2017 China Apple Crop Outlook

SDIC Zhonglu Fruit Juice Company
Zhonglu America Corporation
Michael Choi
1. 2016 Crop Review
2. 2016 Crop Utilization
3. 2017 Crop Forecast
4. Apple Export, Import, Apple Price
2016 Crop Review
2016 China Apple Production
In Major Provinces

2016 China Apple Production:
43,882,000 MT

(Unit: 1,000 MT)
Source: China Ministry of Agriculture

Shaanxi: 11,008
Shandong: 9,781
Henan: 4,386
Shanxi: 4,286
Hebei: 3,656
Liaoning: 2,566
Gansu: 3,601
2016 Apple Production
Estimate vs Final Count

Estimate made in Aug 2016

2016 China Apple Crop Forecast

- Smaller crop in early varieties (Gala) but big in later varieties (Qinguan, Fuji)
- Average acreage increase
- Very tight supply of early varieties for processing

2016 Crop Forecast: 43,800,000 MT
2.8% increase from 2015 crop, 10.8% increase from 5-year average

Official Count by China MOA in Jul 2017

2016 Apple Production: 43,882,000 MT

- Shaanxi, 11,008,25%
- Shandong, 9,781, 22%
- Shanxi, 4,286, 10%
- Henan, 4,386, 10%
- Hebei, 3,656, 8%
- Gansu, 3,601, 8%
- Liaoning, 2,566, 6%
- Others, 4,598, 11%

(Unit: 1,000 MT)  
Source: China Ministry of Agriculture
## Apple Production by Province 2012~2016

<table>
<thead>
<tr>
<th>Province</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>’16:’15 Average</th>
<th>5-Year Average</th>
<th>’16 : 5-yr Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shaanxi</td>
<td>9,651</td>
<td>9,428</td>
<td>9,880</td>
<td>10,373</td>
<td>11,008</td>
<td>6.1%</td>
<td>10,067</td>
<td>9.3%</td>
</tr>
<tr>
<td>Shandong</td>
<td>8,710</td>
<td>9,305</td>
<td>9,297</td>
<td>9,584</td>
<td>9,781</td>
<td>2.1%</td>
<td>9,335</td>
<td>4.8%</td>
</tr>
<tr>
<td>Henan</td>
<td>4,367</td>
<td>4,431</td>
<td>4,417</td>
<td>4,496</td>
<td>4,386</td>
<td>-2.4%</td>
<td>4,520</td>
<td>-0.8%</td>
</tr>
<tr>
<td>Shanxi</td>
<td>3,752</td>
<td>3,962</td>
<td>4,173</td>
<td>4,312</td>
<td>4,286</td>
<td>-0.6%</td>
<td>4,097</td>
<td>4.6%</td>
</tr>
<tr>
<td>Hebei</td>
<td>3,115</td>
<td>3,201</td>
<td>3,457</td>
<td>3,666</td>
<td>3,656</td>
<td>-0.3%</td>
<td>3,420</td>
<td>6.9%</td>
</tr>
<tr>
<td>Gansu</td>
<td>2,488</td>
<td>2,696</td>
<td>2,971</td>
<td>3,286</td>
<td>3,601</td>
<td>9.6%</td>
<td>3,007</td>
<td>19.7%</td>
</tr>
<tr>
<td>Liaoning</td>
<td>2,634</td>
<td>2,752</td>
<td>2,476</td>
<td>2,484</td>
<td>2,566</td>
<td>3.3%</td>
<td>2,582</td>
<td>-0.6%</td>
</tr>
<tr>
<td>Others</td>
<td>3,774</td>
<td>3,908</td>
<td>4,252</td>
<td>4,412</td>
<td>4,598</td>
<td>4.2%</td>
<td>4,091</td>
<td>12.4%</td>
</tr>
<tr>
<td>All China</td>
<td>38,491</td>
<td>39,683</td>
<td>40,923</td>
<td>42,613</td>
<td>43,882</td>
<td>3.0%</td>
<td>41,118</td>
<td>6.7%</td>
</tr>
</tbody>
</table>

(Unit: 1,000 MT) Source: China Ministry of Agriculture
Apple Production, Planted Acreage 2012~2016

(Source: China Ministry of Agriculture)

- Apple Production (1,000 MT): 38,491, 39,683, 40,923, 42,613, 43,882
- Acreage (1,000 Ha): 2,231, 2,272, 2,307, 2,328, 2,324

