

# The challenges facing the evolution of the Chinese pork market

Rabobank recently published a Rabobank Industry Note on the Industrialisation of China's Pork Supply Chain and in this article we reflect on what it said.

China is seen as an emerging major pork player in the global marketplace because she is the leading pork producer. China has an increasing influence on the global market for pork as their fluctuating pork imports affect the global supply and demand scenario which, in turn, impacts on the price of pork.

The Chinese pork industry is evolving to meet the changing economic and social environment in that country. Chinese pork consumption is slowing down and its share of the total meat market is declining but, even so, pork will remain China's most popular meat for the foreseeable future.

However, there is an increasing demand for value added products and increasing emphasis is being given to convenience and food safety. In essence, China's pork supply chain is becoming more and more industrialised.

## Genetic growth

On the genetics front there is a rapid growth in the importation of foreign breeds. Pig farming is also going through a restructuring revolution with smaller operators leaving the industry and larger scale ones expanding rapidly. The relative faster pace of the former is resulting in sporadic shortages of pork and price volatility.

When it comes to the abattoirs and processing plants a lot of consolidation is occurring and the enforcement of new regulations will only hasten this. There is a real pos-

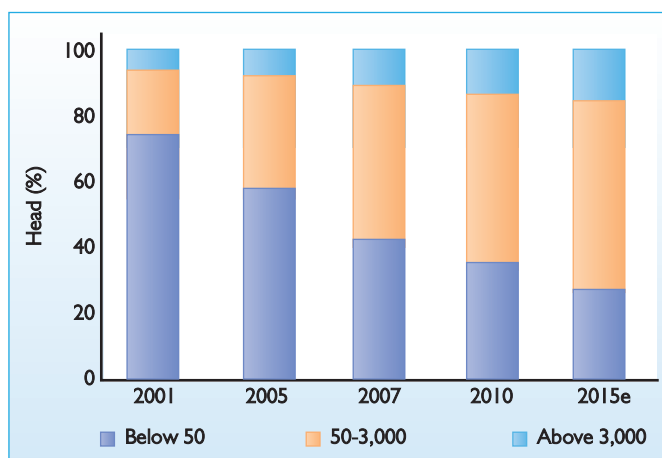


Fig. 1. China's hog farming structure, 2001 - 2015.

sibility of over capacity occurring. Growth in organised retailers is slowing down and as they have increased their bargaining power this will affect the pork supply chain, as will requirements to meet set quality standards.

Accompanying the industrialisation of the Chinese pork sector are various new business models. Vertical integration is being looked at by many as it is perceived as the solution for food safety, but there is no one model that can be applied across the whole Chinese industry. The goal has to be to improve coordination between farming and processing to ensure food safety and traceability.

China has become a net importer of pork in recent times because of pork shortages, but it is probable that in the long term China will be able to be self-sufficient in pork. To do this the country will need to increase corn imports.

At the end of the day the consumer is ultimately driving the direc-

tion of the pork industry's development.

Over the past few decades per capita meat consumption has increased but pork as a percentage of meat consumption has declined.

Pork consumption is expected to decline but it will retain its dominant position. Increase in the growth of pork has reduced from double digit growth to 1-2% per year. Factors favouring pork consumption include income growth, population growth and urbanisation.

Historically, the Chinese diet was grain based but since the economic reforms of the 1970s per capita meat consumption has risen four fold (Table 1).

## Alternative proteins

With the availability of affordable alternative proteins pork's share of total meat consumption has fallen from 80% in 1980 to 65% in 2011.

Poultry is more popular in quick service restaurants like KFC and McDonalds, which are growing rapidly in China. The rate of increase in meat consumption is declining because of the slowing down in population growth rate.

Other factors which will have a long term impact on Chinese pork consumption include food safety issues, input prices and economic performance, with food safety cur-

rently being cited as the number one concern by Chinese consumers who seem prepared to pay a premium for pork sourced from a secure supply chain.

