jan., and the quantity was up by 2 YoY.

The environmental policies are getting stricter. Last year, 2016, saw the issuing of the *Proposal to Control Pollutant Discharge Licensing*, the unveiling of the *Water Pollution Prevention and Control Law of the People's Republic of China (Draft for Revision)*, etc. All these are expected to regulate the sugar making business, eliminating sugar making business that are substandard



regarding pollution treatment (equipment), and optimising the business structure.

## Market Dynamics

### China's sugar alcohol business develops well in 2016

Summary: China's sugar alcohol business witnessed fine development in 2016, with the scope of applications expanding and market recognition improving. CCM expects good prospects in 2017.

China began to produce sugar alcohol in the 1970s, but the industry developed slowly: total production capacity stood at less than 100,000 t/a in the 1990s. However, in the past decade it has grown quickly as a result of economic restructuring, and development in the chemical and pharmaceutical businesses, as well as in light industry: present capacity exceeds 2.30 million t/a.

"In recent years, the sugar alcohol business has developed rapidly – overcapacity has been witnessed in selected products in the last two years," stated Zhu Lujia, secretary general of the Functional Sugar and Ingredient Specialised Commission, "Problems such as overcapacity, blind investment, high energy consumption and environmental pollution are key issues." According to CCM's research, production capacity utilisation of sorbitol (about 2 million t/a) and xylitol (over 130,000 t/a), the top 2 sugar alcohols, is presently less than 70% and 60% respectively.

Global sales of sugar alcohols have increased frequently in recent years: value of sales was USD1.93 billion in 2011, USD2.87 billion in 2015, and was expected to surpass USD3 billion in 2016, according to the International Sugar Organisation.

In China, sorbitol and xylitol are key sugar alcohols. Output of these alcohols in 2015 amounted to over 1.30 million tonnes and around 70,000 tonnes respectively. Thanks to high production capacity and strong demand, exports of these alcohols have topped the list for years: from Jan.-Nov. 2016, 84,952.76 tonnes of sorbitol and 27,989.45 tonnes of xylitol were exported.

In 2016, the scope of sorbitol applications was expanded to include frozen surimi products (condiments for hot pot), of which the market size is expected to increase given the rapid growth of the domestic hot pot business. Demand for sorbitol will, of course, increase accordingly.

Xylitol, which is calorie free and anti-dental caries, is now widely applied in sugar-free sweets. For instance, in North Europe, sugar free chewing gum with added xylitol makes up 80%+ of all chewing gums vs. no more than 50% in China. This indicates huge market potential domestically.

Some sugar alcohols play a functional role. However in China businesses focused on these alcohols started late, and markets have yet to completely mature. Take erythritol (which has a taste and sweetness similar to white sugar but has only 1/10 of the calories of white sugar, and is an anti-oxidant, protecting the liver and cardiovascular system) as an example. Production started in 2004, and the industry now has a total production capacity of 21,000 t/a. Its key manufacturers are Zibo Zhongshi Gerui Biotechnology Co., Ltd. (Production capacity: 12,000 t/a), Shandong Sanyuan Biotechnology Co., Ltd. (Sanyuan Biotechnology, 5,000 t/a) and Baolingbao Biology Co., Ltd. (4,000 t/a).

Erythritol is mainly exported to Europe, America and Southeast Asia. In the domestic market, it is not well recognised and sales have been disappointing. "Before 2016, the business was operating at a loss due to poor market recognition," stated Sanyuan Biotechnology in its H1 2016 financial report, "This year we promoted the product widely and made certain results."





With heightened consumer focus on health products, and increased efforts by manufacturers to promote erythritol, the alcohol is expected to be gradually recognised by consumers, and sales are expected to increase. In addition, demand for products which are marketed in a mature fashion, such as sorbitol and xylitol, will increase due to their widened scope of application. The market for sugar alcohol looks promising in 2017.

## Limited rise expected in sugar price in China in 2016/17

Summary: In 2016/17 extracting season, China's sugar price rises will be restricted, since users, bearing cost in mind, may seek for substitutes.

According to the China Sugar Association, by the end of Dec. 2016, the cumulative output of sugar in 2016/17 extracting season (Oct. 2016-Sept. 2017) amounted to 2.30 million tonnes, up by 19.85% YoY. Specifically,

- Cane sugar: 1.52 million tonnes
- Beet sugar: 774,600 tonnes

Meanwhile, the sales totalled 1.17 million tonnes, up by 23.67% YoY. The sales / production ratio was 50.82%, vs. 49.25% in the same period of 2015/16.

Last extracting season, 2015/16, saw frequent rises in sugar price. In 2016/17, the growth is expected to continue: the price was USD1,003/t (RMB6,914/t) in Dec., up by 23.67% YoY, according to CCM's price monitoring. All these are good news to the domestic sugar makers.

The supply-demand relation, the imports and the sugar smuggling are also factors impacting the sugar price.

According to the Ministry of Agriculture of the People's Republic of China (MOA), the sugar shortage is 1.67 million tonnes in 2016/17, which is a support to price rise.

In addition, China is a large sugar (raw sugar + refined sugar, 90%+ of raw sugar) importing country: 3.73 million tonnes in 2015/16, making up 20.86% of the total sugar consumption (based on the raw sugar / sugar processing ratio at 1:0.85), and 4.81 million tonnes in 2014/15, 27.07% of the total.

According to CCM's research, from 1-13 Jan., 2017, the international price of raw sugar stayed at USD440.92-462.97/t (20-21 cent/lb). If transportation fee and tariff are included, the profit from processing imported in-quota raw sugar is USD143.89/t (RMB1,000/t) and zero from out-of-quota raw sugar.

Currently, the Ministry of Commerce of the People's Republic of China is investigating into imports of sugar for safeguard measures. It is a common idea that the tariff, of great possibility, will be increased. This will pose a large threat to the import business, impact the domestic supply of sugar and help drive up the price.

China has strengthened the fighting against sugar smuggling and the quantity of smuggled sugar is decreasing, beneficial to sugar price rises.

However, the sugar users, facing increasing sugar price, inevitably, will seek for substitutes. In Nov. 2016, the MOA adjusted the





prediction on the consumption of sugar for 2016/17, from 15.10 million tonnes to 15 million tonnes, and attributed it to the increasing use of substitutes such as starch sugar.

Meanwhile, the growth in downstream output has slowed down, which also restrains the sugar consumption.

- Sweets: output up by 13.84% YoY in 2014, 6.68% in 2015 and even down by 0.67% in Jan.-Oct. 2016
- Soft drinks: output up by 7.01% YoY in 2014, 6.20% in 2015 and 2.14% in Jan.-Oct. 2016

All this will result in a limited rise in sugar price.

