# China - Pork Powerhouse of the World

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In recent years, live pig and pork production and pork consumption have been undergoing dramatic changes in China. As the biggest pig and pork producing country in the world, all these changes will not only influence the pig and pork industry in China, but will also affect international feed and pork trading countries. An overview of the current status and challenges faced by China, the powerhouse of pork production, will help the world understand the past, present and future trends in the Chinese pig industry. This information may also enable countries and companies to adjust pork production policies to suit the future international market economy in pork.

## ▪ The Reality of Agriculture in China

### Affluent Labor Resources but Short of Land and Water Resources

There are more than 900 million people in rural China. Of those 900 million people, only 100 million of the 600 million capable workers are required to work the current Chinese land area used for agricultural production. The remaining 500 million workers must work in other non-agricultural industries or must migrate to cities for jobs.

Land and water resources are in short supply and the scale of many agricultural operations is not economical. Arable land acreage per household in China is less than 1 ha, while the USA, with twice the arable land as China, has 2 million farms and average acreage of 100 ha. In comparison, the EU, with similar arable land as China, has 7.4 million farms and average acreage of 20 ha.

### Lower Pork Price but High Cost for Major Agriculture Products

Taking the 1998 international future price of agricultural products as a basis of 100, prices for key Chinese agricultural products in 2001 were much higher: wheat 143, rice 101, corn 180, soybean 179, cotton 107, soybean oil 156, peanut oil 153, sugar 183 and live pigs 68. Of the 9 key Chinese agricultural products, only live pigs were competitively priced with the international market (Zhai, 2001). Live pig price increased dramatically from July 2003 and is still at a relatively high level in 2005 (**Figure 1 and Figure2**). Increases in live pig and pork prices were the result of increases in feed price, caused by less grain production in 2003 and 2004 and international price increases, and SARS outbreaks in China during 2003, 2004, and 2005. This also triggered increases in pork and offal importation from Canada, USA and Demark due to local pork price increases and WTO entry related quota and tariff reduction for pork products (tariff reduction to a set level was completed in 2004).

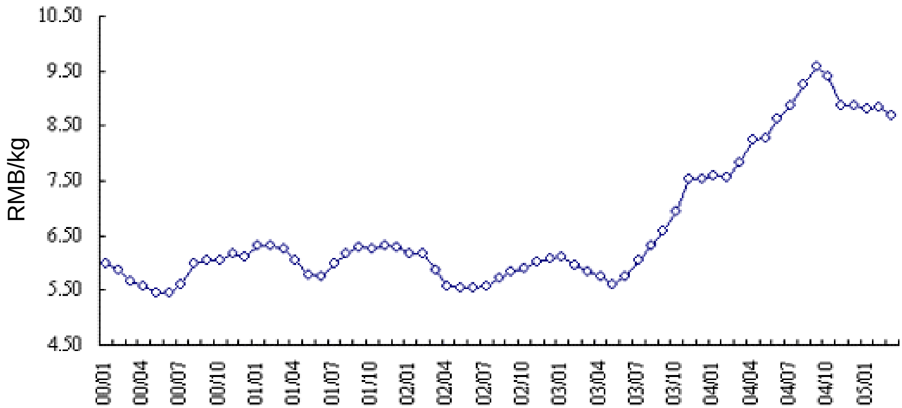


**Figure 1. Live pig price from Jan 2000 to March 2005 (source: MOA)**

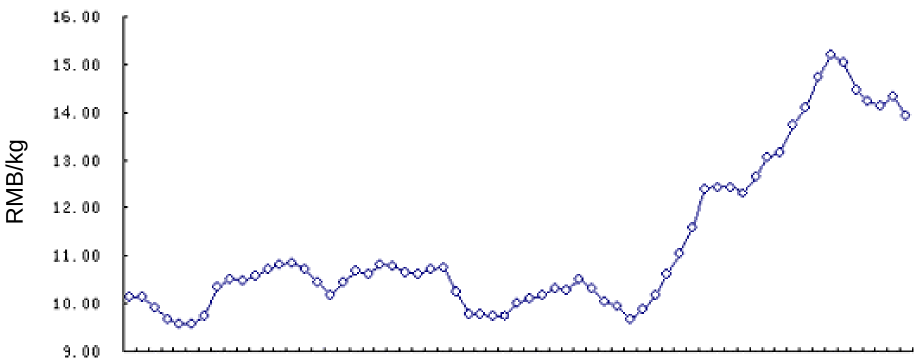


**Figure 2. Pork retail price from Jan 2000 to March 2005 (source: MOA)**

## ▪ Live Pig and Pork Production in China

China has been the largest live pig and pork producing country in the world for many years; 48-50% of the worlds live pigs are grown in China. With a long history of 7000 years of pig farming, the pig is a very important animal for both the economy and the domestic food supply.

