Market Research on China Stevia Sweetener Industry

The Eighth Edition

Nov. 2017

Researched & Prepared by:

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1. Introduction

*Market Research on China Stevia Sweetener Industry*, finished in November 2017, is CCM’s eighth edition report on China’s stevia sweetener industry. This intelligent report attaches importance to the following parts:

- Stevia planting, stevia leaf output and price in China
- Stevia sweetener production, price, export and consumption in China
- Government policies on stevia sweetener usage in China
- Stevia sweetener market cycle analysis and forecasts in China.
2. Approach for this report

This report is based on data collected with diverse methods, which are listed as follows:

**Desk research**

This includes access to published magazines, journals, government, industry and customs statistics, association seminars as well as information from the Internet. A lot of work has gone into the compilation and analysis of the obtained information. When necessary, information has been checked with stevia industry participants and specialists regarding stevia planting, industrial data, production cost, production technology, market price, industrial development trend, downstream industries application and policies. Data collected and compiled are variously sourced from:
- CCM's database
- Published articles from periodicals, magazine, journals and third party database
- Statistics from governments and international institutes
- Customs statistics
- Comments from industrial experts on various platforms
- Information from the Internet

**Methods and sources for different segments of the industry**

- Stevia planting and stevia leaf output: Interviews with stevia planting cooperatives and stevia sweetener producers
- Stevia sweetener extraction and purification: Interviews with stevia sweetener producers & trade data from China Customs
- Stevia consumption: Interviews with stevia sweetener producers & trade data from China Customs

**Telephone interview targets**

- Stevia planters and stevia planting cooperatives
- Key stevia sweetener producers and traders
- Typical stevia sweetener consumers from major end users
- Associations involved and industrial experts

**Data compilation and crosscheck**

Data obtained from various sources have been combined and cross-checked to ensure that this report is as accurate and methodologically sound as possible.
3. Executive summary

Stevia sweetener industry in China consists of three segments, namely stevia planting, stevia sweetener processing and stevia sweetener consumption, involving hundreds of thousands of players including stevia farmers, stevia leaf traders, stevia sweetener producers, traders and end users. The whole industry is still at its growing stage in China, as well as in most overseas countries.

Focuses of China's stevia sweetener industry from 2014 to 2017:
- Stevia planting area saw fast expansion after the dramatic price increase of stevia leaves in 2014. However, the expanding planting area has led to oversupply of stevia leaves, and thus the stevia planting area shrinks in 2017 and it is expected to continue on decreasing.
- Major stevia planting area has shifted to northern provinces of China.
- Stevia planting cost is on an increasing trend.
- Product structure of stevia sweeteners has changed. The major product specifications of stevia sweeteners have changed to extracted stevia sweeteners in this period.
- The export structure of stevia sweeteners changed as well accordingly.
- Domestic market of stevia sweeteners was growing slowly, while the dominant driver of China's stevia sweetener industry remained to be the overseas demand.
- The Chinese government has expanded the application range of stevioside in food industry.
4. What is in the report?

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

... 

1 Overview of stevia sweetener industry in China 

... 

Current status of stevia sweetener industry in China:

- Dominant player of stevia leaf supply in the world, with the largest planting area and stevia leaf output
- Dominant supplier of extracted stevia sweeteners in the global market by volume. Most of the extracted stevia sweeteners are exported to overseas companies for further purification.
- Wide variety in stevia sweetener specifications, but most of them have low output volume except for extracted stevia sweeteners.
- Large domestic consumption of stevia sweeteners by volume, but mostly low purity products with small per capital consumption volume

... 

3.1 Current status and changes of stevia planting

Figure 3.1.1-1 Stevia planting area in China, 2007–2017

*Note: Stevia planting area in 2017 is a full year estimation, the same as that as of Aug. 2017, as farmers finish stevia planting in the first half year.*

*Source: CCM*
Figure 3.1.1-2 Stevia planting area and stevia leaf output in China, 2007–2017

Note: 1. Stevia planting area in 2017 is a full year estimation, the same as that as of Aug. 2017, as farmers finish stevia planting in the first half year.
2. Stevia leaf output in 2017 is estimated as stevia leaves in regions in northern China such as Heilongjiang, Gansu provinces, Xinjiang Uygur Autonomous Region and Inner Mongolia Autonomous Region have yet to be harvested.
Source: CCM

3.2.1 Stevia leaves price changes in recent years

Table 3.2.1-1 Prices of stevia leaves in China, 2010–2017

<table>
<thead>
<tr>
<th>Year</th>
<th>Price range, RMB/kg</th>
<th>Average price, RMB/kg</th>
<th>Average price, USD/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>14–15</td>
<td>14</td>
<td>2.07</td>
</tr>
<tr>
<td>2011</td>
<td>11–13</td>
<td>12</td>
<td>1.86</td>
</tr>
<tr>
<td>2012</td>
<td>10–12</td>
<td>11</td>
<td>1.74</td>
</tr>
<tr>
<td>2013</td>
<td>8–10</td>
<td>10</td>
<td>1.61</td>
</tr>
<tr>
<td>2014</td>
<td>16–22</td>
<td>18</td>
<td>2.93</td>
</tr>
<tr>
<td>2015</td>
<td>11–20</td>
<td>14</td>
<td>2.25</td>
</tr>
<tr>
<td>2016</td>
<td>12–19</td>
<td>16</td>
<td>2.41</td>
</tr>
<tr>
<td>2017</td>
<td>12–18</td>
<td>15</td>
<td>2.21</td>
</tr>
</tbody>
</table>

Note: The price range in RMB/kg refers to purchasing price of stevia leaves which have impurity level lower than 10% and steviol glycoside contents higher than 10%.