## Company Development

### Anhui Jinhe to financially benefit from short supply of sweeteners in 2017

Summary: On 22 Dec., 2016, Anhui Jinhe announced the receipt of a notice from the local environmental protection bureau about the removal of its listing for rectification. This signalled that its succession of environmental problems were solved. This year, 2017, will see increasing prices of ace-K and sucralose and the company's fine financial performance as a consequence, due to the limited production caused by increasingly strict environmental policies.

On 22 Dec., 2016, Anhui Jinhe Industrial Co., Ltd. (Anhui Jinhe) announced the receipt of a notice from the Bureau of Environmental Protection of Chuzhou City, Anhui Province, about the *Notice to Remove the Listing of Anhui Jinhe for the Violation of Environmental Protection Law issued by the Department of Environmental Protection of Anhui Province*. This meant that its listing on the official website of the provincial environmental protection department for rectification was removed.

In Aug. 2016, Anhui Jinhe was listed by the provincial environmental protection department for its serious environmental problems which were violations of the environmental protection laws and regulations, and was ordered to finish the rectification and turn over a penalty of USD43,170 (RMB300,000) by the end of Nov. 2016. The problems included no processings of formalities related to its changes in measures to deal with waste gas generated from its projects such as a 5,000 t/a acesulfame-K (ace-K) production project, no application for environmental impact assessment on its liquid ammonia and methanol co-production project, and dishonesty in its reportings about air pollution prevention and control measures and environmental protection equipment checking.

"The listing for rectification has no impact on our business operation and no big negative impact on our financial performance," claimed Anhui Jinhe at that time, "The rectification will be finished by the end of Sept. at the latest, having small impact on the production." The removal indicated that its environmental problems were solved.

Anhui Jinhe is mainly producing ace-K and sucralose. So far these 2 sweeteners have recorded large growths in price, expected to contribute to its profit growth in 2017. Specifically,

- **Sucralose**

A key manufacturer JK Sucralose Inc. suspended production for environmental problems and resumed production at a limited scale. Other manufacturers, restricted by environmental policies, reduced the production. All this has caused sharp rises in price since May, with a rate of over 100%.

Anhui Jinhe is now operating at a production capacity of 500 t/a. Its 1,500 t/a production line, now under construction, is expected to



be put into operation in March 2017. Since 40% of its orders were signed in late 2016, Anhui Jinhe will benefit from the high price and improve its financial performance in 2017.

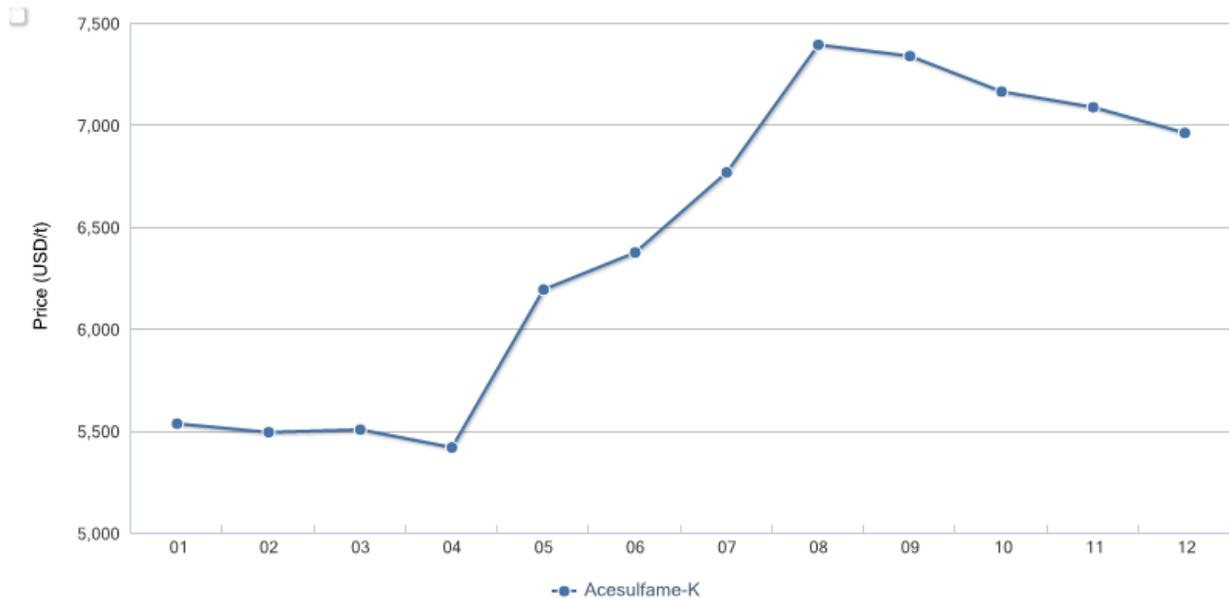
• **Ace-K**

The price increased by 35%+ in 2016, mainly because a key competitor Suzhou Hope Technology Co., Ltd. (Suzhou Hope) reduced the production significantly due to the break of capital chain and the production suspensions of key diketene (DK) manufacturers in April and July caused by production accidents.

Though Suzhou Hope has been reorganised, its production stays low, with production capacity declining from 10,000 t/a to less than 2,000 t/a. In addition, Suzhou Hope was ordered to relocate its ace-K project to the Yangzijiang International Chemical Industrial Park by 30 Dec., 2017, owing to its leakages of sulphur trioxide and liquid ammonia. This further restricts the production.