CAGR: 3.33% for Apple Production, 1.03% for Acreage
China Apple Production (2002-2016)

Average Annual Increase: 1,760K MT

Total Increase: 128.1%, CAGR: 6.07%

(Unit: 1,000 MT)  
Source: China Ministry of Agriculture
Apple Crop by Variety
2012 ~ 2016

(Unit: 1,000 MT) Source: China Ministry of Agriculture
Apple Crop Utilization
CY 2016 Apple Utilization
10-Year Utilization for Apple JC

2016 Production + Import
43,949K MT

- 2,500, 6%
- 3,906, 9%
- 1,500, 3%
- 36,043, 82%

Used for Apple Juice Concentrate

- 2007: 28.0%
- 2008: 18.9%
- 2009: 14.4%
- 2010: 12.1%
- 2011: 12.2%
- 2012: 13.5%
- 2013: 8.9%
- 2014: 7.2%
- 2015: 8.1%
- 2016: 8.9%

Fresh Consumption AJC Processing Other Processing Export

0.0% 5.0% 10.0% 15.0% 20.0% 25.0% 30.0%
2017 Apple Crop Forecast
Apples in Shaanxi Province
Aug 1, 2017

Gala

New Crop Gala Apple

Qinguan
Apples in Shanxi Province
Aug 3, 2017

Gala

Qinguan

Fuji
2017 Apple Crop Forecast
For Major Growing Provinces

- **Shanxi**
  - Drought impact on early variety, but 6% increase

- **Gansu**
  - Hail storm, but new acreage, improved yield: 6% increase

- **Shanxi**
  - Good weather. Drought impact on early variety. 7% increase

- **Henan**
  - Good weather. Drought impact on early variety. 7% increase

- **Liaoning**
  - Severe drought in the south. But new acreage in the north. 5% reduction

- **Hebei**
  - Drought but new acreage and better yield. 1% increase

- **Shandong**
  - Severe drought: 6% reduction

*2017 Crop Forecast: 45,076,000 (2.7% increase from 2016)*
## Apple Production by Province 2015~2016 + 2017 E

<table>
<thead>
<tr>
<th>Provinces</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>’17:'16</th>
<th>5 Yr ('12-'16) Average</th>
<th>’17 : 5-yr Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shaanxi</td>
<td>10,373</td>
<td>11,008</td>
<td>11,779</td>
<td>7%</td>
<td>10,067</td>
<td>17.0%</td>
</tr>
<tr>
<td>Shandong</td>
<td>9,584</td>
<td>9,781</td>
<td>9,194</td>
<td>-6%</td>
<td>9,335</td>
<td>1.5%</td>
</tr>
<tr>
<td>Henan</td>
<td>4,496</td>
<td>4,386</td>
<td>4,693</td>
<td>7.0%</td>
<td>4,520</td>
<td>6.2%</td>
</tr>
<tr>
<td>Shanxi</td>
<td>4,312</td>
<td>4,286</td>
<td>4,543</td>
<td>6%</td>
<td>4,097</td>
<td>10.9%</td>
</tr>
<tr>
<td>Hebei</td>
<td>3,666</td>
<td>3,656</td>
<td>3,693</td>
<td>1%</td>
<td>3,420</td>
<td>8.0%</td>
</tr>
<tr>
<td>Gansu</td>
<td>3,286</td>
<td>3,601</td>
<td>3,817</td>
<td>6%</td>
<td>3,007</td>
<td>26.9%</td>
</tr>
<tr>
<td>Liaoning</td>
<td>2,484</td>
<td>2,566</td>
<td>2,438</td>
<td>-5%</td>
<td>2,582</td>
<td>-5.6%</td>
</tr>
<tr>
<td>Others</td>
<td>4,412</td>
<td>4,598</td>
<td>4,920</td>
<td>7%</td>
<td>4,091</td>
<td>17.1%</td>
</tr>
<tr>
<td>All China</td>
<td>42,613</td>
<td>43,882</td>
<td>45,076</td>
<td>2.7%</td>
<td>41,118</td>
<td>9.6%</td>
</tr>
</tbody>
</table>

(Unit: 1,000 MT)  Source: China Ministry of Agriculture
Apple Export, Import. Wholesale Price
Apple Export by Year
2012~2017

