
Food Safety : A Long Correction

April 2014

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Vision Management Consultants



Frank Gibson

- Australian
- 20 years advising international companies in China - large multinationals
- Complex business problems across market entry, strategy development, marketing and sales and distribution
- Strong agri business and FMCG background – food, beverage, farming, supply chain, retail
- Previous economic advisory and Government policy background



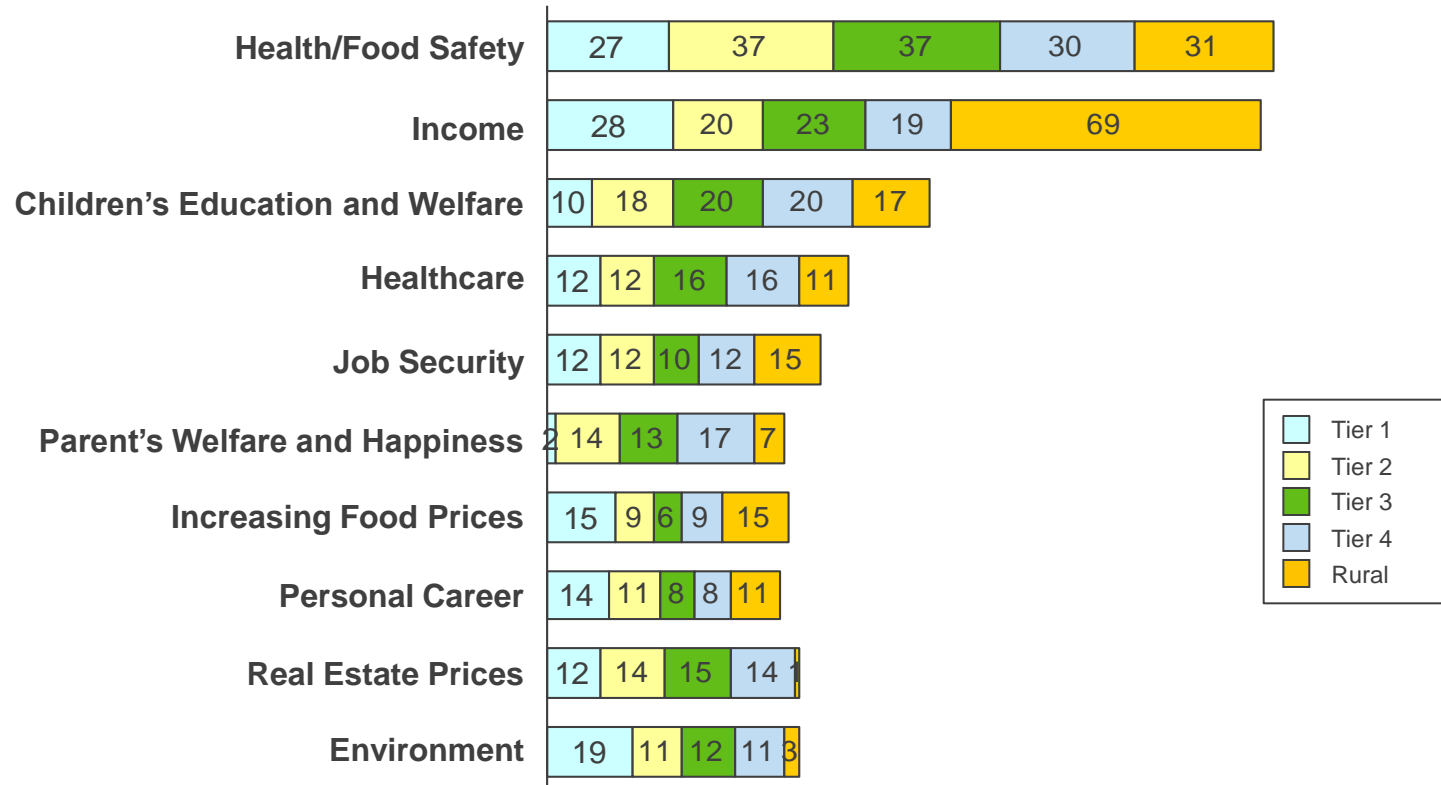
Xavier Naville

- French
- Founder of Creative Food - a key supplier of locally grown produce to major restaurant chains
- Over 12 years grew to 8 factories, 4 farms, 1000+ employees, and sales US\$50m+ - sold to Bakkavor (UK listed)
- Working with Frank 2 years - recent consulting experience in dairy, horticulture, seafood, supply management (farming), animal health and retail
- Previously CEO of Compass Group

Health/Food Safety is a major concern for urban residents

Biggest and Second Biggest Concerns

(%)



Source: 2013 China Consumer Confidence Survey

And there are good reasons for that

Food Safety Issues : 2012–2013

"Flammable Noodles"
Public anxiety over chemical food additives



"Dyed Buns"
Banned dyes used to fake buns at higher price points



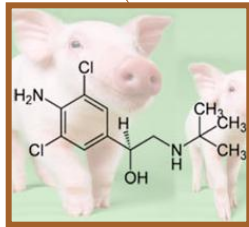
"Aflatoxin"
Excessive levels found in milk due to contaminated feed



"Pigs in the River"
More than 12,000 dead pigs floating down the Huangpu into Shanghai



"Boutlism"
Fears that botulism tainted milk powder effecting imported infant formula brands



"Clenbuterol"
Added to porcine feed to make meat leaner



"Gutter Oil"
Reprocessed oil illegally collected from restaurant waste



"Super Chickens"
KFC birds have 18 different sorts of antibiotics – grow from 30 grams to 3.5kg in 40 days



"Rat Meat"
Rat and fox meat being sold as mutton

The Sanlu incident was a pivotal moment in the history of Food Safety in China

