The China Malting Barley Market
Current and future Trends

Joe Fung
Supertime Development Limited
Hong Kong, PR China

Melbourne - 27 July 2010
1.3 billion consumers in this China Market
My presentation is composed of 3 parts:

- The Brewing Industry in China
- The Malting Industry in China
- The Malting Barley Market in China
I. The Brewing Industry in China
   I. Beer production growth
      ✷ Beer production and consumption in different areas
      ✷ Beer market share
      ✷ Brewing industry development trend

II. The Malting Industry in China
    ✷ Malt Demand in different areas
    ✷ Malt quality
    ✷ Comparison of large and middle sizes of malt houses
    ✷ Malting industry development trend
III. The Malting Barley Market in China

- Barley imports in the recent years
- Compare the domestic and imported barley
- Barley import origins
- Domestic barley development
Part I

The Brewing Industry in China
China Beer Production (10,000 Kilolitre) 2005 -2009

2004—2009 China beer production
2009, National Bureau of Statistics released the national beer production number was 42,364,000 KL, (Increase of 7.1% from 2008 (adjusted)). Industry statistics beer production was 40,354,000 KL, an 4.7% higher than previous year, a growth for eight consecutive years. AVERAGED figure of beer production is 41,359,000 KL. China ranks number 1 in the world of beer production. Per capita beer consumption of 30.2L, (Increase of 1.2L of 2008).
Beer Output Growth 2009

Growth over 10% in 2009
Growth over 20% in 2009
5 years projection of beer production and growth rate

Average 3.1% growth

Extrapolating from the beer output forecast and the malt to beer at a 1 to 14.5 ratio

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Beer Production (10kt)</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>3,189</td>
<td>9.9%</td>
</tr>
<tr>
<td>2006</td>
<td>3,515</td>
<td>10.2%</td>
</tr>
<tr>
<td>2007</td>
<td>3,931</td>
<td>10.7%</td>
</tr>
<tr>
<td>2008</td>
<td>4,103</td>
<td>9.7%</td>
</tr>
<tr>
<td>2009</td>
<td>4,236</td>
<td>8.8%</td>
</tr>
<tr>
<td>2010Est</td>
<td>4,448</td>
<td>6.0%</td>
</tr>
<tr>
<td>2011Est</td>
<td>4,671</td>
<td>5.0%</td>
</tr>
<tr>
<td>2012Est</td>
<td>4,904</td>
<td>5.0%</td>
</tr>
<tr>
<td>2013Est</td>
<td>5,149</td>
<td>5.0%</td>
</tr>
<tr>
<td>2014Est</td>
<td>5,407</td>
<td>5.0%</td>
</tr>
</tbody>
</table>
The Top 8 China breweries production in 2009

1. China Resource Brewery (SAB) 8,398,450 KL (19.82%)
2. Tsingtao Brewery 5,903,478 KL (13.94%)
3. Yanjing Brewery 4,672,479 KL (11.03%)
4. inBev Brewery 3,537,453 KL (8.35%)
5. Hunan Gold Star Brewery 1,908,559 KL (4.51%)
6. Chongqing Brewery 1,176,689 KL (2.78%)
7. Zhujiang Brewery 1,137,689 KL (2.69%)
8. Kingway Brewery 821,502 KL (1.94%)
The 10 leading Provinces in Beer Production

Top 10 accounts for 65% of the total - (275.01 mil hl).

**2009**

- **(1)** 50,775 (11.99%)  
- **(2)** 38,206 (9.02%)  
- **(3)** 25,036 (5.91%)  
- **(4)** 24,686 (5.83%)  
- **(5)** 12,061 (5.1%)  
- **(6)** 10,516 (2.5%)  
- **(7)** 8,452 (2.0%)  
- **(8)** 6,010 (1.4%)  
- **(9)** 5,780 (1.3%)  
- **(10)** 1,613 (0.4%)

All these top 10 provinces are in the eastern part of China.

Total: Estimated 423.64 in 2009 (mil. HL)
Massive urbanization

In 2006, the urbanization rate was 43.9% and could reach 70% in 2015.
Massive urbanization associated with higher income and lifestyle changes, significantly increases the potential for a consumer to become a beer drinker or a drinker to consume more.

