



American Spice Trade Association
2011 Annual Meeting & Exhibits
Scottsdale, Arizona



Market report Chinese Garlic

Presented by Raf Nonneman,
China Spice Services Ltd
on April 3, 2011



China Spice Services

food safe AD & FD vegetables and spices from source country



Overview

- General information Chinese Garlic.
- Production flow chinese Garlic.
- Supply & demand and market review 2010
- Outlook new crop 2011.
- Quality concerns.
- Conclusions.

General information Chinese garlic

- China is worlds largest fresh garlic producer with a yearly normal estimated total crop size of **5.000.000 MT** fresh garlic.
- In a normal crop year :
 - Approx 75% of the fresh crop goes into the fresh market both for domestic as well as exports worldwide.
 - Approx 10% goes for seeds processing
 - Approx 5% goes for frozen and salted applications.
 - Approx 10% goes for dehydration into flakes.
- The dehydration factor from fresh into dehydrated garlic is 4:1.

General Information Chinese Garlic

- The main garlic growing areas are Shandong (Linyi, Jinxiang) , Jiangsu , Henan and Hebei.
- Traditionally, Linyi processors make Cat. A flakes from premium fresh garlic bulbs. Jinxiang and Linqun processors make Cat. B and C flakes.
- Approx. 1500 small to medium size dehydrators can process approx. 50000 - 150000 MT per year.
- Approx 20 larger factories can produce approx 30000 - 50000 MT dehydrated flakes.
- Farm to Fork is possible on a limited scale and subject to an inspection scheme.

CHINA : Shandong map



Approx 1500 small traditional dehydrators



Linyi dehydration plants



Farm to Fork contract farming



Production flow Chinese Garlic

- Garlic seeds are planted in October.
- Garlic bulbs get to maturity in May/June.
- Dehydration starts after the fresh crop is harvested end of June and goes on till end of September for the premium grade A flakes.
- Milling takes place from September till June. Traditionally, there is no milling in July and August due to the hot and humid weather conditions.
- Traditionally, the carry over fresh garlic stocks sitting in warehouses comes into the market for more dehydration from November onwards till April/May. These qualities can be categorized as B and C flakes.
- Dehydrated garlic has a good shelf life and can be stored 3 to 4 years. However the colour will get darker and moulds increase due to poor warehousing conditions.

Field survey in April 2011



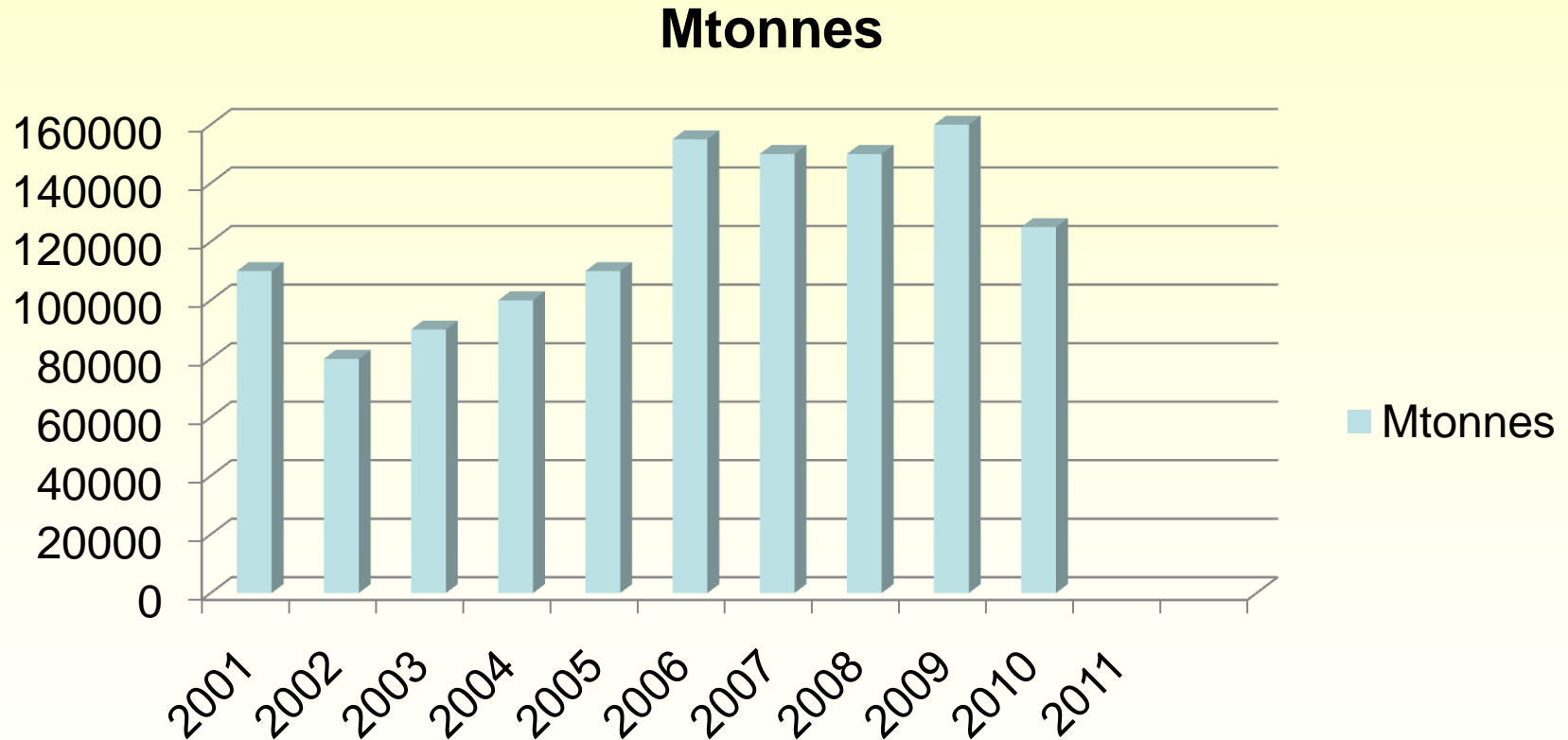
Fresh garlic dehydrated, hand sorted and milled