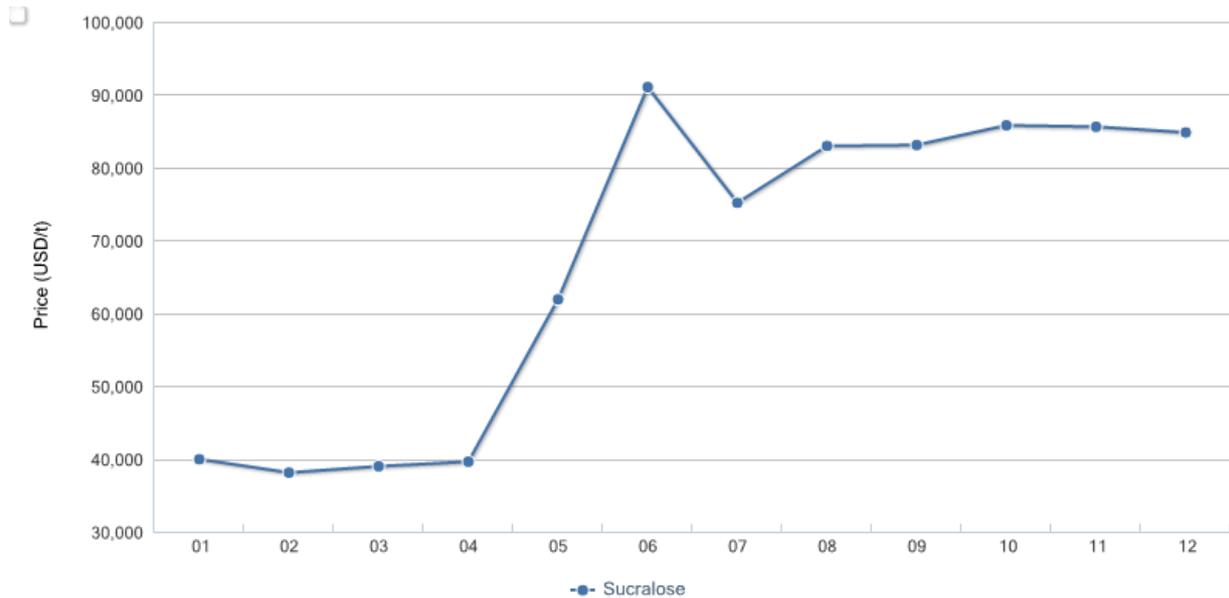
Anhui Jinhe is now operating at a production capacity of 12,000 t/a. Besides, it has a production capacity of 10,000 t/a for raw material DK. This indicates that the company will not be greatly impacted by the short supply of DK in the market and will benefit from the high priced ace-K.

Figure 1: Ex-works price of acesulfame-K in China, Jan.-Dec. 2016



Source: CCM

Figure 2: Ex-works price of sucralose (99%) in China, Jan.-Dec. 2016



Source: CCM

### New Francisco applies for listing on NEEQ

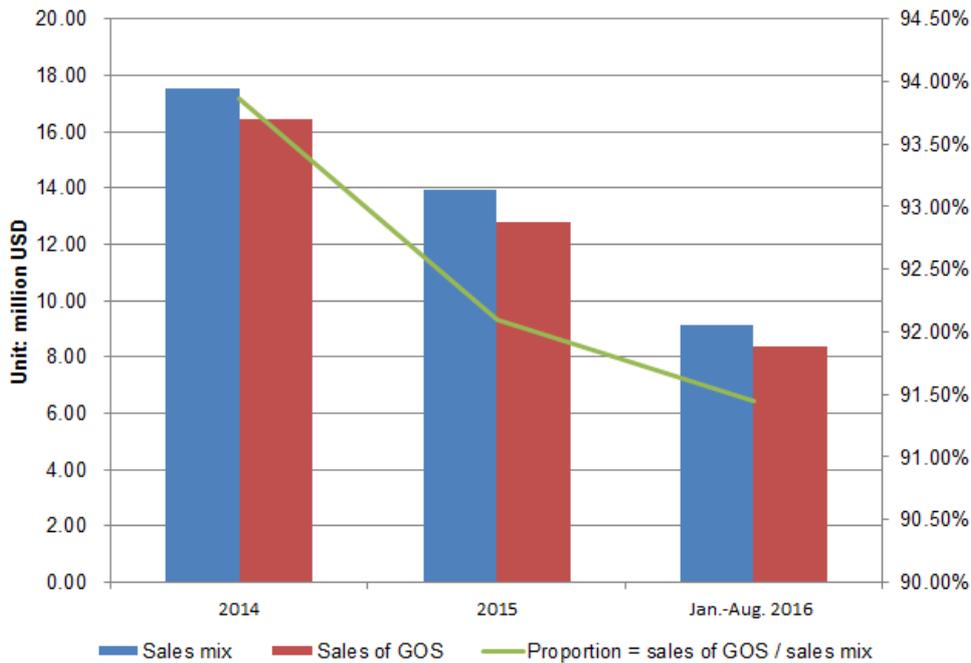
Summary: On 29 Dec., 2016, New Francisco officially applied for listing on the NEEQ, which is expected to strengthen its competitiveness, improve recognition of its GOS and support its profit growth.

On 29 Dec., 2016, New Francisco (Yunfu City) Biotechnology Co., Ltd. (New Francisco) officially applied for listing on the New Third Board (= National Equity Exchange and Quotations, NEEQ), and accordingly submitted its financial / auditing reports and a report regarding the securities company in charge of its share transfer.

Specifically, in 2014, 2015, and Jan.-Aug. 2016, the company's sales reached USD17.55 million (RMB122 million), USD13.90 million (RMB96.61 million) and USD9.13 million (RMB63.43 million) respectively, with corresponding net profit amounting to USD2.68 million (RMB18.65 million), USD2.25 million (RMB15.61 million) and USD1.47 million (RMB10.25 million).

New Francisco is a Taiwanese-Indonesia joint venture. Its controlling shareholder is Jinruiqi Investment Co., Ltd., which has a 59.95% stake in the company. It is mainly involved in the R&D, production and sale of galacto oligosaccharide (GOS, key product), maltodextrin and other functional sugars like fructo oligosaccharide (FOS), isomalto-oligosaccharide (IMO) and linear oligosaccharide. In 2014, 2015, and Jan.-Aug. 2016, its sales of GOS were USD16.40 million (RMB114 million), USD12.80 million (RMB88.98 million) and USD3.35 million (RMB58 million) respectively, accounting for 93.87%, 92.10% and 91.44% of the company's sales.

Figure 3: New Francisco's GOS sales, 2014-2015 & Jan.-Aug. 2016



Source: New Francisco (Yunfu City) Biotechnology Co., Ltd.

The listing of the company is expected to improve product recognition and enhance its competitiveness, and meanwhile provide it with channels for financing.

According to CCM's research, there are only a few GOS manufacturers in China, including Quantum Hi-tech (China) Biological Co., Ltd. (production capacity: 10,000 t/a, stock code: 300149), Baolingbao Biology Co., Ltd. (production capacity: 5,000 t/a, stock code: 002286) and New Francisco (15,000 t/a). Compared to the other 2 manufacturers, who have already been listed, New Francisco lacks financing channels and exposure. The listing is hoped to enable it to gain ground on its competitors.