Source: Population Division of the Department of Economic and Social Affairs of the United Nations
## Beer Market Share

<table>
<thead>
<tr>
<th>Segment</th>
<th>Popular</th>
<th>Near-Prem.</th>
<th>Prem.</th>
<th>5-P%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of Industry</td>
<td>93.4%</td>
<td>5.0%</td>
<td>1.3%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Segment Trend</td>
<td>+5.1%</td>
<td>+2.1%</td>
<td>+9.6%</td>
<td>-1.6%</td>
</tr>
<tr>
<td>Barrels (mm Bbls)</td>
<td>182.77</td>
<td>9.7</td>
<td>2.6</td>
<td>0.6</td>
</tr>
</tbody>
</table>

**Others**

<table>
<thead>
<tr>
<th>Others</th>
<th>31.0%</th>
<th>20.1%</th>
<th>12.5%</th>
</tr>
</thead>
</table>

Source: Anheuser-Busch International (Wuhan) Brewery

### Segment Breakdown

- **LION GROUP 5.6% (10.2)**
  - Yanjing Brand 4.2% (7.8)
  - Tsingtao 10.5% (19.1)
- **CREB 7% (12.8)**
  - Yanjing 9.1% (16.7)
  - Tsingtao Owned 9.7% (17.7)
- **Heineken 65.0% (0.4)**
  - Others 10.2% (0.07)
  - Budweiser 49.9% (1.3)
  - Carlsberg 6.3% (0.2)
  - Tiger 4.4% (0.1)
  - Suntory Gold 0.82% (0.08)
  - Suntory 0.8% (1.53)
  - Pabst 9.3% (0.9)
  - San Miguel (GZ) 4.2% (0.4)
  - Sunmi 6.9% (0.18)
  - Tsingtao 12.9% (0.93)
  - Zhuijiang GD 9.8% (0.95)
  - Zhuijiang Owned 0.3% (0.3)
  - Kingway 13.4% (1.3)
- **Bacchus 11.5% (0.07)**
- **Others 64.2% (117.3)**

Note: Percentage values in parentheses.
Confucius said...

Beer drinking comrades are the good comrades!
Part 2

The Malting Industry in China
Major Commercial Malting Companies 2010
Present Main Malting Area in China

Most of the large malting plants are in the coastal cities.
## China Malting capacity

<table>
<thead>
<tr>
<th>Company</th>
<th>Capacity 2008</th>
<th>Expansion Plans 2009</th>
<th>Total Capacity 2010</th>
<th>Market %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supertime Malting</td>
<td>850,000</td>
<td>192,000</td>
<td>1,042,000</td>
<td>19.47%</td>
</tr>
<tr>
<td>Cofco Malting</td>
<td>680,000</td>
<td>80,000</td>
<td>760,000</td>
<td>14.20%</td>
</tr>
<tr>
<td>Longken Malting</td>
<td>300,000</td>
<td>-</td>
<td>300,000</td>
<td>5.61%</td>
</tr>
<tr>
<td>Qingdao Brewery</td>
<td>250,000</td>
<td>90,000</td>
<td>340,000</td>
<td>6.35%</td>
</tr>
<tr>
<td>Chunlei Malting</td>
<td>200,000</td>
<td>-</td>
<td>200,000</td>
<td>3.74%</td>
</tr>
<tr>
<td>Dalian Xingze Malting</td>
<td>180,000</td>
<td>100,000</td>
<td>280,000</td>
<td>5.23%</td>
</tr>
<tr>
<td>Muogao Malting</td>
<td>170,000</td>
<td>-</td>
<td>170,000</td>
<td>3.18%</td>
</tr>
<tr>
<td>Chende Sihai Malting</td>
<td>160,000</td>
<td>100,000</td>
<td>260,000</td>
<td>4.86%</td>
</tr>
<tr>
<td>Huanghe Malting</td>
<td>150,000</td>
<td>-</td>
<td>150,000</td>
<td>2.80%</td>
</tr>
<tr>
<td>Yanjing Brewery</td>
<td>120,000</td>
<td>50,000</td>
<td>170,000</td>
<td>3.18%</td>
</tr>
<tr>
<td>Beidahuang Malting</td>
<td>100,000</td>
<td>-</td>
<td>100,000</td>
<td>1.87%</td>
</tr>
<tr>
<td>Ningbo,Dongnanxi Malting</td>
<td>80,000</td>
<td>-</td>
<td>80,000</td>
<td>1.49%</td>
</tr>
<tr>
<td>Others</td>
<td>1,360,000</td>
<td>140,000</td>
<td>1,500,000</td>
<td>28.03%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,600,000</strong></td>
<td><strong>752,000</strong></td>
<td><strong>5,352,000</strong></td>
<td><strong>100.00%</strong></td>
</tr>
</tbody>
</table>