- Sanlu China's largest infant formula company and one of its most trusted consumer brands
- New Zealand's Fonterra held 43% stake
- Scandal broke in September 2008
 - 300,000 babies effected
 - 54,000 hospitalized
 - ? died
- Melamine contamination subsequently found to be across 80% of the dairy industry



A supply chain stretched too far...

- Dairy Industry value US\$2b in 2000 – US\$25b by 2008
- Dominated by peasant farming - low productivity and poor quality milk
- Substances to pass tests - soy, animal parts, hydrogen peroxide, antibiotics, fat
- Melamine added to enable the dilution of milk with water
- Problems the result of unbalanced investment across the supply chain
- Less than 3% of milk came from farms owned by processors
- ***The front end 21st Century – the back end medieval***

The Government's response was to recognize this as a structural problem

- New food safety laws
- Improved standards and increased surveillance
- Policies to drive consolidation and integration
 - Processors must control their own supply chain
 - Most subscale processors shut down
- Shift from protecting peasant farmers to driving modernization
- Government subsidies restructured to encourage larger farms
- Increased professional investment
- Much greater openness and transparency around food safety in government and media



Nevertheless modernization is not a quick process ... there are major hurdles to overcome

Modernization Hurdles

- ① Barriers to land consolidation and scale (particularly the ambiguity and uncertainty around land use rights)
- ② Decades of environmental neglect resulting in soil contamination and water pollution
- ③ Conflicting interests between central government and local authorities
- ④ An evolving moral framework that can manage the tension between profit and social responsibility
- ⑤ Regulation and surveillance which has been rapidly improving but still playing “catch up”
- ⑥ Limited modern farming capabilities, skills and culture – *the ‘know how’ or ‘software’ that is critical to modernization*