Notably, New Francisco intends to acquire its affiliated company, King-Prebiotics Biotechnology (TW) Co., Ltd. (King-Prebiotics), before the listing in order to reduce financial risks. Reportedly, the two companies are highly interrelated: the former sells GOS to the latter and also purchases raw materials from the latter. In particular:

- Sales: USD0.38 million (RMB2.65 million) in 2015, making up 2.74% of New Francisco's sales mix, and USD2.98 million (RMB20.69 million) from Jan.-Aug. 2016, 32.62% of the total
- Purchasing: USD1.07million (RMB7.44 million) in 2015, making up 11.32% of the company's total purchases, and USD3.78 million (RMB26.25 million) from Jan.-Aug. 2016, 45.66% of the total

New Francisco is a formulator of the national GOS standard. Its GOS has been certified by the US' FDA as GRAS (= Generally Recognized as Safe). Its high purity (100%) GOS is mainly used in infant food, liquid milk and healthcare food. As a nutritional supplement to infant formula, demand for GOS has been increasing since the two-child policy was implemented. This increase in demand is expected to continue to provide opportunities for this leading GOS manufacturer.

## Shandong Longlive: XOS marketed in the US

Summary: On 28 Dec., 2016, Shandong Longlive announced the launch of a XOS whey protein powder which uses its XOS, onto the US market. In addition, the company actively expanded its business and promoted its "Internet + Big Health" strategy, in a move to improve its profitability.

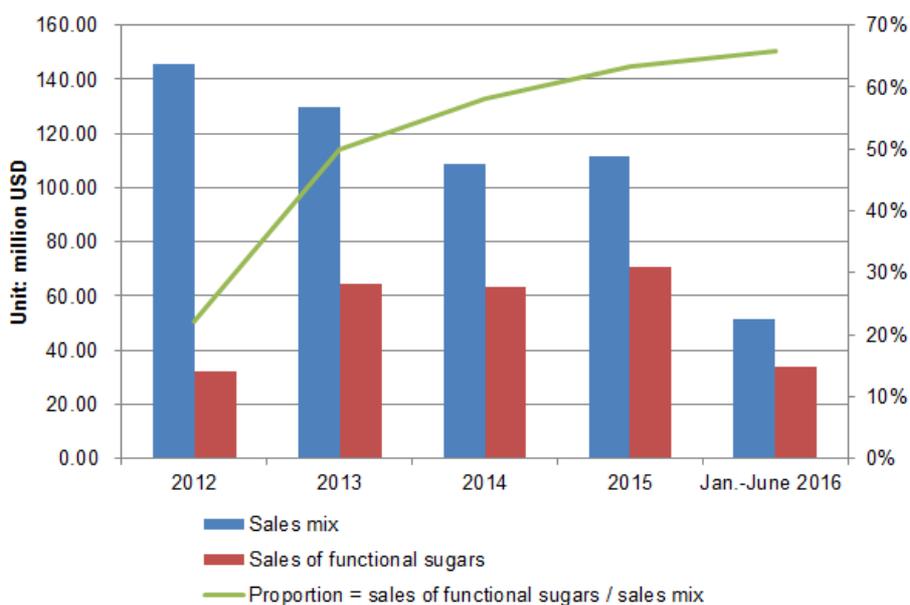
On 28 Dec., 2016, Shandong Longlive Bio-technology Co., Ltd. (Shandong Longlive) officially announced that the xylo oligosaccharide (XOS) whey protein powder jointly developed by University of California, Los Angeles and Nutrasomma Inc. was marketed on Amazon.com, the largest E-commerce platform in the US. Specifically, XOS developed by Shandong Longlive was added into the product, to improve the intestinal health, promote the absorption of whey protein and increase the utilisation of protein. This launch enabled Shandong Longlive to move into the US market.

Shandong Longlive is mainly involved in the business of functional sugars. In recent two years, its sales of functional sugars (mainly XOS) made up 50%+ of the sales mix. Currently, the company is operating at a production capacity of 4,000 t/a for XOS. Its 6,000 t/a XOS project which is now under trial production, is expected to be put into mass production soon.

XOS is widely applied. In addition to healthcare products, Shandong Longlive is using it in feed, food and drug.

- Feed: in 2006, a certificate of feed and feed additive was obtained for its XOS (prebiotics) from the Ministry of Agriculture of the People's Republic of China; in June 2016, its XOS feed was launched onto the European market; in Oct. 2016, it started marketing its premium XOS feed brand "Xinyuankang" in domestic market
- Food: XOS is used as a nutrient supplement in infant formula. According to its 2015 financial report, Shijiazhuang Junlebao Dairy Co., Ltd. is a key client for its XOS and Yashili International Holdings Ltd. a new one
- Drug: in March 2015, the company was approved by the China Food and Drug Administration for its use of XOS as an excipient in clinical test. This marks an application expansion, though no specific products have been launched so far

Figure 4: Shandong Longlive's sales of functional sugars, 2012-2015 & Jan.-June 2016



Source: Shandong Longlive Bio-technology Co., Ltd.



In 2016, Shandong Longlive also actively developed other businesses, a move intended to improve the profitability.

In May it finished the acquisitions of Xiamen Kuaiyun Information Technology Co., Ltd. and Winnerspring Union (Beijing) Technology Development Co., Ltd. (Winnerspring Union), for the business extension into the internet. From this, it integrated its functional sugar business with internet business and developed the "Internet + Big Health" business. In Jan. 2017, the company received bonuses from the said 2 companies, respectively of USD5.09 million (RMB35.36 million) and USD4.61 million (RMB32.06 million).

In Oct. 2016, Shandong Longlive mortgaged its right to use trademarks and its stake in Winnerspring Union, for a loaning of USD43.17 million (RMB300 million). This sum is to be used for acquisitions and improvement of liability structure. On 31 Dec. the company announced on its interactive trading platform that it had several target companies (specific company names yet to be disclosed), but it would not take actions soon since it's not the right time yet.