In 2004, China had 485.5 million pigs on farms and slaughtered more than 621 million pigs; this accounted for 48.6% of the world slaughter and yielded 47.6% of the world pork production. In 1990, about 310 million pigs were slaughtered from a national population of 336 million pigs accounting for 33.6% of the slaughtered pigs in the world and 32.6% of the world pork (**Table 1** and **Table 2**). These data indicate that pig productivity increased rapidly in the last decade. As a pork powerhouse, China will influence all aspects of the world pig industry such as labor, feed ingredient trading, food processing, pork trading, live pig trading, equipment and technology transfer.

**Table 1. Change in pig productivity for the last two decades in China**

| Year | Stock x1000 head | Slaughter x1000 head | Pork prod. x1000 T | Average carcass wt, kg | Slaughter As % of stock | Pork/ stock pig (kg/y) |
|---|---|---|---|---|---|---|
| 1980 | 300,000 | 139,860* | 10,000 | 71.5* | 46.6 | 33.3 |
| 1990 | 336,240 | 309,969 | 22,807 | 73.6 | 92.2 | 67.8 |
| 1989-91 | 361,621 | 309,705 | 22,854 | 73.8 | 86.0 | 63.2 |
| 1997 | 390,000 | 450,000 | 34,640 | 76.9 | 115.4 | 88.8 |
| 1998 | 422,560 | 502,150 | 38,840 | 77.3 | 118.9 | 91.9 |
| 2000 | 422,563 | 519,772 | 40,314 | 77.6 | 122.4 | 95.4 |
| 2001 | 457,430 | 549367 | 41845 | 76.2 | 120.1 | 99.0 |
| 2002 | 462,738 | 565952 | 43200 | 76.3 | 122.3 | 93.4 |
| 2003 | 466,000 | 592000 | 46240 | 78.1 | 127.0 | 99.2 |
| 2004 | 485,525 | 621723 | 47750 | 76.8 | 128.1 | 98.4 |
| 2005* | 482,000 | 618000 | 47020 | 76.1 | 128.2 | 97.6 |

Sources: China Agricultural Statistics from year 1980 to 2004;$ Based on Li Jing (2005, *Data based on WWW.CAAA.Com(2005); *Data based on first quarter stock in 2005 (4.19% increase over 2004);

**Table 2. The Chinese percentage of world of pig production**

| Years | 1990 | 1998 | 2000 | 2004 |
|---|---|---|---|---|
| Pig slaughter, % | 33.6 | 46.2 | 44.9 | 48.6 |
| Pork production,% | 32.6 | 46.1 | 45.0 | 47.6 |
| Pig stock on farms, % | 42.3 | 44.3 | 46.3 | 49.4* |

*Calculated by assuming slaughter to stock ratio is 130% and pig stock in China was 485.525 million heads in 2004

China is divided into 4 key pig-producing regions. These regions are: Yangzi River region (Sichuan, Chongqing city, Guizhou, Hunan, Jiangxi, Jiangsu, Zhejiang and Anhui provinces) with 43.8% of national pork production; Northern China region (Hebei, Shandong and Henan provinces) with 21.6% of national pork production; Northeastern region (Liaoning, Jinlin and Heilongjiang provinces) with 6.3% of national pork production; and Southeastern coast region (Fujian, Guangdong, Yunnan and Hainan) with 13.2% of national pork production (Wang, 2001).

The Yangzi River and Northern China regions are the key pork producing and internal exporting zones in China. Northeastern China used to be short of pork due to the colder climate but is becoming self-sufficient and starting to export to other regions as a result of cheaper feed ingredient supply and high cost of grain transportation in the last several years.