Three basic things needed to modernize a dairy herd

The 3 Cs

① **Capital**



To build farms, buy equipment, fund operations



Relatively Easy

② **Cows**



Healthy ones with good genetics



Some constraints

③ **Capability**

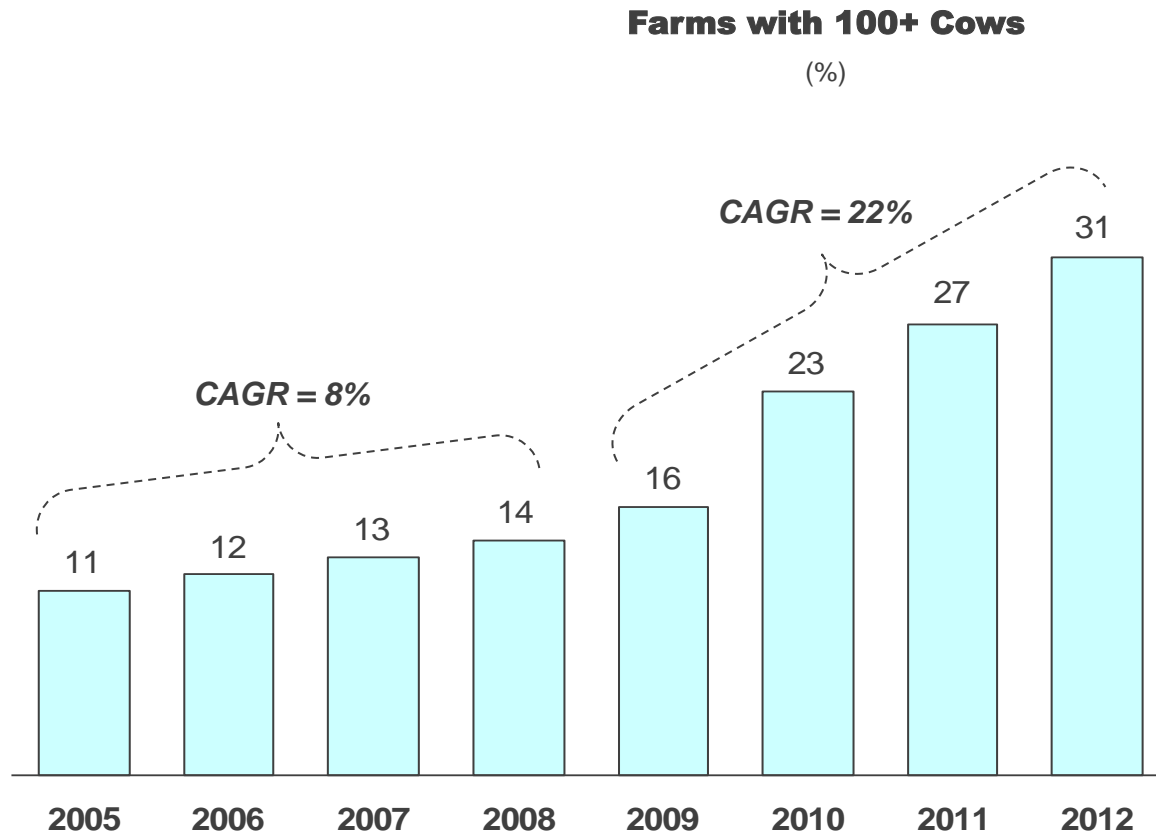


“Know How” How to look after cows and get milk out of them



Much more difficult

Since Sanlu larger scale farming has increased



- However many of these “Farms” will be “cow banks” i.e. milking collectives
- Nevertheless it does reflect a significant reduction in individual peasant farming