## Price Update

### Ex-works prices of sweeteners in China, Jan. 2017

Table 2: Ex-works prices of sweeteners in China, Jan. 2017

No.	Product	Price in Jan. 2017, USD/t	Price in Dec. 2016, USD/t	Sweetness compared with sucrose	Price of unit sweetness in Jan. 2017, USD/t	Month-on-month change of price in Jan. 2017
1	Sugar	961	1,003	1.00	961	-4.13%
2	Steviol glycosides (RA95)	76,261	76,858	450.00	169	-0.78%
3	Sucralose	83,456	84,834	600.00	139	-1.63%
4	Acesulfame-K	6,907	6,961	200.00	35	-0.78%
5	Aspartame	11,943	12,036	200.00	60	-0.77%
6	Glycyrrhizin (tripotassium glycyrrhizinate)	14,101	14,212	150.00	94	-0.78%
7	Saccharin	9,065	9,136	300.00	30	-0.78%
8	Cyclamate (NF13)	1,943	1,958	30.00	65	-0.76%
9	Neotame (98%)	38,850	39,154	8,000.00	5	-0.78%
10	Erythritol	3,309	3,335	0.65	5,091	-0.78%
11	Mannitol (food grade)	2,590	2,610	0.70	3,700	-0.76%
12	FOS (fructo oligosaccharide, powder 95%)	6,043	6,236	0.30	20,144	-3.08%
13	XOS (xylo oligosaccharide, powder 95%)	32,087	32,339	0.40	80,218	-0.78%
14	Maltose syrup (75%, liquid)	302	305	0.90	336	-0.98%
15	Sorbitol (70%, liquid)	374	377	0.70	534	-0.80%
16	HFCS (fructose: 42%, liquid)	309	334	1.00	309	-7.25%
17	HFCS (fructose: 55%, liquid)	331	348	1.10	301	-4.91%
18	Maltitol (75%, liquid)	532	537	0.90	592	-0.93%
19	Glucose monohydrate	475	479	0.74	642	-0.84%
20	Crystalline maltitol	2,302	2,320	0.35	6,578	-0.78%
21	Crystalline sorbitol	1,151	1,160	0.50	2,302	-0.77%
22	Crystalline xylitol	3,309	3,335	1.20	2,758	-0.81%

Source: CCM

### China's price of xylitol to maintain stability overall and increase slightly

Summary: In H1 2016, China's xylitol price maintained stability. However in H2, it fluctuated greatly, mainly because of the decreased price of corn and the fairly tight supply based on strict environmental policies. It is expected that these two factors will continue working in 2017, and as a consequence, the xylitol price will be stable as a whole and increase slightly.

The period, H1 2016, witnessed stable price of xylitol in China, Q3 falls and Q4 rises. Specifically, the ex-works price of crystalline xylitol was USD3,370.37/t in June, slightly up by 1.64% over Jan., between June and Sept., was down by 6.78% and up by 6.07% between Sept. and Dec., according to CCM's price monitoring.



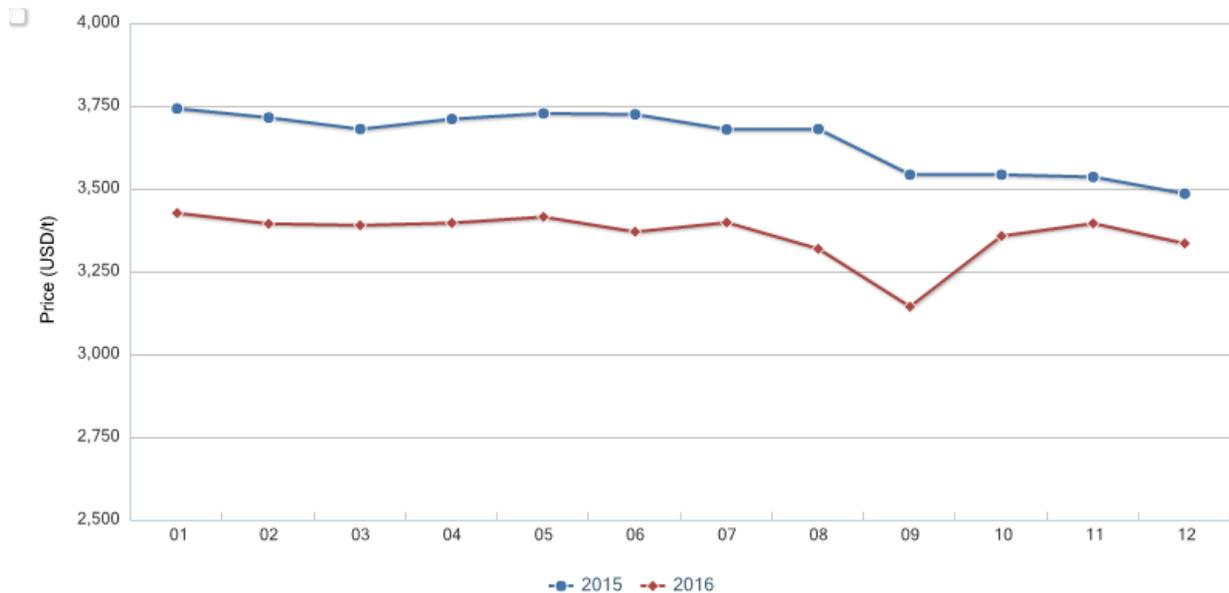
A key factor for the stability in H1 was the stable demand. According to CCM's research, key producers including Shandong Futaste Pharmaceutical Co., Ltd. (production capacity: 25,000 t/a) and Zhejiang Huakang Pharmaceutical Co., Ltd. (production capacity: 30,000 t/a) were busy fulfilling orders signed before and received very few new orders.

Large decreases in corn price and increasing environmental pressure were reasons for the fluctuations in H2 2016.

The fall in Q3 can be mainly attributed to the sharply decreased price of corn, by 16.71% during July-Dec., vs. only 7.41% in H1. The supply of corn was increased, since newly harvested corn was launched onto the market, and the temporary purchase for storage policy was removed.

In Nov. and Dec. 2016 respectively, the *Proposal to Control Pollutant Discharge Licensing and the Water Pollution Prevention and Control Law of the People's Republic of China (Draft for Revision)* was released, indicating increasing pressure on the manufacturers. Due to this, they restricted production and raised price.