Source: Cofco Malting Dc. 30, 2009 (revised June 2010 by SDL)
Guangzhou Malting Company Limited

- The first commercial malting company in Southern China
- Annual production: 300,000MT
Ningbo Malting Company Limited

- **Annual production:** 340,000MT
- **Commercial maltster largest in Eastern China. (South of Shanghai)**
Large Scale Malt House

Round Saladin germination compartment
Figure 2. China: Growth in Malting Barley Demand versus Beer Production

Sources: China National Bureau of Statistics, Agriculture and Agri-food Canada. 
†: Agriculture and Agri-food Canada forecast.
Projected Malt requirement

Unit: 10K mt

- Total malt requirement
- Commercial malt requirement

Values for years 2005 to 2014:
- 2005: 313
- 2006: 293
- 2007: 281
- 2008: 283
- 2009 Est.: 295
- 2010 Est.: 305
- 2011 Est.: 316
- 2012 Est.: 326
- 2013 Est.: 337
- 2014 Est.: 347

GDH YST
SUPERTIME DEVELOPMENT LIMITED
Projected total barley requirement

Barley requirement in China
## Malt Quality depends on the breweries

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<th>Prem.</th>
<th>S-P/I</th>
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<td>2.6</td>
<td>0.6</td>
</tr>
</tbody>
</table>

**Others 64.2% (117.3)**

- **Zhujiang Brand** 2.5% (4.6)
- **Zhujiang Total** 2.8% (5.1)
- **LION GROUP** 5.6% (10.2)
- **CREB** 7% (12.8)
- **Yanjing** 9.1% (16.7)
- **Yanjing Owned** 4.9% (8.9)
- **Tsingtao** 10.5% (19.1)
- **Tsingtao Owned** 9.7% (17.7)

Source: Anheuser-Busch International (Wuhan) Brewery
Remarks: Distribution of Supertime Malting plants
MALT DEMAND WILL INCREASE

- Chinese government’s funding for malting barley breeding
- To minimize grain consumption for production of rice spirits
- The younger population
- The economic growth
- The present low per capita beer consumption
- Beer consumption will increase
- Malt demand will continue to grow

There were a few newly built advanced and large scale commercial malting plants. There will be more competition in malting industry in China.
What we see is happening in China for malting

- Brewing industry development in China is very fast. Most of the international brewery groups have already joined the growth. And foreign breweries are participating in the development of the brewing industry in China.

- Chinese people will consume more beer than other alcohol drink for healthy consideration.

- Chinese government will promote beer production because beer uses less cereal than other alcoholic drink.

- Malting industry will keep using large percentage of imported barley due to the return for the barley growers are small in comparison.
Part 3

The Malting Barley Market in China
I. China's grain production

Wheat: a predominant

China is the largest producer of wheat in the world: producing 100 million mt +/- per year or 17% of the World production.

Wheat is the third most important cereal in China, with 23 million hectares or 27% -30% of the land used.

Rice: a very important

196 million mt +/- a year, more than 29 million ha of land used.