Price range and average price of stevia leaves in 2017 are those of stevia leaves in China’s southern provinces such as Jiangsu, Anhui and Jiangxi provinces, etc. Stevia leaves in northern provinces such as Heilongjiang, Gansu provinces, Xinjiang Uygur Autonomous Region and Inner Mongolia Uygur Autonomous Region won’t be finished harvesting by Sep. 2017 when this research is already finished.
Source: CCM

...
4 Stevia sweetener production in China

... 

Table 4.1-2 Output of stevia sweeteners by product grade in China, 2010–2016, tonne

<table>
<thead>
<tr>
<th>Year</th>
<th>Extracted stevia sweeteners</th>
<th>Low purity stevia sweeteners</th>
<th>High purity stevia sweeteners RA95 and above</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1,605</td>
<td>1,623</td>
<td>892</td>
<td>247</td>
</tr>
<tr>
<td>2011</td>
<td>1,857</td>
<td>1,012</td>
<td>690</td>
<td>217</td>
</tr>
<tr>
<td>2012</td>
<td>1,675</td>
<td>1,008</td>
<td>473</td>
<td>149</td>
</tr>
<tr>
<td>2013</td>
<td>2,178</td>
<td>1,079</td>
<td>371</td>
<td>121</td>
</tr>
<tr>
<td>2014</td>
<td>2,405</td>
<td>856</td>
<td>563</td>
<td>160</td>
</tr>
<tr>
<td>2015</td>
<td>2,542</td>
<td>802</td>
<td>566</td>
<td>119</td>
</tr>
<tr>
<td>2016</td>
<td>2,828</td>
<td>797</td>
<td>511</td>
<td>70</td>
</tr>
</tbody>
</table>

Note: Output total=extracted stevia sweetener+low purity stevia sweetener+high purity stevia sweetener

Source: CCM

... 

Figure 4.2.1-1 Annual average market price of stevia sweeteners by product grade in China, 2010–2016

Note: The price of each grade of stevia sweeteners is the average price of all specifications in that grade.
High purity stevia sweeteners here refer specifications from RA80-90, while RA95 and above are not included.

Source: CCM

...
RA95 stevia sweetener cost breakdown in China

The cost of RA95 stevia sweetener production heavily depends on the price of stevia dried leaves, which accounts for about XXX% of the total production cost. In 2016, stevia dried leaf price dropped to USD XXX/t from USD XXX/t in 2014 in China. As a result, the production cost of one tonne of RA95 stevia sweetener reduced by about XXX% in 2016 compared with that in 2014.

Table 4.3-1 RA95 stevia sweetener cost breakdown in China, 2016

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit consumption, t/t</th>
<th>Unit price in 2016, USD/t</th>
<th>Unit cost, USD</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stevia dried leaf</td>
<td>21.07</td>
<td>2,410</td>
<td>50,779</td>
<td>Steviol glycoside contents ≥10%</td>
</tr>
<tr>
<td>Hydrochloric acid</td>
<td>1.376</td>
<td>38.75</td>
<td>53</td>
<td>Contents ≥30%</td>
</tr>
<tr>
<td>Liquid caustic soda</td>
<td>1.206</td>
<td>233.01</td>
<td>281</td>
<td>Contents ≥30%</td>
</tr>
<tr>
<td>Ethanol</td>
<td>0.79</td>
<td>598.59</td>
<td>473</td>
<td>Contents ≥95%</td>
</tr>
<tr>
<td>Slaked lime</td>
<td>0.79</td>
<td>242.67</td>
<td>192</td>
<td>Contents ≥90%</td>
</tr>
<tr>
<td>Ferrous sulfate</td>
<td>0.36</td>
<td>104.86</td>
<td>38</td>
<td>Contents ≥98%</td>
</tr>
<tr>
<td>Water</td>
<td>543.7</td>
<td>0.34</td>
<td>–</td>
<td>1.00 185 544</td>
</tr>
<tr>
<td>Natural gas</td>
<td>3,000 m³</td>
<td>USD0.52/m³</td>
<td>1,560</td>
<td>/</td>
</tr>
<tr>
<td>Electricity</td>
<td>6,500 kWh</td>
<td>USD0.13/kWh</td>
<td>845</td>
<td>/</td>
</tr>
<tr>
<td>Absorption resin</td>
<td>0.16</td>
<td>2,563</td>
<td>410</td>
<td>/</td>
</tr>
<tr>
<td>Ion exchange resin</td>
<td>0.26</td>
<td>973</td>
<td>253</td>
<td>/</td>
</tr>
<tr>
<td>Ion exchange resin</td>
<td>0.26</td>
<td>1,931</td>
<td>502</td>
<td>/</td>
</tr>
<tr>
<td>Others</td>
<td>–</td>
<td>–</td>
<td>2,000</td>
<td>/</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>–</td>
<td>–</td>
<td><strong>57,571</strong></td>
<td>–</td>
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</tbody>
</table>

Note: The cost breakdown is based on a purification stevia sweetener unit with a capacity of 500t/a, adopting resin absorption and separation method.

Source: CCM
# 8 Forecast on stevia sweetener industry in China

Figure 8-1 China's stevia leaf market cycle & forecast to 2022

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<tr>
<td>Planting area</td>
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<tr>
<td>Impurity</td>
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<td>Stock</td>
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Source: CCM

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