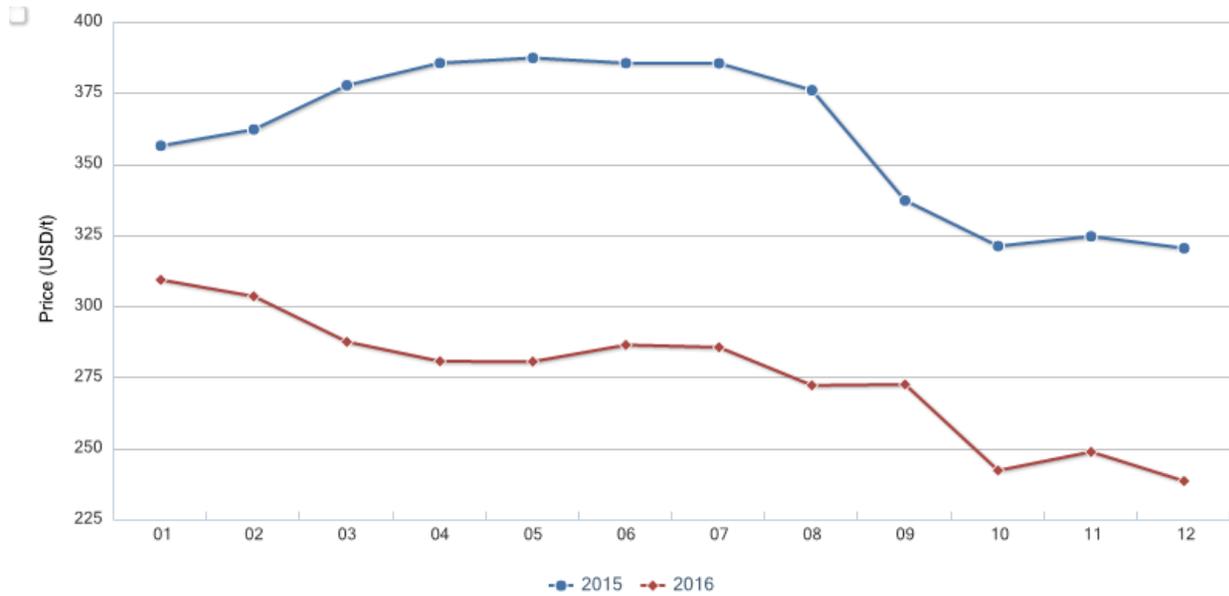
Figure 5: Ex-works price of xylitol in China, Jan. 2015-Dec. 2016



Note: Xylitol: crystalline xylitol specifically.

Source: CCM

Figure 6: Monthly market price of corn in China, 2015-2016



Source: CCM

CCM expects the xylitol price to maintain stability as a whole and increase slightly in 2017. This is mainly because manufacturers may restrict and even suspend production, provided that the environmental policies will get stricter and stricter.

### China's ex-works price of ace-K rises by 36.43% at most in 2016

Summary: China's ex-works price of ace-K fluctuated greatly in 2016, due to the increased price of raw material and the improved industry concentration: a rise of 35%+ based on the highest / lowest price. Recent two years have witnessed the increasingly strict environmental policies, which is expected to continue restricting the production of ace-K and to push up the price accordingly.

According to CCM's price monitoring, China's ex-works price of acesulfame-K (ace-K) was USD6,961/t (RMB48,000/t) in Dec. 2016, up by 23.71% YoY and 25.74% over Jan. 2016. Specifically regarding the highest price in Aug. and the lowest in April, it recorded a growth of 36.43% - the price maintained stability from Jan.-April and Aug.-Dec., but increased during April-Aug.

Such price fluctuations can be mainly attributed to the increased price of raw material and the improved industry concentration. In April, a key diketene (DK) manufacturer Jiangsu Tiancheng Biochemical Products Co., Ltd. (production capacity: 40,000 t/a) suspended production for relocation due to environmental problems, and in July, another key player Wanglong Group Co., Ltd. (70,000 t/a) also suspended production because of a production accident. This directly caused the sharp rises in DK price and furthermore the growths in ace-K price.

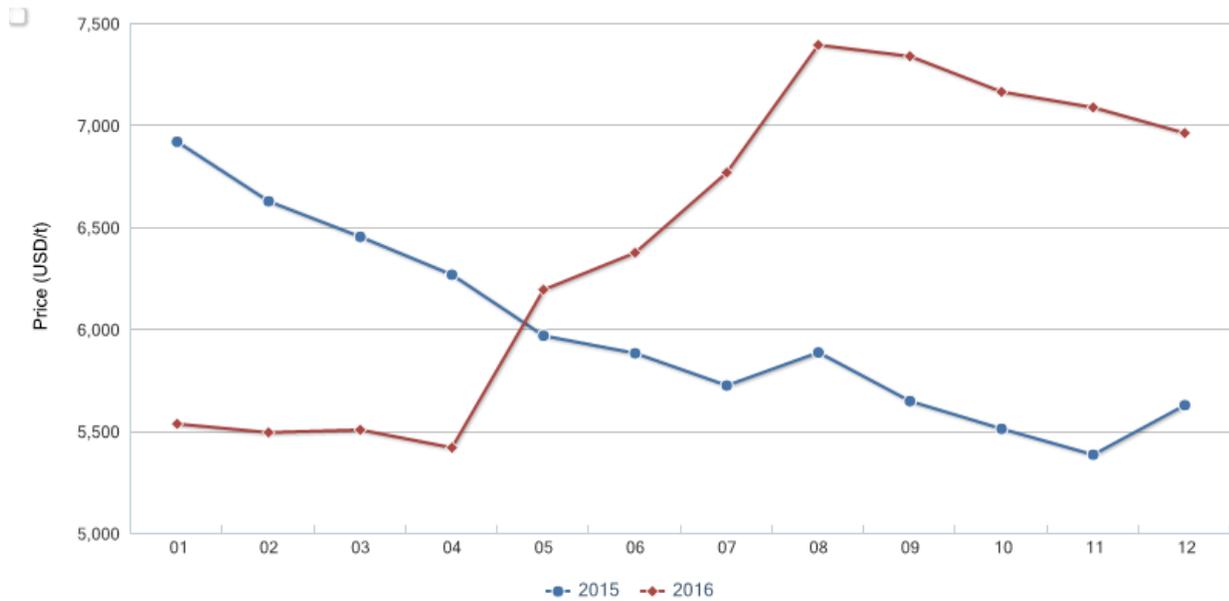
The production of ace-K is concentrated in China. According to CCM's research, the global production capacity reached about 20,000 t/a in 2016, of which China made up around 85%. Specifically, Anhui Jinhe Industrial Co., Ltd. expanded its production from 9,000 t/a to 12,000 t/a. Due to environmental problems and break in capital chain, its key competitor Suzhou Hope Technology Co., Ltd. gradually reduced its production, from 10,000 t/a to less than 2,000 t/a. This indicated that the industry concentration was improved further.

In this context, Anhui Jinhe certainly had a say on pricing. However after Aug. the price of ace-K showed no rises. This, according to

analyst CCM, may be because Anhui Jinhe intended to capture more market shares and the downstream enterprises had limited tolerance to price rises. Anhui Jinhe was operating at a production capacity of 10,000 t/a for DK, which meant that it was not greatly impacted by the short supply of DK in the market. Suzhou Hope still did the business despite its reduction in production capacity. In order to capture more market shares, the company took no actions in quotation raising.

The downstream enterprises, with a focus on cost, may seek for substitutes. This was a restriction on ace-K price rises.

Figure 7: Ex-works price of acesulfame-K in China, Jan. 2015-Dec. 2016



Source: CCM

In 2017, the price of ace-K will continue rising due to the increasingly strict environmental policies. According to CCM's research, Anhui Jinhe suspended production of its 5,000 t/a production line for nearly a month because of environmental problems; Suzhou Hope was ordered to relocate its production line owing to environmental problems also.

