

# Global Growth in Pork Production

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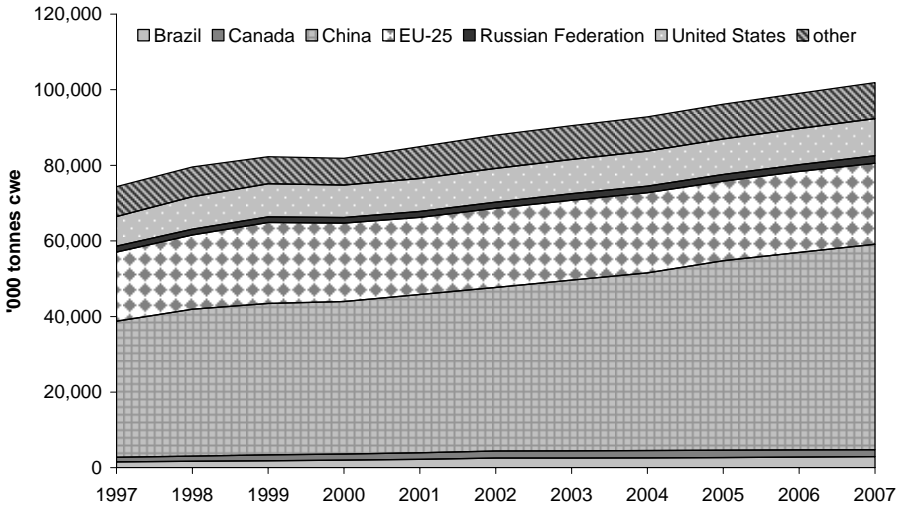
The global pork industry is evolving at a rapid pace. It is characterised by increased levels of global competition, expansion of industrialized production, vertically integrated supply chains and production of differentiated products to meet the needs of increasingly demanding consumers. For Canadian hog producers, gaining an appreciation of the global operating environment, especially the emergence of new hog production regions, is important in assessing the future direction and profitability of the industry and their own enterprises. This knowledge becomes even more acute when considering the current operating environment in Canada; an appreciating currency, high feed costs, labor shortages, processing sector restructuring and ever-increasing government regulation.

## ■ The Global Pork Matrix

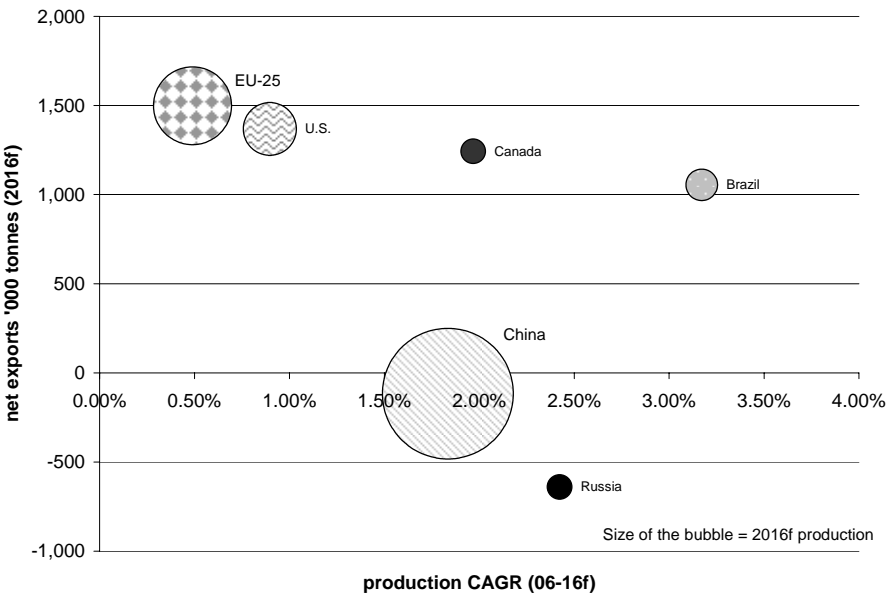
World pork production has increased more than 37% since 1997, from 74.4 million tonnes to 101.9 million tonnes in 2007. Over the same period beef production increased 11% while poultry production increased 38%. China continues to completely dominate global pork production, whereas the European Union's (EU) share of total production has fallen from close to 25% in 1997 to 21% in 2007, despite the addition of new member states, many of whom are traditional pork producing countries (**Figure 1**).