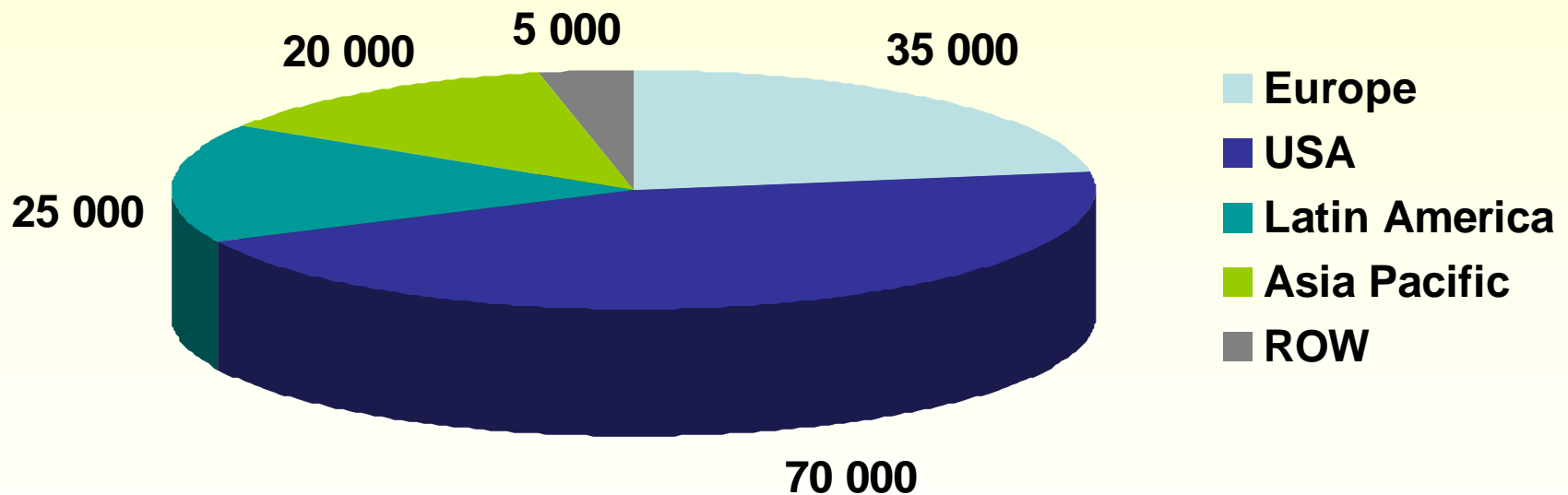
Carry over stocks fresh garlic dehydrated/sun dried in April 2008