China is increasing attention to environmental protection. This year, 2017, is hard to see full operation of ace-K production facilities. The global demand this year is about 15,000-18,000 tonnes. Hence, it is expected that the supply will be tight and the price will rise as a consequence.

## Import and Export Analysis

### Exports of sweeteners and raw materials from China, Nov. 2016



Table 3: China's exports of sweeteners and raw materials (selected, with independent HS codes), Nov. 2016

Product	Nov. 2016		Oct. 2016		MoM change of volume in Nov. 2016	MoM change of value in Nov. 2016
	Export volume, tonne	Export value, USD	Export volume, tonne	Export value, USD		
Saccharin	1,232.77	11,281,942.00	1,011.27	9,206,543.00	21.90%	22.54%
Cyclamate	2,001.49	2,945,491.00	1,727.63	2,500,510.00	15.85%	17.80%
Mannitol	879.08	1,743,993.00	760.41	1,538,407.00	15.61%	13.36%
Xylitol	2,615.39	7,314,919.00	2,514.44	6,836,725.00	4.01%	6.99%
Sorbitol	10,987.44	6,336,002.00	8,681.60	5,161,352.00	26.56%	22.76%
Glucose and glucose syrup (fructose content <20%, dry state)	65,929.99	27,554,869.00	47,912.04	20,760,204.00	37.61%	32.73%
Glucose and glucose syrup (20%≤fructose content<50%, dry state)	828.04	1,003,019.00	339.11	419,833.00	144.18%	138.91%
Other fructose and fructose syrup (fructose content >50%, dry state)	49,203.92	17,868,291.00	41,316.55	15,457,747.00	19.09%	15.59%
Liquorice	200.56	1,259,949.00	209.86	973,642.00	-4.43%	29.41%
Corn starch	19,959.59	6,345,196.00	12,686.55	4,204,778.00	57.33%	50.90%

Source: CCM & China Customs

Table 4: Top 3 export destinations of sweeteners and raw materials (selected, with independent HS codes) from China, Nov. 2016

Product	1		2		3		Others, tonne	Total, tonne
	Destination	Export volume, tonne	Destination	Export volume, tonne	Destination	Export volume, tonne		
Saccharin	Germany	134.00	Brazil	101.88	South Africa	86.00	910.89	1,232.77
Cyclamate	South Africa	607.50	Brazil	237.95	Myanmar	195.00	961.04	2,001.49
Mannitol	India	182.70	The US	166.75	Turkey	117.00	412.63	879.08
Xylitol	Poland	557.75	The US	499.78	Turkey	252.48	1,305.38	2,615.39
Sorbitol	Thailand	2,094.02	Vietnam	1,461.80	Japan	1,307.26	6,124.36	10,987.44
Glucose and glucose syrup (fructose content <20%, dry state)	Indonesia	16,573.24	South Korea	15,025.22	The Philippines	8,643.05	25,688.48	65,929.99
Glucose and glucose syrup (20%≤fructose content<50%, dry state)	Malaysia	426.30	Ghana	216.00	The Philippines	141.20	44.54	828.04
Other fructose and fructose syrup (fructose content >50%, dry state)	The Philippines	33,092.09	Indonesia	9,557.82	Vietnam	4,815.08	1,738.92	49,203.92
Liquorice	Japan	85.88	Taiwan	34.58	Germany	28.00	52.10	200.56
Corn starch	Indonesia	15,202.52	Vietnam	839.81	Malaysia	660.00	3,257.26	19,959.59

Source: CCM & China Customs

## China's exports of saccharin to increase in 2017

Summary: China's exports of saccharin increased from Jan.-Nov. 2016, mainly because the government encouraged the export business and the RMB depreciated. It is expected that in 2017, the saccharin business will be oriented by export mainly and the export volume accordingly will rise, due to the increased inventory and the government policy.

According to China Customs, China exported 1,232.77 tonnes of saccharin in Nov. 2016, up by 6.68% YoY and 21.90% MoM. The combined figure during Jan.-Nov. amounted to 12,517.64 tonnes, up by 10.53% YoY. Due to this, the full-year figure is expected to rise.

The rise can be mainly attributed to the government policy and the RMB depreciation.

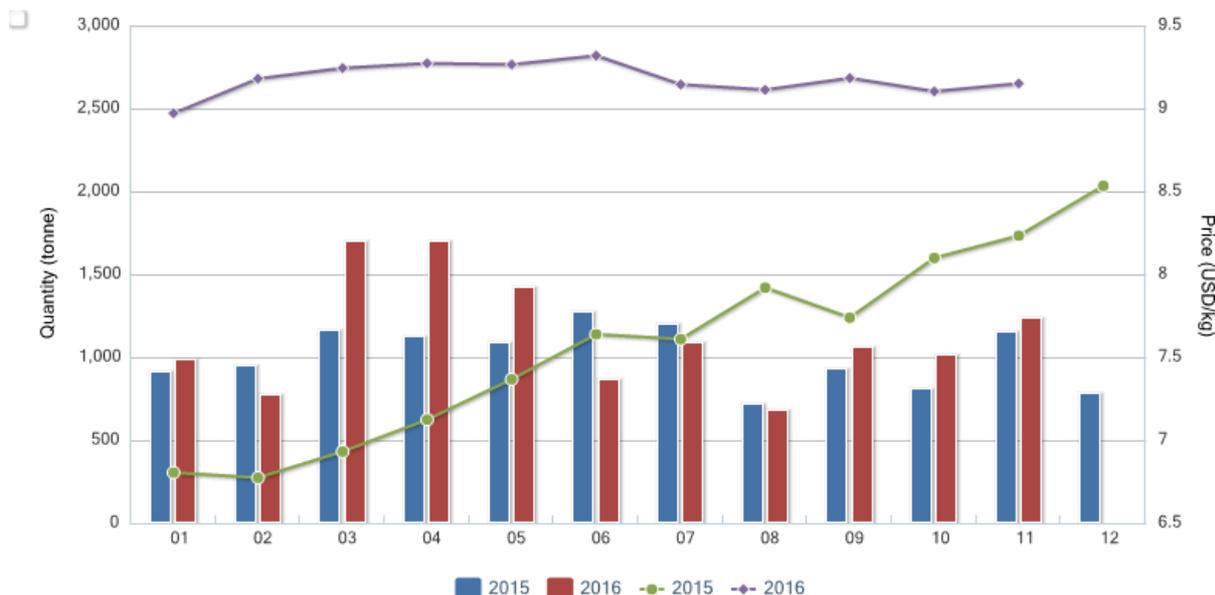
- Exports of saccharin encouraged: in recent years, the Ministry of Industry and Information Technology of the People's Republic of China has made plans for saccharin production and sales: output of 19,000 tonnes, domestic sales of 3,200 tonnes and exports of 15,800 tonnes every year
- RMB depreciation: cumulative fall of 6.83% in 2016, vs. 5.77% in 2015

From Jan.-Nov. the export price maintained stability on a monthly basis but increased compared to the same period of 2015, by 22.74% to USD9,177.48/t on average. This was mainly because the increasingly strict environmental policies exerted heavier



pressure on manufacturers and as a consequence, they raised the quotations.