Rice is the first cereal in China, about 40% of China's grain production.
Corn: becoming more important

- number one producing country in the world;
  163 million mt +/- a year,
  or 20% of World production

corn is the second largest cereal in China
  34% +/- of Chinese grain production
  34.4% +/- of the land used

*Sources:  a) National Information Centre for Cereal and Oil;
           b) National Center for Research Development;
           c) Analysis of the Beijing Office
           d) French Cereal Beijing office
Chinese Grain Map
Malting barley is very small in production

Demand for malting barley China: 3.5 million mt
\( \frac{3.5}{1.245} = 2.81 \) mt of malt

Selection of local malting barley in China \( \approx 1.5 \) million mt

China Barley Import about 1.8 to 2 million mt, including about 850,000 mt from Australia in 2009

There are 200,000 to 500,000 mt of wheat malt using annually...depends on the other grain price
Different areas of barley production in China in 2009

- **Xinjiang**: 240,000
- **Yunnan**: 150,000
- **Jiangsu**: 650,000
- **Inner Mongolia**: 800,000

Other regions with production include: Heilongjiang, Jilin, Hebei, Liaoning, Henan, Shandong, Jiangsu, Hubei, Sichuan, Zhejiang, Hainan Island.
Farmland for malting barley in 2000-2009

Farmland (10,000 Mu)

Reduction barley farming in Inner Mongolia ??

acre = 6.07 mu

866,667 hectares

Note: Price unsecured area recovered by wheat, corn ....1 Ha = 15 Mu
# Imports of malting barley in China

<table>
<thead>
<tr>
<th>Year</th>
<th>Australia</th>
<th>Canada</th>
<th>France</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>1 292</td>
<td>639</td>
<td>367</td>
</tr>
<tr>
<td>2002</td>
<td>1 512</td>
<td>233</td>
<td>162</td>
</tr>
<tr>
<td>2003</td>
<td>632</td>
<td>67</td>
<td>664</td>
</tr>
<tr>
<td>2004</td>
<td>1 273</td>
<td>431</td>
<td>0</td>
</tr>
<tr>
<td>2005</td>
<td>1 176</td>
<td>705</td>
<td>297</td>
</tr>
<tr>
<td>2006</td>
<td>1 673</td>
<td>460</td>
<td>15</td>
</tr>
<tr>
<td>2007</td>
<td>492</td>
<td>353</td>
<td>91</td>
</tr>
<tr>
<td>2008</td>
<td>733</td>
<td>219</td>
<td>81</td>
</tr>
<tr>
<td>2009</td>
<td>847</td>
<td>490</td>
<td>395</td>
</tr>
</tbody>
</table>

*(in Million mt.)*

**Note:** Calendar year: January to December
Origins of barley used in China

(10K mt.)
10 Years’ Average by importing Country

- Australia: 1,060K
- Canada: 400K
- France: 250K
challenges of the Chinese market
A continent country

- China 9,572,900 sq km
- Australia 7,659,861 sq km
- 1.25 times that of Australia, and larger than the E. U.
- Second largest country in the world of its surface area.
- First country in the world of
  1. The longest borders.
  2. Mountainous.
  3. Desert.
Three major economic regions of China

- 10 provinces
- 71.8% of the land in China
- 28.5% of the population
- 80% of ethnic minority

Central / Central, rapidly developing

Western Region / Western, still underdeveloped

Legend
- Eastern China
- Central China
- Western China
Economic growth and demand on agriculture Products
Strong economic growth

For 30 years, annual growth of 9% since 2003 above 10%, and +8% in 2008/2009
Chinese GDP USD bn = 2700 = 4th place worldwide
Urbanization acceleration, which modifies the demand for agricultural products
Future supplies threatened, because of shrinking natural resources

- Given the trends in consumption, will supply be able to meet the demand?

In the medium and long term, the supply situation for agricultural products in China is not optimistic. This is mainly due to constraints related to the natural environment and limited resources.
B. Scarcity of freshwater resources

The shortage of water:

Environmental Problem in North
i.e. in the North West, water is absent in many places or low precipitation (desert).

Problem infrastructure in South West
If there is water, it is not usable due to lack of channel or well.

Problem notability in developed regions
Poor water quality: the deterioration of water quality is unable to drink or for irrigation

Water resources per capita = 2100 m³ (world average = 8000 m³) or ¼ of the world average.
Growth = Pollution =?!  
It should be added: the biomass fuel

According to various official sources, the environmental costs are of the order of 5-10% of GDP per year!