Qty: 1,000 MT
Price/MT

Source: China Customs
2016 Total Apple Export: 1,322,042 MT

- Bangladesh, 181,437, 14%
- India, 147,030, 11%
- Thailand, 142,202, 11%
- Philippines, 133,622, 10%
- Russia, 114,620, 9%
- Vietnam, 110,032, 8%
- Indonesia, 89,900, 7%
- Others, 403,199, 30%

(Unit: MT)  Source: China Customs
Apple Import by Major Country
2016 + 2017 (1-6)

2016 Apple Import
Total Import 67,109 MT
- USA: 27,020, 40%
- NZ: 16,275, 24%
- Chile: 16,275, 24%
- Others: 4,002, 6%

2017 (1-6) Apple Import
Total Import 44,286 MT
- USA: 17,628, 40%
- NZ: 16,754, 38%
- Chile: 9,116, 20%
- Others: 787, 2%

(Unit: MT)  Source: China Customs
Fuji Apple Wholesale Price Trend
2014~2017

Prices for 80mm (D) Fuji Apple
(CNY/KG)

Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun

2014/15 2015/16 2016/17
China Apple Industry Overview

- Apple Acreage showed decrease in 2016 first time in 20 years: Decrease mostly in some major growing areas but increase in other areas such as Ningxia, Sichuan, Xinjiang, etc. provinces.
- However, apple production has been increasing due to improvement in yield by adopting new technologies and better management.
- Apple production growth has slowed down in the past 4 years to 3%+/-
- Fuji variety continues to be popular taking over 70% of total production.
- Fresh + processing apple prices have stayed lower in the past 2 years.
- Fresh apple export volume increased to over 1.3 MM MT in 2016 and stayed strong into 2017 although price has been dropping. However, Apple import volume has been minimal.
- More production in Organic and SOD apples
China Apple Industry Trend - Overview

• Apple acreage showed decrease first time in 2016: Decrease mostly in major growing areas as old trees were cut, but still increase in other areas like Ningxia, Xinjiang, Sichuan etc. for the last 3-5 years.
• Apple production growth has slowed down in the past several years: 3%+/-
• Fuji variety continues to be popular: >70%
• Fresh apple price has been staying low in the past 2 years, so has processing apple prices.
• Fresh Apple Export increased to over 1.3MM MT and stays strong in 2017. However, fresh apple import is minimal <100K MT
• More production in organic and SOD apples

Thank you!

from

SDIC Zhonglu Fruit Juice Co., Ltd.
Zhonglu America Corporation
2017 China
Apple Juice Concentrate

SDIC Zhonglu Fruit Juice Company
Zhonglu America Corporation
Michael Choi
2016 AJC Production by Province

2016/2017 Production: 558,000 MT

Shaanxi, 209,180, 38%
Shanxi, 124,833, 22%
Shandong, 73,104, 13%
Gansu, 33,127, 6%
Ningxia, 32,875, 6%
Liaoning, 32,537, 6%
Henan, 22,902, 4%
Others, 29,442, 5%

(Source: China Chamber of Commerce - AJC)
2013/4~2016/7 AJC Production by Major Provinces

(Source: China Chamber of Commerce - AJC)
CY 2016 Apple Utilization
10-Year Utilization for Apple JC

2016 Production + Import
43,949K MT

- 36,043, 82%
- 3,906, 9%
- 2,500, 6%
- 1,500, 3%

Used for Apple Juice Concentrate

- 2016: 8.9%
- 2015: 8.1%
- 2014: 7.2%
- 2013: 8.9%
- 2012: 13.5%
- 2011: 12.2%
- 2010: 12.1%
- 2009: 14.4%
- 2008: 18.9%
- 2007: 28.0%

Fresh Consumption [28.0%]
AJC Processing [18.9%]
Other Processing [14.4%]
Export [13.5%]

