

## **Sponsors**

---

### **University of Minnesota**

College of Veterinary Medicine

College of Food, Agricultural and Natural Resource Sciences

Extension Service

Swine Center

Thank you to **IDEXX Laboratories** for their financial support to reproduce the conference proceeding book.

### **Production Assistant**

Janice Storebo

### **Formatting**

Tina Smith

### **CD-ROM**

David Brown

### **Logo Design**

Ruth Cronje, and Jan Swanson;  
based on the original design by Dr. Robert Dunlop

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, or sexual orientation.

# Changing trends in the global pork complex

Brett Stuart

Over the past year, hog production and international pork trade have come to dominate discussions within the livestock sector. As you might imagine, the focus on the industry is due, unfortunately, to problems related to production losses, feed costs, disease issues, and trade disruptions.

## World overview

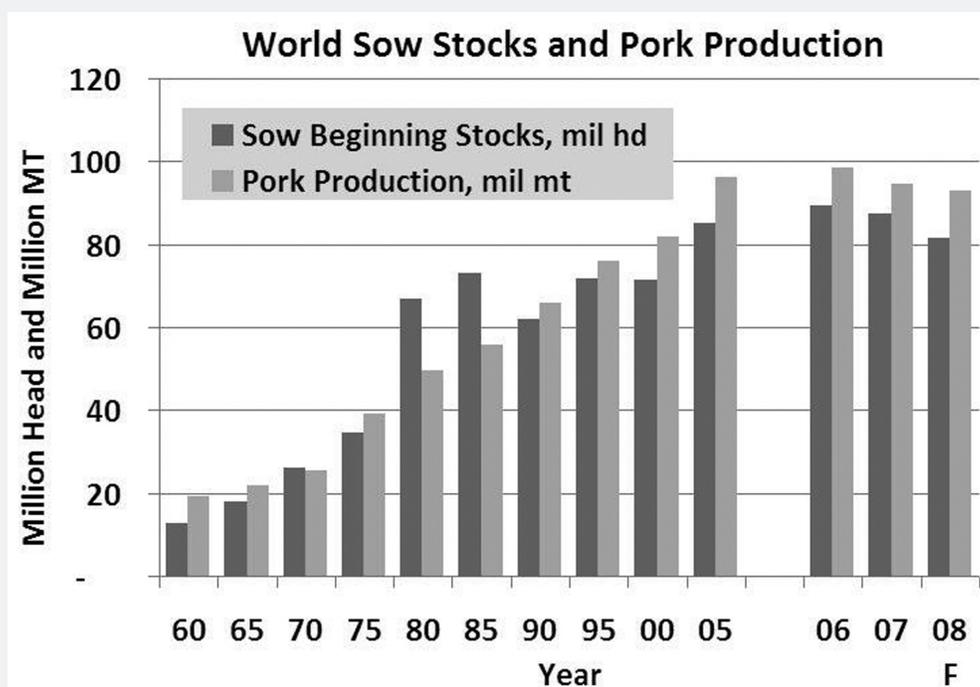
The world sow herd and associated pork production grew at a rapid pace from 1960 to 2006 as shown in **Chart 1 – World Sow Stocks and Pork Production**. However, 2007 and 2008 (forecast) show a strong trend reversal with sow/pork declines globally. The biggest factor has been Chinese disease losses and production declines. In mid-2007 Chinese blue-ear disease ravaged the countryside, killing 20+ million hogs. The ensuing winter brought harsh blizzards into key pork regions of China, further

stressing animal health, and the 2008 earthquakes in Sichuan province, further exaggerated losses. (**Chart 1**)

As pork prices rose, the government realized they needed to support producers and restructure the industry in order to maintain social order. Today, due to production incentives and new farm insurance programs, production is rising in China. The trend is a reduction in small “backyard” production toward more professionally managed and concentrated animal production operations. This shift will increase production output and improve pork quality.

China’s sow herd declined by 2.43 million head in 2007 and is expected to increase by roughly 1.5 million head in 2008.<sup>1</sup> The Chinese blue ear disease that ravaged China spread south into Vietnam where sow inventories are expected to decline by 4 million head in 2008.<sup>2</sup> The combined sow losses in these two countries in 2007 and 2008 represent losses in excess of the entire US sow herd.

**Chart 1: World sow stocks and pork production**



Source: USDA/FAS, Production, Supply, Disappearance tables, 2008

## Changing trends in the global pork complex

Keep in mind that 56 percent of the earth's hogs live in China. The following chart, **Chart 2 - World Pork Production** compares countries in terms of pork production. (Chart 2)

World pork production has continued to move toward greater concentration into a few nations. China, the US, EU and Brazil now account for 80 percent of global pork production (and 71 percent of all pork, beef and poultry production). Other producing countries; Australia, Mexico, Canada and Russia have suffered from increased input costs and/or imports from more efficient producing nations.

Feedgrain prices continue to pummel pork and poultry production globally and grain-fed beef production in N. America. The 2005 average Omaha cash corn price was \$1.77/bushel.<sup>3</sup> In July 2008, the Omaha price has been over \$6.50/bushel. While US pork producers feel pain over these higher feed costs, they are in much better shape than producers in other countries. Japan importers were booking corn imports in July 2008 for August delivery in excess of US\$10/bushel.<sup>4</sup> European prices are not far behind. Denmark, a key European producer is expected to scale back production by 10% in 2008<sup>5</sup> due to the higher feed costs.