In the first quarter of 2005, nine provinces slaughtered more than 9 million head of pigs, 62.1% of the national total. These provinces were Hunan, Sichuan, Henan, Shandong, Hebei, Guangdong, Hubei, Guangxi and Anhui. Hunan, Scihuan and Henan are the key provinces, accounting for one third of national total slaughter. Sichuan, Hunan, Henan, Shandong and Hebei produced more than 1 million tons of pork in the first quarter in 2005, accounting for 43% of total national pork production.

The national breeding herd, as a percentage of market pigs, reached 9.8% in first quarter of 2005; this is higher than the normal 8%. In Hunan, Henan, Shandong and Hubei, breeding herd percentages of market pigs reached 10.0%, 11.8%, 11.6% and 11.4%, respectively. This increased percentage of breeding pigs suggests that more pigs will be produced over the next two to three years and over stocking will reduce live pig price and pork price. This is already evident in late 2005.

## Meat Processing in China

In 2001, there were 3,700 medium to large-scale meat processing enterprises operating in China, with 4,000 cooling units of 4.5 million tons of pork cooling capacity. 60 units have pork cooling capacity over 10,000 tons. Processed meat products were 3.5 million tons in 2001 and accounted for 8.4% of total meat production in that year. Dressed meat, chilled meat and frozen meat products were about 1/3 of total processed meat. Smoked pork, sausage and ham are the other processed meat products. There are more than 500 sausage producing lines nation wide, such as Shuanghui in Henan, Jinluo in Shandong, Zhengrong in Henan and Yurun in Jiangsu. Shuanhui, Jinluo and Zhenrong have daily sausage productivity over 100 tons. Henan and Shandong provinces produced over 85% of national sausage production in China.

By comparison, in 2004 there were only 2,155 large-scale slaughterhouses and meat processors in China. Total annual revenue was 162 billion RMB (Reminbi Yuan). The top 50 largest meat processors (with annual revenue of more than 230 million RMB, assets more than 168 million RMB) were mainly located in Shandong (18 units), Henan (5 units), Liaoning (4 units), Hunan (3 units), Sichuan (3 units), Heilongjiang (3 units), Jiangsu (3 units), Inner Mongolia (2 units), Anhui (2 units), Guangdong (2 units), Shanghai (2 units), Fujian (1 unit), Hebei (1 unit), Hubei (1 unit) and Shannxi (1 unit). In addition, there are more than 30,000 smaller slaughterhouses and meat processors operating in China. This means that more strict measures are required to limit small-scaled operations to improve meat safety and international competition.

## Meat Consumption in China

Most of the pork produced in China was consumed domestically (98%, **Table 4**). Of the 1.3 billion Chinese population, 80% (1.32 billion people) consume pork as their key animal meat. In China, pork production averaged 35-36 kg per capita in 2003, which means about 100 grams daily of potential pork consumption (**Table 3**) for every Chinese, although this number varies due to exportation and importation each year (Li, 2005). Poultry, beef, and aquaculture production also increased to account for 20 to 35% of total animal meat production. However, the number one position of pork production and consumption was still maintained in China (**Table 3** and **Table 4**).

**Table 3. World meat production per capita in 2003**

| | China | USA | Brazil | World |
|---|---|---|---|---|
| PopulationX10000 person | 131 170.9 | 2 9404.3 | 1 7847 | 630 146.3 |
| Pork average per capita, kg/person | 35.2 | 30.8 | 17.1 | 15.6 |
| Broiler chicken average per capita, kg/person | 7.2 | 50.8 | 43.5 | 10.4 |
| Beef average per capita, (kg/person | 4.6 | 40.9 | 40.5 | 9.3 |
| Meat total per capita, kg/person | 54.1 | 132.3 | 103.0 | 40.2 |

**Table 4. Meat consumption in rural and urban areas, % of total meat**

| | Pork | Beef and mutton | Poultry meat |
|---|---|---|---|
| Urban residents | 61.7 | 17.8 | 20.5 |
| Rural residents | 71 | 11 | 18 |
| National average | 66.8 | 14 | 19.2 |
| National meat production | 65.9 | 13.7 | 20.4 |

Data of Li and Zhang (2001) suggested that domestic pork consumption as a percentage of overall meat production has been increasing in China. They also observed that pork consumption by urban residents was higher than that of rural residents (1.6:1), and the increase in domestic pork consumption was driven by an increase in urban resident consumption. Pork demand has also increased in the rural areas where the economy and living standards are getting better. Increased consumption has also been seen in the city areas where rural workers have migrated to find jobs during no farming time or even for long term work. Survey by National Agriculture Survey Team (NAST, 2002) showed that pork consumption from eating out was 16.7% of total pork consumption in China and was increasing. Another trend in pork consumption is an attitude change from quantity to demanding quality and safety.