Aple JC Export
2005 - 2017 (1-6)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>144,455</td>
<td>127,803</td>
<td>13.0%</td>
<td>256,883</td>
<td>239,840</td>
<td>7.1%</td>
</tr>
<tr>
<td>Canada</td>
<td>15,797</td>
<td>14,982</td>
<td>5.4%</td>
<td>24,262</td>
<td>23,131</td>
<td>4.9%</td>
</tr>
<tr>
<td>Japan</td>
<td>23,333</td>
<td>28,786</td>
<td>-18.9%</td>
<td>49,237</td>
<td>60,881</td>
<td>-19.1%</td>
</tr>
<tr>
<td>Australia</td>
<td>12,679</td>
<td>11,852</td>
<td>7.0%</td>
<td>23,814</td>
<td>25,400</td>
<td>-6.2%</td>
</tr>
<tr>
<td>Russia</td>
<td>24,603</td>
<td>24,389</td>
<td>0.9%</td>
<td>50,700</td>
<td>35,925</td>
<td>41.1%</td>
</tr>
<tr>
<td>Ukraine</td>
<td>198</td>
<td>154</td>
<td>28.6%</td>
<td>242</td>
<td>198</td>
<td>22.2%</td>
</tr>
<tr>
<td>Germany</td>
<td>4,189</td>
<td>3,362</td>
<td>24.6%</td>
<td>7,121</td>
<td>16,664</td>
<td>-57.3%</td>
</tr>
<tr>
<td>Holland</td>
<td>2,607</td>
<td>2,838</td>
<td>-8.1%</td>
<td>3,290</td>
<td>4,218</td>
<td>-22.0%</td>
</tr>
<tr>
<td>S. Africa</td>
<td>17,869</td>
<td>15,809</td>
<td>13.0%</td>
<td>37,957</td>
<td>16,086</td>
<td>136.0%</td>
</tr>
<tr>
<td>Others</td>
<td>29,238</td>
<td>28,502</td>
<td>2.6%</td>
<td>53,045</td>
<td>51,486</td>
<td>3.0%</td>
</tr>
<tr>
<td>Total</td>
<td>274,969</td>
<td>258,477</td>
<td>6.4%</td>
<td>506,551</td>
<td>473,829</td>
<td>6.9%</td>
</tr>
</tbody>
</table>

(Unit: MT)  Source: China Customs
### Apple JC Export: Volume & Unit Price 2003 ~ 2017

#### Supply < Demand
- **Qty**: 1,000 MT
- **Price**: $/MT

#### Big inventory
- Price fell

#### High AJC cost
- High price

#### Competition from Europe
- Qty, Price Increase

**Source:** China Ministry of Agriculture

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<table>
<thead>
<tr>
<th>Year</th>
<th>Qty (1,000 MT)</th>
<th>Price ($/MT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>418</td>
<td>$608</td>
</tr>
<tr>
<td>2004</td>
<td>487</td>
<td>$668</td>
</tr>
<tr>
<td>2005</td>
<td>651</td>
<td>$707</td>
</tr>
<tr>
<td>2006</td>
<td>674</td>
<td>$884</td>
</tr>
<tr>
<td>2007</td>
<td>1,043</td>
<td>$1,194</td>
</tr>
<tr>
<td>2008</td>
<td>693</td>
<td>$1,630</td>
</tr>
<tr>
<td>2009</td>
<td>796</td>
<td>$814</td>
</tr>
<tr>
<td>2010</td>
<td>784</td>
<td>$939</td>
</tr>
<tr>
<td>2011</td>
<td>609</td>
<td>$1,755</td>
</tr>
<tr>
<td>2012</td>
<td>587</td>
<td>$1,922</td>
</tr>
<tr>
<td>2013</td>
<td>598</td>
<td>$1,502</td>
</tr>
<tr>
<td>2014</td>
<td>456</td>
<td>$1,389</td>
</tr>
<tr>
<td>2015</td>
<td>474</td>
<td>$1,182</td>
</tr>
<tr>
<td>2016</td>
<td>507</td>
<td>$1,077</td>
</tr>
<tr>
<td>2017 (1-6)</td>
<td>275</td>
<td>$991</td>
</tr>
</tbody>
</table>
Processing Apple Price Trend (2013~2016)
In Western Provinces

(Unit: CNY/MT)
Apple JC Production  
Cost Increasing, New Challenges

Chinese Yuan vs US$ - Appreciation

Other Cost Increasing Factors

- Stricter Environmental Protection Policy for cleaner water, air, soil: AJC plants needed to upgrade waste water recycling equipment, improve waste treatment system >> forced some small plants to close, increased AJC production cost with higher cost of energy, packaging material, coal, etc.
- Interest rates rising
- Ocean freight fluctuating to higher level
China Apple Industry Trend - Overview

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