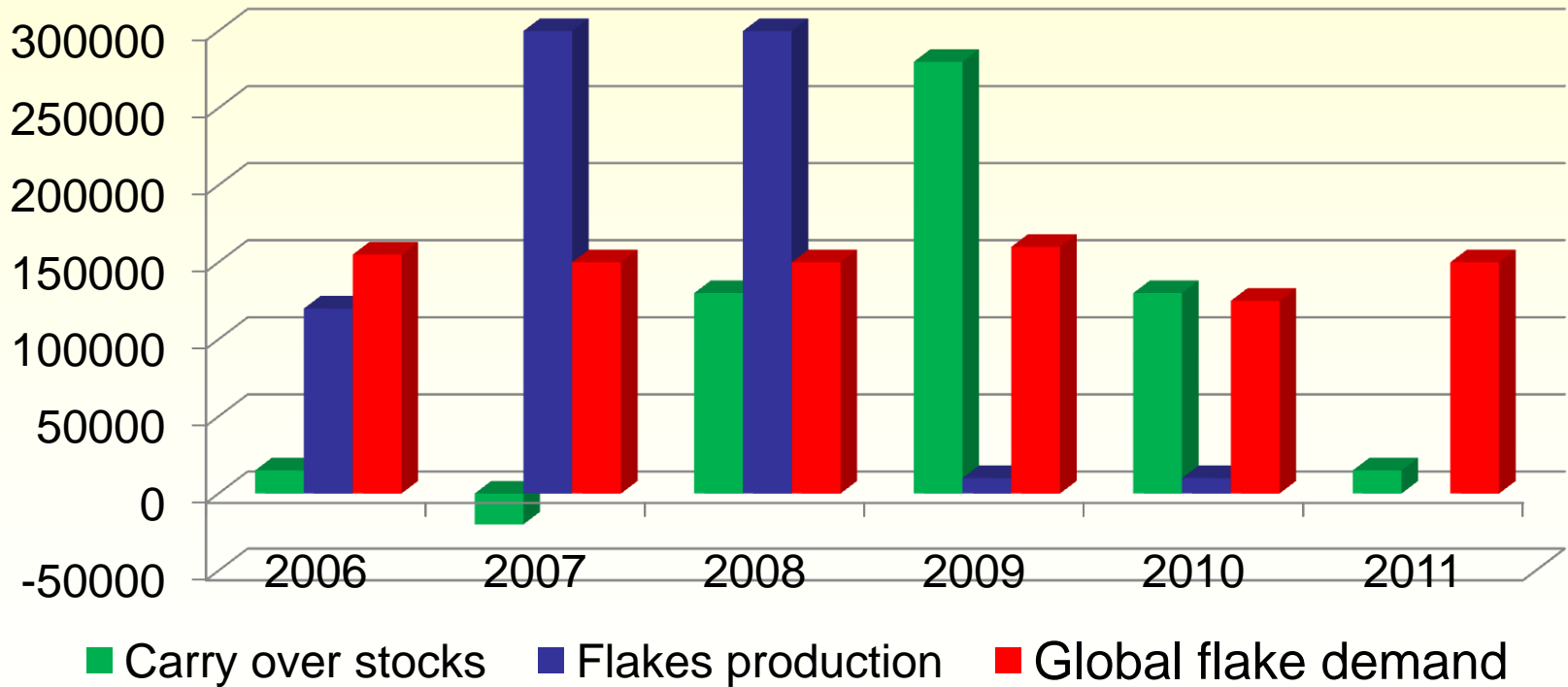
Total exports Dehydrated garlic from China last 10 years



The total estimated yearly global demand of dehydrated garlic over the last 5 years is approx. 150.000 MT