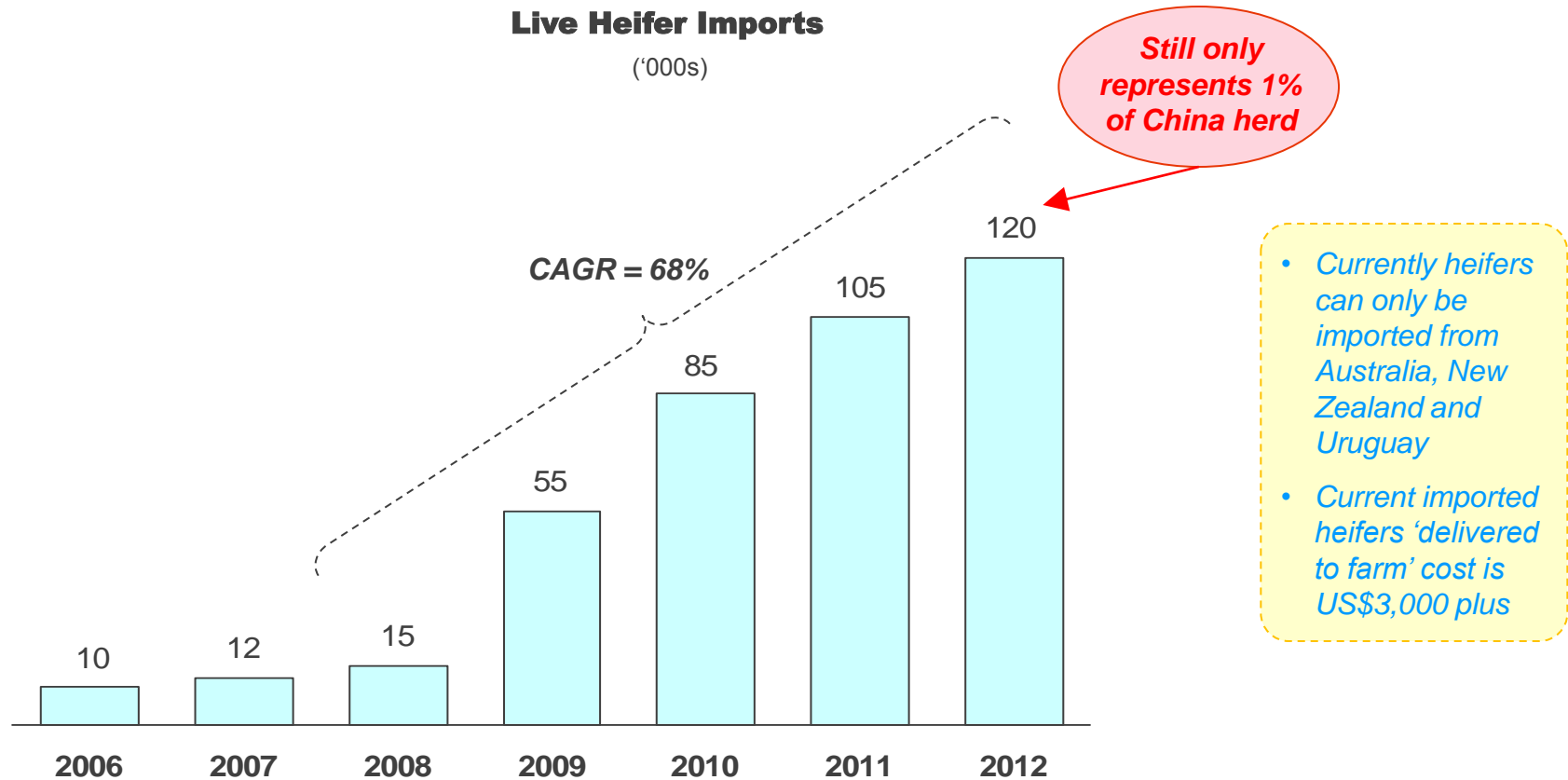
There are now a significant number of large scale professional farming enterprises

Key Dairy Farming Companies

	# Farms	Total # Cows	Locations
Modern Dairy	22	180,000	Various
Huishan	22	80,000	Shenyang
Sanyuan	39	56,000	Beijing
Aust Asia	5	50,000	Shandong
Feihe	4	35,000	Heilongjiang
Fonterra	4	30,000	Hebei
Shengmu	6	35,000	Inner Mongolia
Yili	21	30,000	Various
Jia Li He	10	20,000	Hebei
Dairy United	10	15,000	Hebei
Bright Holstan	13	15,000	Shanghai
Jiabao	4	15,000	Shandong
Wondershan	1	10,000	Heilongjiang
Shangfu	10	10,000	Fujian
Hua Xia	1	10,000	Hebei
New Hope	7	6,000	Sichuan
<i>Total</i>	180	600,000	~3,300 per farm