Although total pork production per capita was much higher than the world average in 2004 (35.2 vs 15.6 kg/person), total meat production per capita was lower than the USA and Brazil (**Table 3** and **Table 6**). In the future China will import more meat as the population grows and domestic demand increases, although currently pork exports are slightly higher than imports (**Table 5**).

**Table 5. World meat import and export in key countries in 2003,x10000tons**

| | China | | USA | | Brazil | | World | |
|---|---|---|---|---|---|---|---|---|
| | **Export** | **Import** | **Export** | **Import** | **Export** | **Import** | **Export** | **Import** |
| Pork | 38 | 22 | 70 | 53 | 54 | 0.02 | 853 | 844 |
| Broiler | 24 | 60 | 245 | 1 | 192 | 0.03 | 772 | 691 |
| Beef | 4 | 10 | 110 | 126 | 102 | 6 | 802 | 755 |
| Meat total | 96 | 107 | 461 | 192 | 368 | 6 | 2790 | 2655 |

**Table 6. Meat production in the world in 2003/2004 (x10000T),**
Source - FAO（Dec. 20, 2004）

| Meat | Year | China | USA | Brazil | World |
|---|---|---|---|---|---|
| Pork | 2003 | 4,624 | 906 | 306 | 9,858 |
| | 2004 | 4,775 | 933 | 311 | 10,039 |
| Broiler | 2003 | 951 | 1,492 | 776 | 6,580 |
| | 2004 | 947 | 1,554 | 867 | 6,772 |
| Beef | 2003 | 602 | 1,204 | 723 | 5,830 |
| | 2004 | 627 | 1,121 | 777 | 5,870 |
| Total | 2003 | 7,090 | 3,891 | 1,839 | 25,348 |
| | 2004 | 7,264 | 3,885 | 1,992 | 25,750 |

## ▪ Pig and Pork Trading in China

China is a net meat importing country due to increasing demand and an increasing population, despite being the largest meat producing country in the world. In 2003, the ratio of export to import of meat products was 1.11, with broiler meat the key imported meat (0.6 million tons of 1.07 million tons of imports, net import was 0.36 million tons) and pork was the key exported meat product (0.38 million tons of 0.96 million tons of export, net export was 0.16 million tons)(Table 5).

Canada produced over 30 million head of live pigs in 2004/2005, an increase from the 15 million head in 1994. As the largest pork exporter in the world, Canada exported more than 0.92 million tons, of the 1.9 million tons of pork produced in 2003, and almost 1.05 million tons in 2004. These exports went to countries such as Japan, US and China. The USA and the EU are also major exporters. In 2005, the EU is predicted to export 1.3 million tons of pork products. Brazil and China are the other key pork exporters.

In the 1990's, total pork export from China was maintained in the range of 0.35 to 0.5 million tons. However, the percentage of production that was exported decreased from 2.1% in 1990 to 0.9% in 1998 and 0.8% in 2003, because pork production increased and live animal export decreased. Pork imports increased dramatically during this period, from 10,000 tons in 1990 to 27,200 tons in 1998 and further increased to 220,000 tons in 2003.

Exported pork products included live pigs (more than 50%), fresh, chilled and frozen (FCF) pork products (30%), processed pork product (less than 20% and is decreasing) and very small amount of offal. FCF pork products and offal are the major pork imports into China.