50% of ground water is polluted, 62% of rivers unsuitable for use!

16 of the 20 cities most polluted (air) in the world are Chinese!

3.5 million km² subject to erosion, 90,000 km² are threatened by desertification?
It should be added: the biomass fuel

"Plan for Development of Renewable Energy Medium-and long-term"

In 2010, 2 million MT of petroleum fuels will be replaced by biofuel in 2020, this figure will increase to 10 million by then (1T ethanol: corn ≈ 3.2T). Under the Chinese plan: the development of this sector will follow three steps:

1. Industrialization of the technology during the 11th Five Year Plan;
2. The sector will gain in magnitude during the 12th Five Year Plan;
3. Growth of this sector after 2015, bringing the proportion of biomass fuel at about 15% of fuel used by all motor vehicles in 2020.
Great challenges ... medium to long terms
In China

Barley is not the most important thing in the Chinese officials mind to develop.
The market reality is in hardship and crisis

I. Growers are seriously hurt by the low grain prices. They have lost their enthusiasm and confidence in growing barley;

II. For the medium brewing enterprises which using domestic barley malt, their operation are in a serious state, and some almost desperate because of substantial losses, while seeking to sale their own business

III. As a result of different expectations of farmers and malt barley users. The local malting barley has been marginalized seriously in the recent years. Should this trend continuous, barley supply will be in serious shortage in China.
2. How to Forecast of the future barley market

*Barley and malt production are both small industry in China*, but its market, affected by so many factors, many of which cannot be controlled;

weather factors
change of other grain production
Sea freight
currency exchange rate

Very Difficult to predict
1. Import barley in 2010 - Increase in quantity, Decrease in quality.

- Large quantities of Australian lower grade barley and FAQ barley entered to the Chinese market in the past 12 months.
- In 2010, the quantity of the total barley import may exceed 2.5 million mt., (including this low grade stuffs.)
2. Import prices will rise slowly barley
(This may change - look what is happening in the market past few weeks.)

1. Current barley market situation, we have seem the low and the price should be on the way going back up.

2. Reduction in malt barley production will lead to a smaller supply of local malt, some malt companies will continue to stop production and even close down, or be sold.

3. Breweries, malt companies will be forced to slightly raise the purchase price target, but will **reduce the amount of malt use**, and **more stringent in the quality demand**. It will make the malting companies more difficult to get a proper return in making malt, it is difficult for others to enter the malt market.
4. Malt market will be more clearly differentiated into two blocks, mainstream and non-mainstream. The mainstream market that is large-scale manufacturing enterprises in the use of imported barley in malt production, non-mainstream market is the many to the use of domestic barley-based malt production. The mainstream maltsters will be able to maintain high market share in low-profit return. The profitability will depend on efficiency...

We have been running the **Six Sigma programs** (an efficiency training) in the past 3–4 years. We have more than 18 black belts in our 9 plants.
3. Several suggestions to the brewing and malting industry

- We should look at the overall situation and future of our raw materials supply, in particular, to think rationally for the brewing company’s future.
- Should be rational and objective estimation of current and future of barley malt supply and demand fundamentals.
- The brewing industry should have a vision of to establish a stable raw material production base of barley, including the establishment of mutually beneficial market procurement mechanism and quality control mechanisms, and to establish the concept of appropriate nurturing agriculture.
Let’s see any one of your growers want this job in China…

I don’t think so!
Harvesting by hands
Weighting and selling
Quality inspection
Flat bed storage
Unloading of barley
Other type of flat bed storage
All barley variety needs a replacement over time, We need research and development to push us forward
Conclusion

- China will remain to be the largest barley importing country for the foreseeable future.
- China will import different grade and specs of barley.
- These lower grade of barley will likely replace most if not all of the winter barley in China western coastal.
- Demand for malt 1 will likely be reduced.
- Until the demand in China’s consumers changing to higher end brewing products. lower grade barley will have their market in China.
- Chinese farmers are not competitive enough to grow barley due to limited resource.
- Eventually, the market will find it’s balance.
Thank you!

This Presentation was jointly prepared by
Technical Support Group
Supertime development Limited