However, given the current fragmentation of the pork supply chain, it will take years to develop a wide-spread co-ordinated supply chain that will convince consumers that their pork is safe.

Input prices are expected to continue their upwards trend due to global competition and finite land and water availability.

## Increased consumption

China's pork prices have more than doubled in the last decade but it is expected that pork consumption will be negatively linked to price movement as pork is a staple meat and has a lower elasticity for its consumption relative to beef and lamb/mutton.

However, in the future the elasticity of pork consumption relative to income level will increase.

Over the next few years pork consumption is expected to maintain a slow growth of 1-2% per year, whereas poultry consumption will increase more.

By 2020 pork's share of total meat consumption will have further fallen to 62%. The major potential for volume growth in pork consumption will come from lower income groups in urban areas and from rural areas which will become more urbanised.

In addition, there will be an increasing demand for value added products from the urban middle class and the wealthy.

Foreign genetics has a role to play and this will be facilitated by the fact that local breeding technology is lagging behind.

The major sources of foreign genetics are the USA, Canada and Europe and dominant players in China now include PIC, Genus, Hypor, Topigs and JSR Genetics. Joint ventures now operate like Topigs Huanshan, Hubei Liangyou JSR Breeding Ltd and Hypor AgFeed

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Table 1. Chinese per capita meat consumption figures.

Meat	Consumption (kg per head)
Pork	37
Poultry	13
Beef and lamb/mutton	9

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Breeding Company Inc. The majority of breeding companies operate independently and supply piglets into the pork chain, but in recent times there has been an increasing trend of large pork producing companies to integrate upwards into breeding – these include Tangrenshen Group Co Ltd, Wen’s Group, Yurun Food Group, Shineway and AgFeed.

These companies could, in the future, have an impact on the supply chain.

## Restructuring

Chinese pig farming is currently restructuring with the proportion of small operators rapidly declining. Currently less than 40% of live hogs come from small, backyard farms, compared to some 75% in 2001.

This change started in 2007 when backyard farmers were hit the hardest by disease outbreaks because their hygiene and management was the poorest.

This was coupled to a reduction in rural labour because of a migration to the cities. It is now expected that backyard farming will continue to decline because of its decreasing competitiveness.

Nowadays, an increasing proportion of farms are supplying hogs to the abattoirs/processors on direct contracts. A number of leading abattoirs/processors are now establishing their own farms to develop vertically integrated systems.

Wen’s produce 7 million head a year and CP Group, Zhengbang Technology, Chuting Agro-Pastoral Group and Muyan Feedstuff Co Ltd all have farming operations with more than 500,000 animals.

In China farms with >10,000 animals are generally expanding the fastest.

## Over supply in 2012

In 2012 The Chinese pork market experienced over supply, which depressed pork prices and stimulated another round of consolidation (see Fig. 1).

Prices have been very volatile since 2006 due to unbalanced supply and demand with prices soaring in 2008 and 2011.

Many factors were involved including PRRS in 2008 which caused a 20% reduction in herd size that year. In 2012 pork prices began to fall because of a recovery in production, weak demand and the impact of imported pork.

Traditionally, the major pork production areas were Sichuan, Henan, Shandong, Hunan, Hubei and Guangdong but now pig production is moving into the grain producing areas in the northeast, which is China’s corn belt as well as into northern and central areas.