Figure 8: China's exports of saccharin, Jan. 2015-Nov. 2016



Source: CCM & China Customs

China mainly exports saccharin to North America and Europe. Specifically, the top 3 destinations were Germany, Brazil and the US during Jan.-Nov. 2016, for 1,727.45 tonnes (=13.80% of the national figure), 1,400.50 tonnes (=11.19%) and 888.90 tonnes (=7.10%) respectively.

Compared to the same period of 2015, only the exports to Germany went down by 20.22%, and to the US and Brazil up by 18.94% and 58.99%. In addition, the exports to Pakistan and Indonesia increased significantly, by 66.59% and 24.81%.

Table 5: Top 10 export destinations of saccharin from China, Jan.-Nov. 2016

Destination	Export volume	
	Jan.-Nov. 2016	Jan.-Nov. 2015
Germany	1,727.45	2,165.19
Brazil	1,400.50	880.88
The US	888.90	747.35
Pakistan	667.00	400.38
South Africa	604.63	529.50
Indonesia	578.50	463.50
Spain	522.50	548.40
Thailand	472.00	545.20
Bangladesh	390.98	229.70
Argentina	390.90	391.50
The UK	360.00	445.50
The Netherlands	359.00	241.00
South Korea	337.10	353.50
India	322.88	363.68
Mexico	279.80	/
Japan	266.00	380.90
Myanmar	234.11	211.37
Russia	227.10	194.50
Turkey	224.50	226.00
Poland	208.00	/

Source: CCM & China Customs

In 2017, the saccharin business will still be oriented by exports and the export volume will increase further. This is mainly because



the inventory increases year by year: 68.99% in 2014, 45.33% in 2015 and 15.56% in Jan.-Nov. 2016, and the Chinese government continues encouraging the exports.

## News in Brief

### **Hulunbair's 1 million t/a beet planting project to start up in May 2017**

On 25 Dec., 2016, the Argun municipal government, Hulunbair Nongken Group (HNG) and Chifeng Zhongyi Sugar Industry Co., Ltd. (Zhongyi Sugar) signed an agreement about a 1 million t/a beet planting project. Specifically, the plant with a total investment of about USD57.56 million (RMB400 million), will be constructed by Zhongyi Sugar from May 2017 and will operate in Oct. 2018. Hailar Nongken Group, a subsidiary of HNG will supply raw material. It is expected to have a total planting area of 20 thousand ha (300,000 mu) by 2020.

"Based on the output of over 45 t/ha (3 t/mu), the base will help increase the revenue by USD28.78 million (RMB200 million)," stated the subsidiary, "In addition, its byproduct beet pulp has high contents of digestible fibre, protein and sugar, which is good feed for local farming business."

### **Sucralose coded independently in import and export business**

On 1 Jan., 2017, the new *Commodity Name and Coding Harmonised System* was officially implemented. Notably, sucralose was coded independently this time: 29321400.

This revision involved many commodities in, and correspondingly, the *Import & Export Tax Rule (2017 version)* was adjusted: about 760+ commodities were coded with 8 digits, nearly 1/10 of the total.

### **Guangxi Guitang receives governmental funding**

On 4 Jan., 2017, Guangxi Guitang (Group) Co., Ltd. (Guangxi Guitang) announced the receipt of a supporting funding of USD6.35 million (RMB44.11 million) from the Bureau of Finance of Guigang City (in Guangxi Zhuang Autonomous Region). This will be included in its full-year 2016 financial figures, to effectively cover the deficit of USD0.75 million (RMB5.23 million) made in Q1-3.





## India initiates 2nd anti-dumping sunset review of China made saccharin

On 10 Jan., 2017, the Ministry of Commerce and Industry, Government of India (MOCI) announced the initiation of the 2<sup>nd</sup> anti-dumping sunset review on China made saccharin, a move intended to ascertain that whether the dumping of this product involved is continuing, and if yes, whether the dumping continues injuring its business, following the removal of the anti-dumping measures. "The parties involved should submit related information, application for the hearing, answers to questionnaires and comments on the case in literary language within 40 days," stated the ministry.

The product involved is coded 29251100. The target dumping investigation period is from July 2015 to Sept. 2016, and injury investigation period from 2013-2014, 2014-2015 and 2015-2016. This sunset review is aimed at deciding whether China made saccharin will be taxed for anti-dumping again.

In March 2007, the Ministry of Finance, Government of India (MOF) announced the collection of anti-dumping duty on China made saccharin. On 7 Dec., 2011, the MOCI advised the MOF to continue levying anti-dumping duties on China made saccharin. On 13 Jan., 2012, India's customs announced the extension of the collection of anti-dumping duties, by 5 years (to end on 12 Jan., 2017).

## Guilin Layn: controlling shareholder increases stake to 20%

On 12 Jan., 2017, Guilin Layn Natural Ingredients Corp. (Guilin Layn) announced Jiang Xiaosan, the person acting in concert (parties undertake identical investment actions to achieve the same goal) with its controlling shareholder Qin Benjun, increased the shareholding by 1.3 million shares (= 0.30% of the company's total shares) through auction trading.

Following this, the combined stake held by the controlling shareholder Qin Benjun and his two persons (Jiang Xiaosan and Jiang Anming) acting in concert made up 20% of the company's total. Still, Qin Benjun is the controlling shareholder and the actual controller of Guilin Layn.



**Journalist: Yimin Yang**  
**Editor: Jenny Xing**  
**Chief Editor: Yimin Yang**  
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17th Floor, Huihua Commercial & Trade Building, No.80 XianlieZhong Road Guangzhou, 510070, P.R.China

**Tel: +86-20-37616606**

Fax: +86-20-37616768

E-mail: [econtact@cnchemicals.com](mailto:econtact@cnchemicals.com)

Website: [www.cnchemicals.com](http://www.cnchemicals.com)