## Live Pigs

Since 1950, when the Peoples Republic of China (PRC) was established, three train loads of live pigs and poultry have been shipped to Hong Kong and Macao every day. Even in 1960 and 1961 when China only produced 2 kg of pork per capita, such export was not stopped. Live pigs and pork products were also exported to neighboring countries such as Korea, Mongolia and Russia. In 1966, China exported 0.245 million tons of pork (via live animals and pork products). This was increased to 0.416 million tons in 1972, 0.412 million tons in 1973, 0.46 million tons in 1983 and 0.47 million tons in 1984. In 1990, China exported 3 million head of live pigs (equal to 0.23 million tons of pork) and 0.10 to 0.15 million tons of pork product. In 1998, live pig export was reduced to 2.2 million head (Li and Zhang, 2001), 2.03 million in 2000 and 2.5 million head in 2001(NAST,2002). Decreased live animal export occurred for many reasons such as disease control and pork importation from Thailand, USA, Canada, Hong Kong and Macao. 75 to 80% of live pigs exported were pigs with live weight more than 50 kg and15 to 20% were in the range of 10 to 50 kg. Only 5% were less than 10 kg in live weight (Li and Zhang, 2001).

Live pig imports were mainly for genetics. About 11,400 head were imported in one year in the 1990's. Such imports will continue in the coming years since China is improving current genetics with imported genetics from EU, USA and Canada. Semen importation will reduce live breeding animal import to some extent in the future, for cost reasons.

## Fresh, Chilled and Frozen Pork (FCF pork)

Export of FCF pork in 1990's was maintained in the range of 0.1 to 0.15 million tons. It accounted for 30% of total pork product exported by China. In the same time, FCF pork import never exceeded 20000 tons up until 1998. However, according to FAO (2001, 2002), in 2000 and 2001, total pork product import (including offal and processed pork food) increased to 0.534 and 0.498 million tons, export (including live animals export) decreased to 0.284 and 0.335 millions. Some of these data conflicted with Chinese data (Wang, 2002) which indicated that in year 2000, China imported 0.24 million tons of pork product (FCF pork plus offal) and exported only 0.12 million tons of pork products (FCF pork plus processed pork food, not including live animals).

FCF pork import increased until 2004 when Chinese pork price and live pig price were very high. Feed cost was high due to soaring soybean price. Low growth rate and poor breeding performance were caused by moldy grain problems in year 2003/2004, and pig disease issues. Importing pork from US, Denmark and Canada was profitable. However, when the local pig price decreased in the early part of year 2005, FCF pork import was reduced. For example, FCF pork import in the first two months in 2004 was 23400 tons from US, Denmark and Canada by Guangdong, Henan, Guangxi, Shanghai and Beijing. However, FCF pork import was only 8469 tons for the fist four months in 2005, imported mainly from Canada (increased) and USA (decreased) by Shanghai, Tianjin, Guangdong, Jiangsu and Liaoning (MOA, 2004, 2005). Beijing did not import FCF pork as much as last year, possibly due to decreased live pig price from neighboring Heibei, Henan, Shandong and Northeastern provinces where live pigs can be shipped to Beijing. Restrictions on transportation of live pigs were also freed up in late 2004 and 2005, following recovery from an Avian Influenza breakout. FCF pork imports in China are closely related to local pig production and local pig prices. Imports are driven mainly by several large cities to meet demand in the urban areas.

FCF pork export tended to decrease and struggled to maintain around 0.1-0.15 million tons in late 1990's. In recent years, FCF pork export tended to increase again due to a decrease in live pig export to Hong Kong and Macao and re-structuring of the international pork export. In the first two months of 2004, China exported 27000 tons of FCF pork to Hong Kong, North Korea, Russia and Singapore, compared to the same period in 2003. Again, FCF pork export was increased in the first quarter in 2005 to 66800 tons, mainly to

North Korea, Hong Kong and Russia. In 2004, the first 5 key FCF pork export provinces in China were Shandong, Sichuan, Henan, Heilongjiang and Hunan. In 2005, the first 5 FCF pork export provinces were Sichuan, Heilongjiang, Shandong, Henan and Hunan, among which Heilongjiang increased FCF pork to Russia and North Korea most dramatically. FCF pork export to countries or regions other than Hong Kong, Russia, North Korea and Singapore has been impossible in recent years due to disease control, pork quality issues and trading barrier issues.