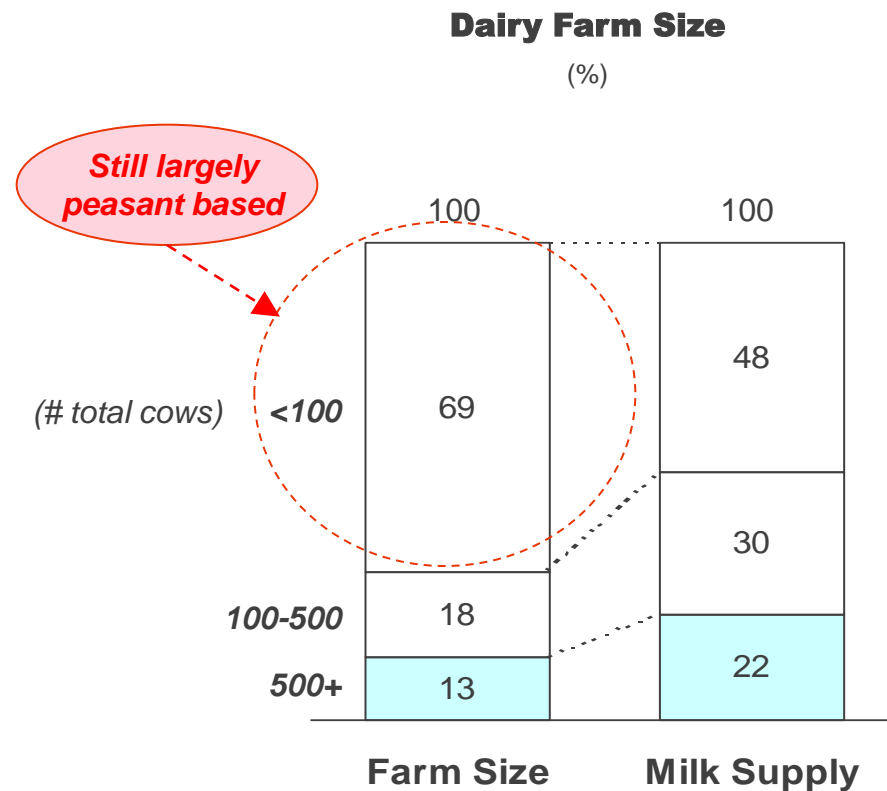
Source: Industry interviews

There have also been rapidly growing numbers of live heifer imports



Note : 2012 imports were Australian 65,000, New Zealand 40,000, Uruguay 15,000
Source: WSJ, China customs

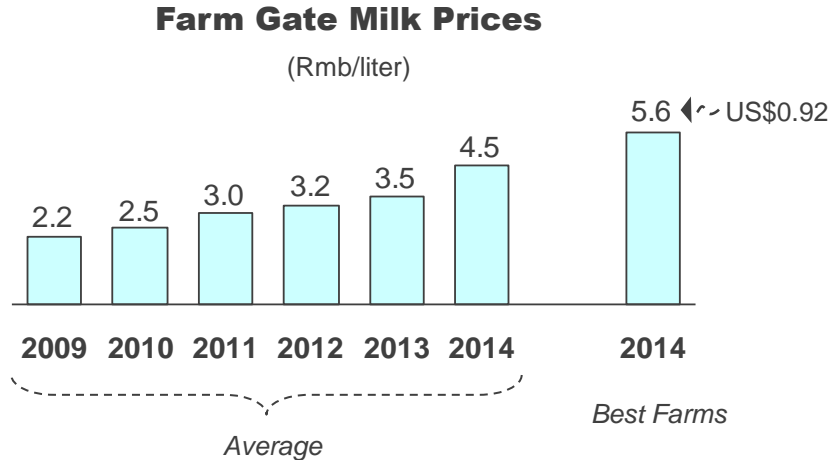
But despite this rapid modernization the sector is still dominated by a fragmented supply base