Carry over stock – Garlic dehydration - Global demand Mtonnes

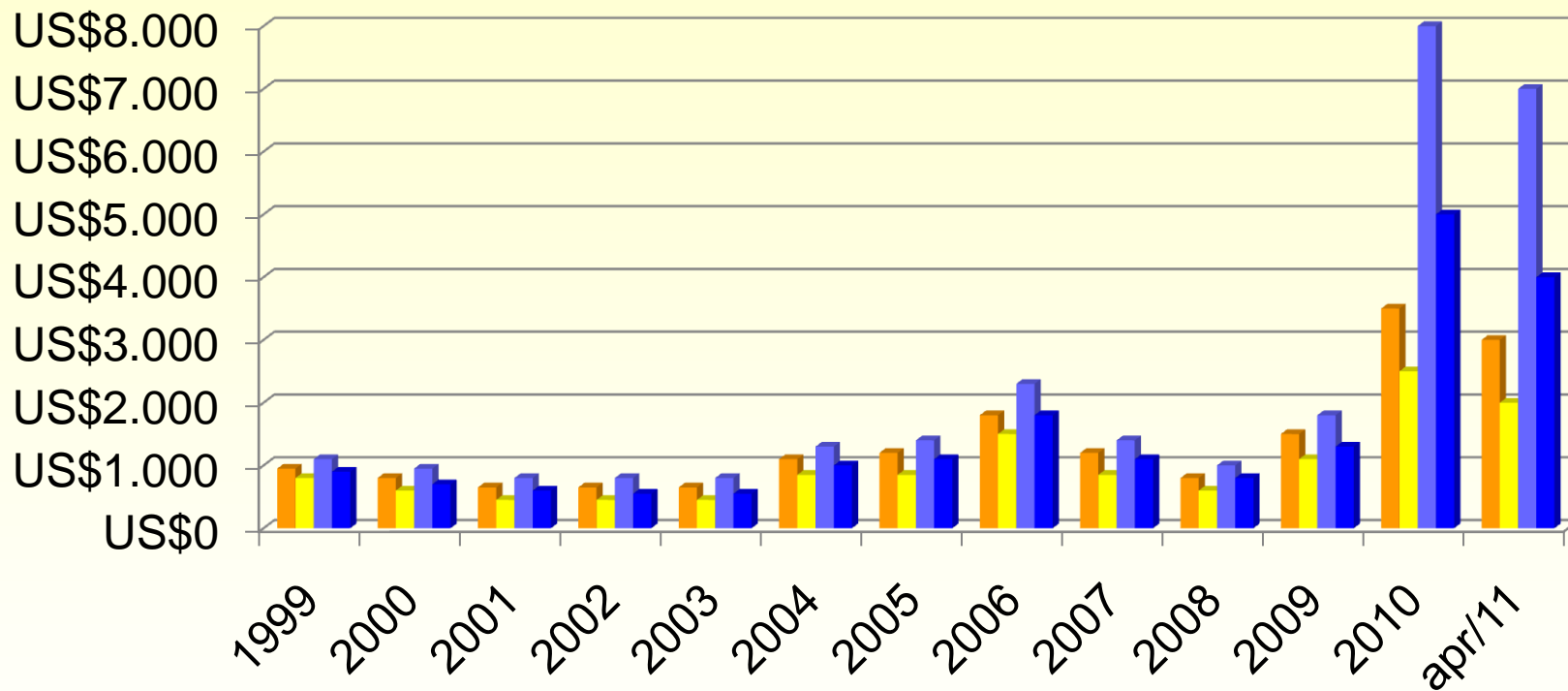


Price developments of the last years.

- **2006/2007:** Prices in 2006 were high as a result of an increased demand for garlic from USA. The Californian garlic processing was reduced and an increased demand for Chinese garlic resulted in Chinese processors increasing its dehydration capacity.
- **2007/2008:** Fresh garlic prices were at historical low levels as a result of surplus fresh garlic available for dehydration. Massive dehydration including sun drying of garlic flakes. Approx 600000 MT dehydrated flakes were processed in 2007/2008. Mainly B and C flakes. This resulted in a price crash in 2008 reaching historical low levels.
- **2009/2010:** The fresh garlic crop was short 40% in June 2009 and 2010. Fresh garlic prices went up high. There was hardly any dehydration in 2009/2010 and we estimate that only 20000 - 25000 MT A flakes were processed in 2009/2010. The huge carry over stocks of 2007/2008 were used to fill the gap between supply and demand.

Price development over the last 10 years

USD/mtonne



Garlic granules Standard
Garlic granules premium

Garlic powder standard
Garlic powder premium

Fact findings of the Crop 2010

- Crop harvested in June 2010 was again 40% short and fresh garlic prices reached all time high price levels. Fresh garlic prices ranged between 5-6 RMB/0,5kg or 35000-45000RMB/mt for dehydrated garlic.
- Processing costs from fresh to dehydrated, hand selected and milled into granules/powder = approx 5000 - 10000 RMB/mt.
- Total cost for 2010 crop dehydrated garlic flake/granules/powder premium quality was in 2010 ranging between 40000 - 55000 RMB or 6150-8400 USD/MT.
- We noticed sales were made above 8500USD/mt for top grade material.
- Old crop carry over stocks dehydrated garlic from 2007/2008 were sold at discounted prices ranging between 2000-4000USD/mt