According to the Food and Agricultural Policy Research Institute (FAPRI) sustained global income and population growth will lead to an increase in per capita meat consumption and this will fuel growth in both meat (beef, pork and poultry) production and trade, which will reach 251.8 million tonnes and 22.8 million tonnes, respectively, by the end of the decade. The bulk of the increase in pork production is forecast to come from China, the EU-25, North America and Brazil (**Figure 2**).

**Figure1. World Pork Production, 1997-2007** (Source: USDA)



**Figure 2. Major Pork Producers in 2016f**



Source: FAPRI, f = forecast (all forecasts are depend on the baseline assumptions made in the FAPRI model)

## ■ The Economics of Pork Production

At a cursory level the profitability of hog production is dependent on six fundamental pillars;

- Access to feed grain
- Accommodation and other infrastructure costs
- Regulatory requirements (e.g. environmental legislation)
- Access to, and cost of, capital
- Labor costs and availability
- Management expertise and practices

Likewise, pork processing is dependent on access to raw materials (hogs), labor and capital, management expertise, regulatory requirements, infrastructure, technology adoption and access to end-users.

Access to feed grain is by far the most important cost driver for pork production across the globe. In all countries it accounts for at least half of all production costs. The innate volatility in feed grain prices also means that a particular region's competitiveness will ebb and flow over time. Countries like Brazil and Argentina benefit greatly from an abundance of feed inputs but there is also competition for this grain between the pork, poultry and beef sectors and issues with government intervention.

It would be folly to discuss the global pork situation without considering the increasing cost of production trends due to the growing competition for feedstuffs and the associated volatility in the feed market. U.S. ethanol production, the initial catalyst behind demand-induced price adjustments in grain and protein meal prices, is still expected to increase through 2008 and beyond. This is expected to continue despite recent overcapacity concerns in the U.S., on going logistical and transport challenges and some slow down in the construction of new plants. In many developing countries, the food versus fuel debate is expected to attract an increasingly level of attention from non-government organizations, consumer groups and government.

Risk management strategies will be increasingly important for hog producers competing for feed grains, but will be inherently more challenging to perfect. Flexibility on the part of livestock producers, such as the utilization of distillers dried grains with solubles (DDGS) and ongoing improvements in feed efficiency will differentiate the most sustainable hog operations.

Industrialized hog production is labor intensive. Access to affordable labor is becoming an acute issue in developed countries across the entire agricultural production spectrum. As production becomes more industrialized and the use

of technology increases, finding adequately trained labor in developing countries is also a constraint. The development of the trade in feeder hogs from Canada to the U.S. has been influenced by relative labor costs between the two countries and the fact that U.S. producers have ready access to corn that can be utilised to finish the hogs to slaughter weight, a production phase that requires less labor.

Access to capital is a requirement for any business. There are understandably huge disparities between the cost of capital across countries and across individual operations. For example, a farmer in Brazil would be faced with a higher peso denominated interest rate when seeking finance for a new hog operation than an integrator in Canada, who would be able to finance a similar capital project at a much lower dollar denominated rate. Likewise a meat multinational looking to invest in Eastern Europe would undoubtedly have a lower cost of capital than an existing family farmer operating in that region. The level of government support across regions also varies considerably and, as overall support to agriculture decreases, pork producers in some countries will find it increasingly difficult to remain cost competitive.

Across the board, but particularly in developed countries, the pork industry is being forced to operate within an increasingly stringent regulatory environment. Newer regulations govern everything from the environmental impact of hog farming to animal welfare standards and occupational health and safety requirements. For example, the costs associated with manure disposal is making hog production in Europe increasingly uneconomic. Attaining the necessary permits to build new hog production facilities will become increasingly time consuming and costly in the U.S. and Canada.

Industrialized agriculture requires the shift to large-scale production units that use standardized technology and management and are linked to the processor by either formal or informal arrangements. The implementation of more industrialized production practices and improved vertical coordination has completely revolutionised hog production in many countries. But this shift has also disenfranchised many small farm hog producers and associated businesses.