- Rapid process of modernization ... perhaps the most rapid ever seen
- 4 million cows in farms of 100 plus ... 1.7 million in farms of 500 cows or more
- However there are still more than 8 million cows in sub scale farms
- Reflects the enormity of the task

A "modern scale" dairy farm in China will have at least 500 cows (or ~300 milking cows)

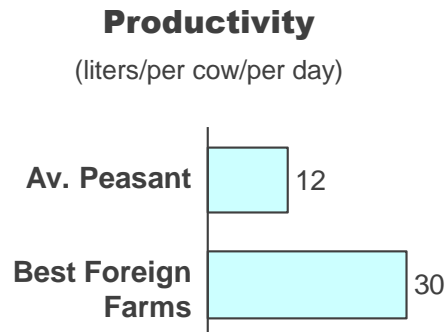
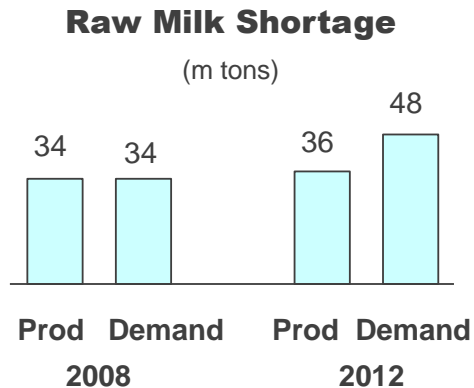
Supply will stay ahead of demand for a long time



- Probably the fastest modernization of a dairy herd that has ever occurred ... but it takes time ... and there will be limits (land, water, effluent management etc)

- Hardest capabilities to build are the software

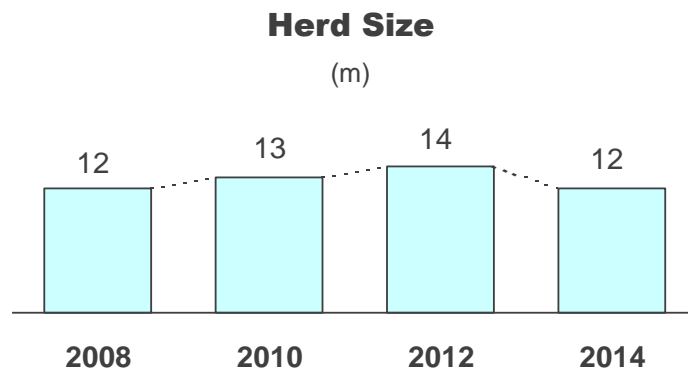
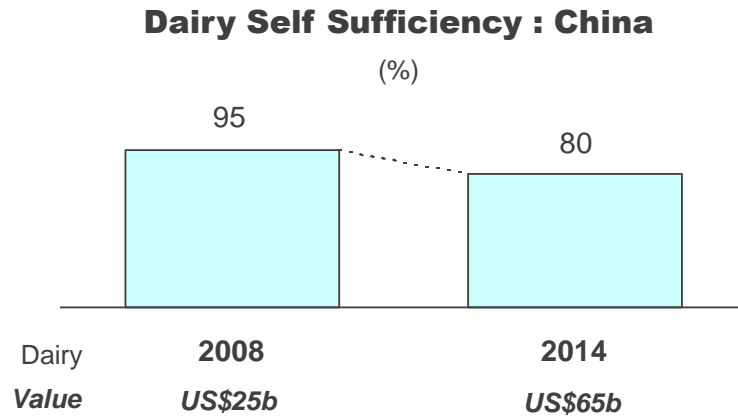
- Animal health and welfare
- Disease prevention
- Feeding