### Processed Pork Product (sausage, canned food, dry pork, smoked pork)

Export of processed pork products was around 60,000 tons in late 1990's, accounting for 20% of total exported pork products. In recent years, processed pork product export was increased slightly. For example, in the first two months in 2004, about 15,600 tons of processed pork products were exported to Hong Kong, Japan and Singapore. In the first quarter of 2005, about 27,900 tons of processed pork products were exported to Japan, Hong Kong and Malaysia, slightly increased over that of the first quarter in 2004. Canned pork product was the major export of processed pork products, and its percentage of total processed pork product decreased from 94.4% in 1990 to 53.5% in 1998. Sausage, dry pork and smoked pork products are increasing in percentage slightly (Li and Zhang, 2001). Import of processed pork products has decreased dramatically since early 1990, reducing from 2000 tons to the current less than 100 tons annually.

### Offal

Offal export accounted for only a small percentage, less than 1%, of total pork exports. In contrast, offal import was about 50% of total pork import in 1990, but reduced to 25% in 1998. Offal import in the first two months in 2004 and the first quarter of 2005 were 20,100 tons and 31,200 tons respectively; reduced compared to the same period of 2003. Offal was mainly imported by Guangdong, Shanghai, Liaoning, Jiangsu and Henan from USA, Canada and Denmark. Since 1995, China has been a net offal import country. Previously, China was a net offal export country.

## ▪ Cost Analysis of Pork Production by Size of Farm

Li and Zhang (2001) calculated the Real Comparative Advantage (RCA) of pork production in China. They found that from 1991 to 1997, pork production RCAs in China were greater than 1. Pork production RCA decreased from 4.0 to 2.4 in 1992 and was further reduced to 1.8 in 1998. This RCA decrease was related to a decrease in pork exports caused by higher feed cost (20 RMB increase in cost for each finishing pig) in this period.

Pork production cost per kg live weight in 1998 was analyzed by size of operation. Average cost per kg of live weight was lower than that in USA and Japan (**Table 7**). Family type pig production (<99 pigs) was the main type and accounted for 70 to 80% of live pigs (**Table 8**). Pigs from this type of production have lower lean percentage, lower feed cost, but higher labor cost than larger farms. Farms that sell 100 or more pigs per year accounted for 15-20% of production and produced pork with medium lean percentage. Pigs produced by these types of piggeries are mainly for local consumption and small cities. Opportunities for live animal and pork export from these types of units are small. State farms/or private intensive pig farms are more intensive piggeries, with better genetics, management and technology. Pigs produced by large state/private farms have higher lean percentage and usually are consumed in large cities or exported as live animals or pork products. Current pig productivity in state farms is similar to that found in developed countries, whereas the cost is higher than the USA but lower than in Japan. In the future there will be competition for pork exports between the state farms and developed countries. In combination with improvements in disease control, pork quality control, processing technology and marketing skills, the Chinese pig industry will be quite competitive.

**Table 7. Live pig production cost analysis in 1998 in RMB, adapted from Li and Zhang(2001)**

| Cost | China Family* | China Special household* | China State farm* | China Average | USA Average | Japan Average |
|---|---|---|---|---|---|---|
| Total cost | 6.94 | 6.82 | 7.42 | 7.05 | 7.17 | 20.49 |
| Labor | 1.36a | 0.44 | 0.41 | 0.76 | 1.01 | 3.44 |
| Feed | 3.55b | 4.13 | 4.40 | 4.00 | 5.03 | 12.52 |

* Family type=3 to 5 finishing pigs; special household= 5 to several thousands stock pigs; State farm=10000 to 50000 stock pigs; a= Higher labor cost for kg LW is high due to small scale; b= lower feed cost is due to use of rural by products

**Table 8. Number of pig farms and % of pigs produced by size of farm.**

| Sales | 1-99 | 100-499 | 500-2999 | 3000-9999 | 10000-50000 | 50000 above | Total |
|---|---|---|---|---|---|---|---|
| 1999 | 637,434 | 154,650 | 16,814 | 2,368 | 629 | 12 | 811,907 |
| | 78.5 | 19.0 | 2.1 | 0.3 | 0.1 | <0.1 | 100.0 |
| 2000 | 685,802 | 165,462 | 21,437 | 2,867 | 669 | 13 | 876,250 |
| | 78.3 | 18.9 | 2.4 | 0.3 | 0.1 | <0.1 | 100.0 |
| 2001 | 703,777 | 193,450 | 22,956 | 2,798 | 747 | 16 | 923,744 |
| | 76.2 | 20.9 | 2.5 | 0.3 | 0.1 | <0.1 | 100.0 |