The pork industry has, and will continue to feel the effects of animal disease. Fortunately, the major disease outbreaks over recent years have impacted production levels and productivity rather than food safety or consumer acceptance. This puts the pork industry in an enviable position when compared to its competitors in the beef and poultry industries who have endured the negative effects of bovine spongiform encephalopathy (BSE) and highly pathogenic avian influenza, respectively. Minimizing the spread and the impacts of swine fever, porcine respiratory and reproductive syndrome (PRRS), circovirus and foot-and-mouth disease (FMD) on hog operations will

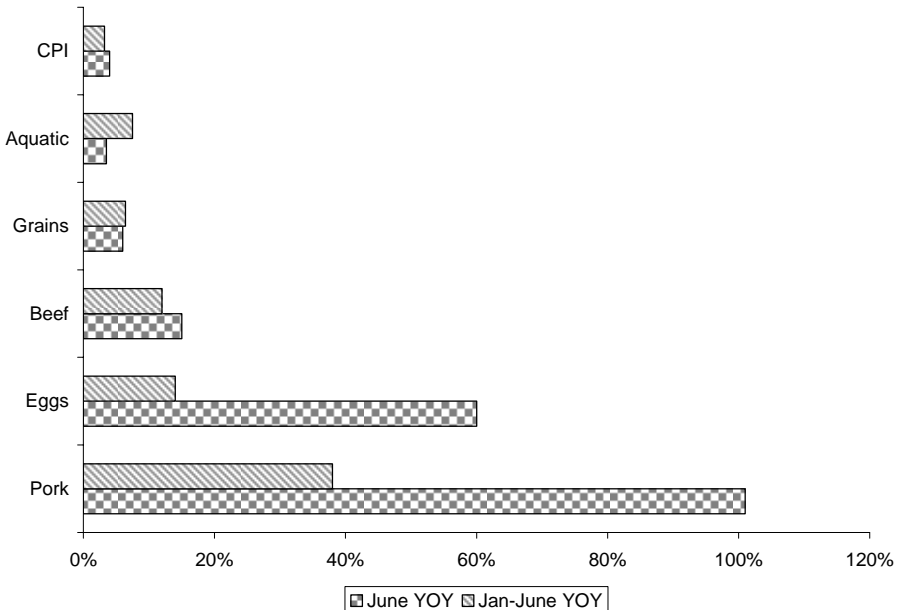
depend on management expertise and a commitment to industry-wide health management and disease control programs.

### ■ The China Effect

China was undoubtedly the most interesting market for meat in 2007 and it provides a fascinating insight into how the dynamics of production and trade competitiveness can change over a very short period of time. In the Chinese pork market in 2007, the influence of all six drivers of profitability mentioned above were evident.

The explosion in meat prices in China attracted widespread media and political attention. In June 2007, China’s consumer price index (CPI) rose to 4% while pork prices jumped a staggering 101% (Figure 3). In the later half of 2007, there was some downward adjustment in pork prices but prices remained well above 2006 levels.

**Figure 3. Chinese Inflation 2007** (Source: National Board of Statistics in China)



What the locals refer to as blue ear disease, thought to be PRRS along with high feed costs and persisting FMD have had a fairly dramatic impact on the world’s largest domestic pork industry. There have been varying reports on the number of hogs that have been culled and what other measures have

been put in place to curb the spread of PRRS but it is clear that domestic production has fallen.

While questions over the accuracy of Chinese agricultural statistics make precise analysis difficult it was clear that China's imports of pork were up more than 100% year over year in the first seven months of 2007. France has been the dominant supplier of pork to China, along with Denmark, Canada and the U.S. These countries are likely to continue to dominate pork shipments to this market. It is important to note that Brazil does not have plants eligible to export fresh pork to China although in September 2007 there were media reports that Chinese authorities were looking to certify a few Brazilian beef and pork plants.

The Chinese government will be investing heavily to revitalize the domestic pork sector. From a political and social perspective, it cannot afford to displace the farmer population at a faster speed than is already occurring, and food security remains a key government initiative. It will likely take a number of breeding cycles for domestic production to show signs of recovery. Look for China to play a bigger role in world grain markets as an importer as it attempts to rebuild domestic production. While it is difficult, if not impossible, to predict the length of time required to recover from blue ear disease and rebuild the Chinese hog herd, it seems reasonable to assume that it will be at least one to two years. Chinese government assistance to the domestic industry includes subsidies for sows, insurance for hogs, distribution of free vaccines, creation of a pork futures market, a cap on some feed costs and assistance with transport. Beyond the near future, China faces more significant challenges agriculturally, due to strengthening demand, especially for meat, and their limited water and agricultural land resources.

## ■ Conclusion

In the pork industry of next decade, successful industry participants will need to be more efficient and cost conscious to maintain and enhance their competitive position. How and where the handful of animal protein multinationals choose to make investments and subsequently, how these companies choose to utilize their geographically diversified productive capacity, will ultimately determine what new pork production regions emerge and challenge the traditional exporting countries, such as Canada. Continued awareness and analysis of the global pork operating environment will be necessary in determining the future directions of national and regional pork industries.