- Demand for high quality milk to run ahead of supply for a long time

- Good for farm investors with modern capabilities (if they can adapt to this operating environment)
- Good for imports

China is actually becoming less self sufficient

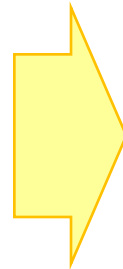


- While herd quality has improved herd size has not
 - Exit of peasant farmers
 - Post melamine culling
 - Disease
- If raw milk is not required then imported powder is always preferred
 - It is cheaper
 - Quality is higher
 - Consumers prefer it
- While there is room for productivity improvement there are also constraints for farm expansion
 - Land
 - Water
 - Effluent management

The poultry industry is another example where capital doesn't solve everything

- Mind boggling numbers
 - 16 billion birds
 - US\$70b revenue
 - 10 million workers
 - #1 in eggs, #2 in chickens
- Rapid intensification in the 1990's – huge integrated processors with hundreds of millions invested

	Slaughtered p.a.
– Wen	800m
– Jiuhe	500m
– Dacheng	200m
– Sunner	200m
– Zhu Cheng	150m
– Wan Fu	100m
– Fengxiang	100m
– Deda	100m
– Tyson	100m



But still huge consumer mistrust

- H7N9
- Antibiotics
- KFC sales fall 40% in one month



Persistent basic “soft ware” problems

- Poor Bio security
- Poor hygiene practices
- Poor health management

One thing China is not short of is disease

Animal Diseases : China

Pigs	Cattle	Poultry	Sheep & Goats	Fish
<ul style="list-style-type: none"> • Foot and Mouth • HP-PRRS • Swine Fever • Erysipelas • Parvovirus • Colibacillosis • Clostridial Diseases • Atrophic Rhinitis • Enteritis • Leptospirosis • Pseudorabies 	<ul style="list-style-type: none"> • Foot and Mouth • Brucellosis • Clostridial Diseases • Leptospirosis • Mastitis • BVD • PI3 • IBR • BRSV 	<ul style="list-style-type: none"> • Avian Flu (HPA) <ul style="list-style-type: none"> – H5 – H9 – H7N9 • Newcastle Disease • Marek's Disease • Avian Coccidiosis • Clostridial Disease • Bursal Disease • Avian Reovirus • Egg Drop Syndrome • Infectious Bronchitis • Duck Plague (Enteritis) • Ap Serositis • Flavi Virus 	<ul style="list-style-type: none"> • Clostridial Diseases • Pasteurellosis • Ovine Abortian • Louping Ill • Contagious Pustular Dermatistis • Samonella • Toxoplasmosis • Foot and Mouth • Brucellosis 	<ul style="list-style-type: none"> • Furunculosis • Vibriosis • Aeromonus • Edwardsiellosis • Infectious Hematopietuc Necrosis (IHN) • Salmon Pancreas Disease • Bacteria Kidney Disease (BKD) • Haemorrhagic Septicaemia • Moratella Vicosus • Enteric Red Mouth Disease (ERM) • RTFS • Streptococciosus • Columaris (Saddle Back) Disease

But it has been short of good quality vaccines

Animal Vaccines

Global Top 5

1. Pfizer
 2. Merck
 3. Sanofi/Mercial
 4. Elanco
 5. Bayer
- 72% share**

- International pharmaceutical companies
- Long history
- But limited access to China market

China Top 5

1. CAHIC
 2. Qindao Yedio
 3. Tecon
 4. Dahuanong
 5. Jinyu
- 35% share**

- Feed and veterinary product companies – around 80
- All less than 20 years experience
- Entered vaccines in response to Government tender program