**Table 9. Pig productivity of the key pork producing countries in 2000**

| | Stock x1000 heads | Slaughter x1000 heads | Kg of Pork x1000 t | CW (kg/pig) | Turnover[a] |
|---|---|---|---|---|---|
| World | 911,957 | 1,158,719<br>1,278,169* | 89,552 | 77.3<br>78.5* | 127 |
| China | 422,563 | 519,772<br>621,723* | 40,314 | 77.6<br>76.8* | 122 |
| USA | 59,337 | 97,926<br>103,000* | 8,532 | 87.1<br>90.6* | 165 |
| Germany | 27,049 | 42,800 | 3,850 | 90.0 | 158 |
| France | 14,635 | 26,898 | 2,312 | 86.0 | 184 |
| Canada | 12,242 | 19,963 | 1,67 | 83.9 | 163 |

Sources: FAOSTAT (2001) and China Statistics Yearbook (2001); *2004 data by FAO
a Turnover is slaughtered pigs as a % of total pigs on farms

# ▪ Challenges Facing the Chinese Pig Industry

## Low Individual Productivity and Low Turn Over Rate

In 2004, pig average carcass weight (CW) was 76.8 kg in China, which was lower than the world average (78.5 kg), US average (90.6 kg) and Brazil average (81 kg) (**Table 9**). Smaller CW in China is closely related to genetics. To achieve higher lean percentage and better pork prices, slaughtering houses are willing to pay more for smaller pigs. Lower dressing percentage caused by feeding methods and management, also contributed to the lower CW. Special cooking styles for baby pigs or specially fed small size breeds also contributed to the smaller carcass weight in China, but to a lesser degree. CW has increased by about 6kg in the last decade (**Table 1**). An increase in CW of 3kg in China will almost equal the entire Canadian pork production in 2004.

Turnover rate of pigs (slaughter as a % of total pigs on farms) in China is lower than the world average. Turnover percentage in China was only 46.6% in 1980; increased to 122% in year 2000; and 128% in year 2004. This is still much lower than the world average (127-130%) and much lower than developed countries (158-165%) (Table 9). Assuming a reasonable increase of 10% in turnover percentage in the next 10 years (increase to 138%), the current stocking rate of 485 million pigs and a carcass weight of 80 kg, then Chinese pork production will increase by 3.88 million tons. This increase is almost double the Canadian pork production of 1.9 million tons in 2005.

## Backyard Pig Farming

Because pig farming is a traditional family based farming practice, 75 to 80% of the pigs in China are still produced in rural backyards, resulting in overweight and fatty pigs. Only 20% to 25% pigs are produced by intensive piggeries and specialized pig-farming households. This situation causes many difficulties in disease control, genetic improvement, carcass quality, uniformity control, pork safety control, and marketing channels establishment. These challenges will negatively affect the potential of China to become a competitive pork exporter.

# ▪ Conclusion

China can be expected to continue its role as a pork powerhouse of the world. The present pattern of increases in productivity, lean yield and carcass weight will continue. Rather than becoming a new export market for existing pork producing countries, China will probably become a major international competitor in the pork export market. In the future, China will also influence all aspects of the world pig industry such as labor, feed ingredient trading, food processing, pork trading, live pig trading, equipment and technology transfer.

## References

FAO STAT(2001, 2004) World meat production and trade
Li, J.P. and Zhang, C.G. (2001) Effect of joining WTO on China pig industry and counter policies. www.cpst.net.cn [in Chinese]
Li, J. (2005) Meat production of three key large meat producing countries. Feed Panorama 6(6):15.
MOA (2004, 2005) Analysis of first quarter pork market. www.cav.net.cn [in Chinese]
NAST (2002) Key animal product supply and prediction in 2002.
Wang, J.X. (2001) Development and future of China pig industry. MOA Report.
Zhai, Y.X. (2001) Analysis of the role of WTO on Chinese agriculture. www.motherol.com [in Chinese]