Current situation for Chinese garlic today April 2011

- Good quality dehydrated garlic in China is today very scarce and offered in small lots at high prices. There won't be any carry over stock by the time new crop enters. Premium flakes are sold locally at 35000RMB/mtonne
- There is little fresh garlic in warehouses and this will be sold by June 2011 when new crop starts. Fresh garlic prices are today still sold in the local market at 10rmb/kg
- There is approx 20000-30000mtonnes standard flakes B and C quality from left over stocks of 2007/2008. These flakes are yellow/dark brown with high moisture and high micro. Some processors redry/roasting it in an attempt to reduce micro. This carry over stock will be used for blending with new crop garlic flakes. This quality is now offered at discounted prices in the range of 10000-20000RMB/mtonne or 1500-3000USD/mt.
- We made a market survey in October 2010 and reported an increased acreage planting. As a result we noticed we noticed discounted prices of 15-20% against August 2010.
- After Chinese New year January 2011, we observed a drought period which changed the sentiment again into a firmer trend.
- Our crop survey in March 2011 indicates a normal growing pattern and we observe again a weaker sentiment.

Quality concerns.

- YTD April 2011 approx 20000-30000 MT flakes are available and in hands of exporters and speculators.
- Most of the available flakes are very dark brown flakes and many are **by-product of the by-product after hand selection.**
- These substandard flakes will be used for blending when milled into off white granules or powder .
- We observed that many processors use white adulterants to blend with the brown flakes to make a white garlic powder. We detected starches and rice powder in many samples garlic powder.
- We observed that some processors bleach the brown flakes with peroxide (H₂O₂) which results in a white garlic flake without taste. We detected many samples of white premium garlic powder with an off taste.
- We observed that many processors do show casing. They cut corners at hand selection, metal detection, blending.
- We noticed inconsistent qualities offered by many traditional suppliers in China.

2007/2008 carry over stocks vs A-Flakes.



Quality differences, adulteration.



Show casing / Outsourcing.



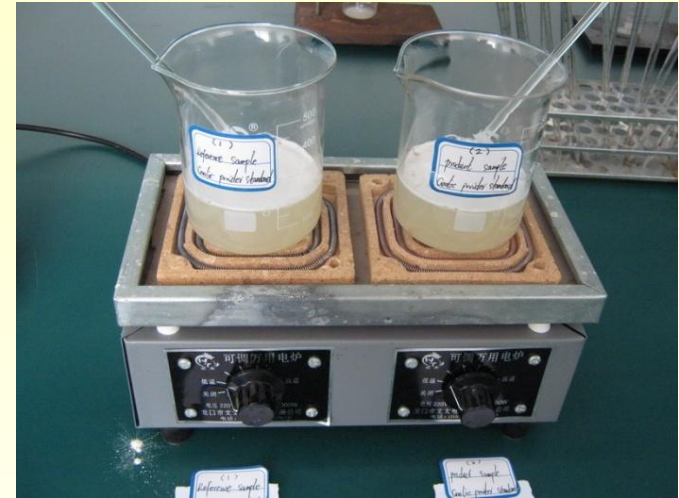
Show casing / Outsourcing



How to anticipate the quality concerns ?

- Auditing the suppliers.
- Having a sample library at the factories with reference samples to match.
- Factory based inspection for each container.
- Finished product tested at third party laboratories prior to shipment.
- Buy new crop premium top grade quality at market price !

Factory based inspection.



Third party lab testing.



Summary situation today April 2011.

- Carry over stocks from 2007/2008 are almost exhausted
- What is available from 2007/2008 is very poor quality and has a brown colour with high moulds
 - There is a high risk for adulteration
- There is hardly any fresh garlic in cold stores left. Prices of fresh garlic remain high and will be mostly sold by June 2011
- Dehydration may start in July/August depending the price of new crop fresh garlic. Milling will be from September/October onwards.
- New crop fresh garlic outlook indicates today a normal good crop.
- Dehydration of garlic flakes depend on the fresh garlic price setting at new crop in July/August 2011.
- It is still too early to make conclusions....



Thank you

China Spice Services Ltd
Harbour Road 18, 3806 Central Plaza
Wanchai , HK
Raf@spices.be
Brian@spices.be