But the supply chains will improve

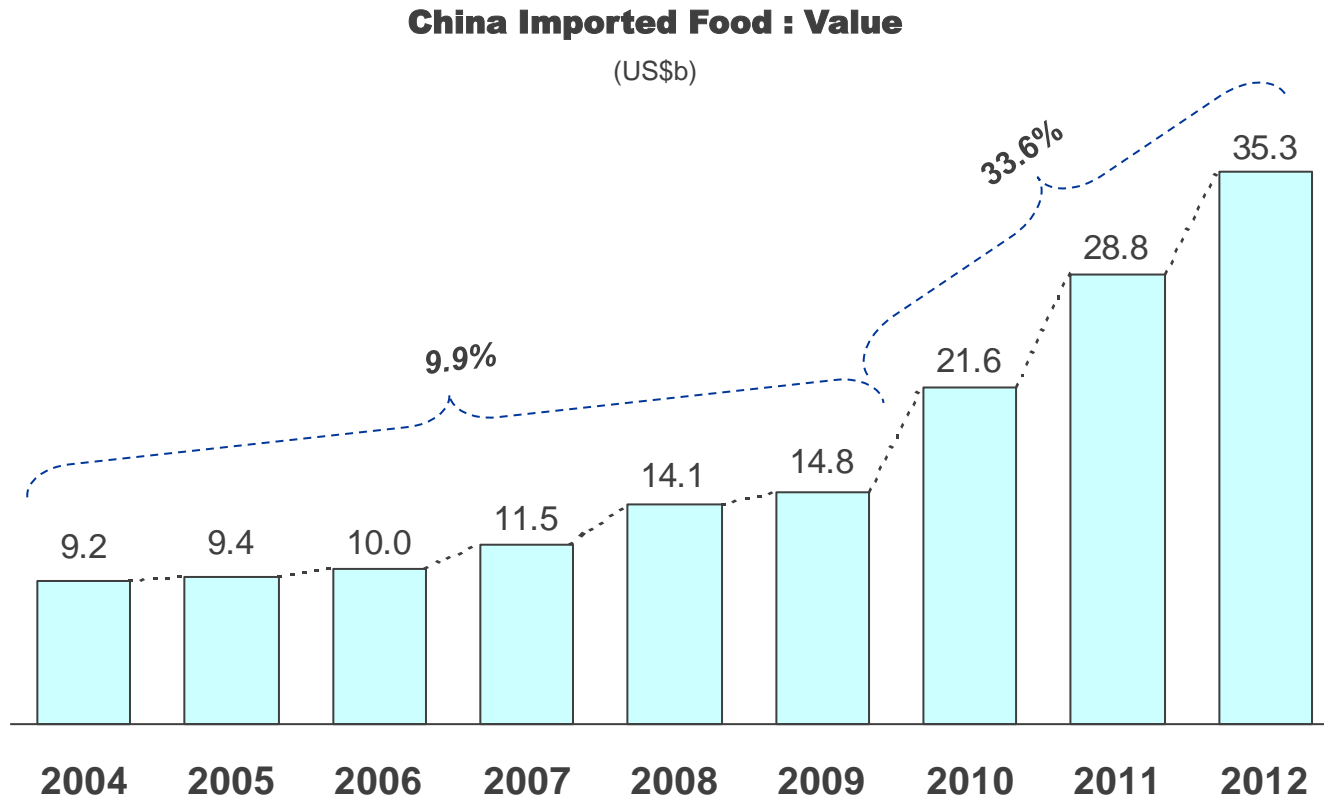
- Consumers demand it
- The Government wants it
- Investors are willing to fund it
- *... but the imbalances of the past mean it is a long correction*

This presents huge opportunity to companies that can bring modern capabilities and skill sets

- Disease prevention
- Breeding technology
- Nutritional science
- Testing and control
- Quality and supply chain
- Waste management

Opportunities providing you possess and/or can acquire the capabilities necessary to succeed in this operating environment

... and while this is happening the boom in imports will continue



Note: Includes food and live animals used for food
Source: InterChina