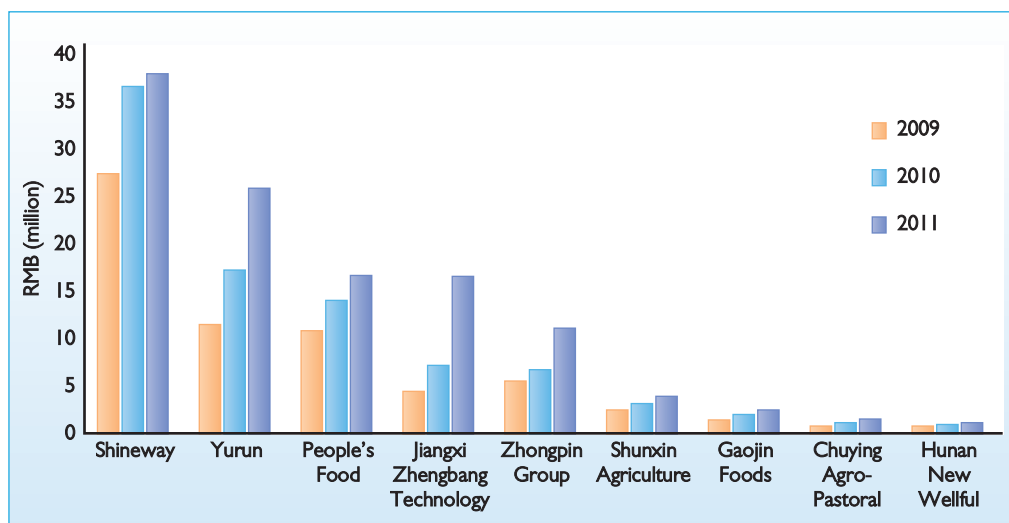


Fig. 2. Sales revenues of listed Chinese pork producers 2009-2011.

Development in the south and in coastal areas is limited by requirements for environmental protection, limited land, limited grain and more expensive labour.

This has meant mega-sized farms have survived in the southern and coastal areas, while small farms have rapidly disappeared. Accompanying this has been a change in investor profiles including investors coming in from other sectors such as steel and information technology.

## Losses at farm level

The first half of 2012 resulted in losses at farm level with farms with their own breeders for feeder pig production just breaking even and small farms that purchase the piglets for fattening making significant losses (these reached US\$24 per fatterer). Grain prices continue to rise so small farmers are going out of business.

Recurring disease outbreaks such as foot and mouth disease, piglet diarrhoea, PRRS and PCV have been cycling in the industry for many years. These are often compounded by inadequate supplies of medicines and vaccines.

Other food safety issues include residues, mishandling of animals that have died from disease and antibiotic usage.

## Abattoir consolidation

Consolidation is occurring in the abattoir sector with the proportion of pigs mechanically slaughtered expected to rise from 20% in 2010 to over 70% in 2020 and the proportion hand killed reducing from 35 to less than 5% over the same period. Abattoirs are better able than farmers to pass extra costs downstream and so their margins are relatively more stable.

China’s national abattoirs/processors include Shineway, Yurun and People’s Food and the key regional players include Zhongpin, Gaojin, Tangrenshen and Shunxin (see Fig. 2).

Profitability seems to be dependent on degree of integration and the proportion of throughput targeted at chilled and prepared meats, which have higher values and profit margins.

Chinese urban consumers are shifting from traditional wet markets to supermarkets for their purchases

of perishable foods, including pork. Deficiencies in transportation mean the many processors focus on regional rather than national markets.

Growth strategies for the Chinese market are likely to centre on backwards vertical integration, taking product right through to point of purchase and margin optimisation and, in some cases, full vertical integration.

For example, Carrefour, Walmart and Lotus have extended backwards into processing to secure safe and quality pork supplies.

Carrefour has set up 16 requirements for the supply of pork products including hog sourcing, no illegal additives during production, cold chain integrity and full traceability and has limited the number of its suppliers to two and has branded its products as ‘Carrefour Quality Line Pork’.

Some meat companies have established their own retail outlets. For example, Shineway and Yurun have established over 1,000 such outlets across the country.

Chinese meat companies control key points in the supply chain, such as breeding, feeding and processing and often leave farming to the farmers but keep control by a centralised management system.

Vertical integration is attracting attention as it is believed to be the solution to food safety issues. However, few companies are fully integrated because of the high land and capital requirements of this approach.

## Still in transition

This report concluded that China’s pork supply chain is in transition as it moves from traditional household farming to modern, commercial systems. However, while the development of farms and processing plants is rapid, the coordination between them remains poorly developed. ■