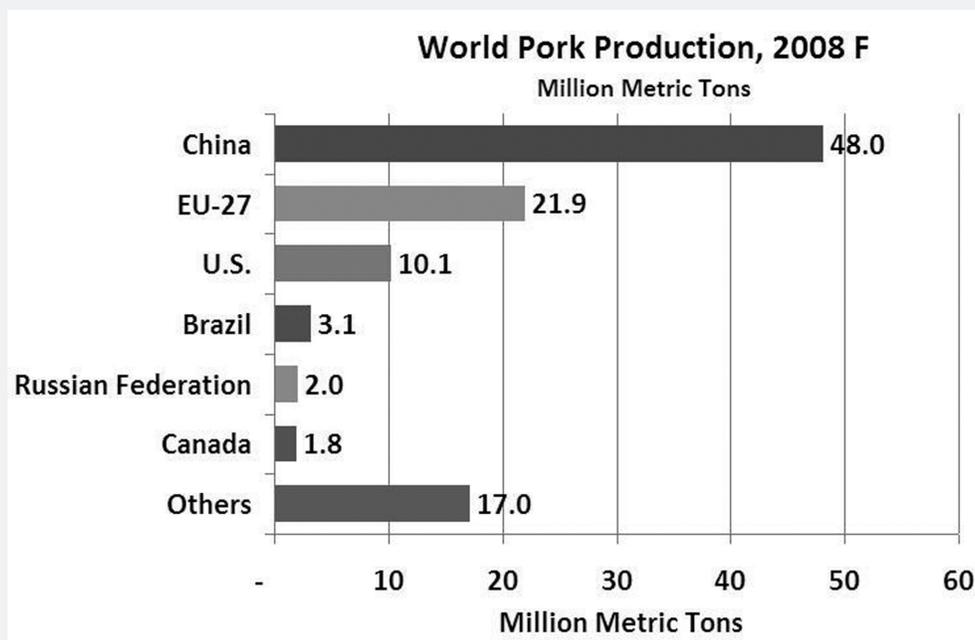
This same scenario is playing out around the globe. Droughts in Australia have limited feedgrain (mainly wheat) and pushed production costs to the breaking point. With the global biofuel industries firmly in place (mainly in the US and EU), these higher feedgrain prices will be a fixture for the foreseeable future.

Five nations and the EU-27 account for 82 percent of world consumption.<sup>6</sup> The two largest producers and consumers, China and the EU-27, are relatively self-sufficient in pork. The others are either major importers (Russia and Japan) or exporters (US and Brazil).

### Key trends affecting the global pork complex

- **Chinese protein demand.** Chinese pork consumption has increased 83 percent since 1980 to just over 92 million metric tons.<sup>7</sup> While there are currently 1.3 billion people in China, an estimated 700 million are subsistence farmers seeking to better their lives by moving to the cities. There will be major shifts to move this group into the higher standard of living as the remaining 600 million Chinese. Pork supplies will need to increase significantly.
- **Chinese pork production growth and self-sufficiency goals.** With over 90 percent of China's pork being derived from "backyard" farming, the move to commercialization holds potential for growth. The Chinese government has developed layers of subsidies and tax incentives to grow the commercial sector, and production has increased. Feedgrain supplies will be the major constraint to the continued migration towards commercial pork production.

**Chart 2: World pork production**



Source: USDA/FAS, OECD/FAO, Global AgriTrends forecasts

On top of input costs, environmental constraints have also affect production. Even in China, water and air quality issues are forcing producers to invest more in measures to reduce these negative impacts.

- **Sustainability.** Producers in the EU have been particularly hard hit by environmental constraints, forcing them to look toward other nations (Eastern Europe and Russia) in which to move large-scale hog production. Companies around the globe, but mainly in developed countries, are being pressured to justify/reduce their “carbon footprint”. While these causes may appear noble, cost increases are typically one result, possibly giving more advantages to less-developed nation producers (Eastern Europe, China).

- **Trade access.** The global meat complex is held in place by a series of key access bans, tariff rates, and subsidies. Were any of these key factors to change, volumes would immediately “re-balance”. Key bans include:

- ◆ **Brazil’s Foot and Mouth Disease (FMD) status:**

While many countries accept FMD-free regions as meat suppliers, a few key markets require the entire country to be FMD-free (which Brazil is not). The US, Japan, S. Korea, Mexico, and Canada, are a few examples that prohibit fresh/frozen meat imports from Brazil and other FMD afflicted suppliers. *These markets are all key buyers of US pork. Were this status to change in any of these key markets, volumes would shift.*

- ◆ **China’s lack of plant approval in South America:**

China has approved one poultry plant in Brazil but has stalled S. American attempts to receive access for pork. While Brazil is a key pork supplier to Hong Kong (and thus, indirectly China), shipments are prohibited for direct trade between China and Brazil.

- ◆ **Japan’s tariffs and subsidies:** Japan has a very complex import tariff referred to as a “gate price” system. All fresh/frozen pork imported at a value less than ¥523/kg must pay the difference between the pork’s value and ¥523/kg. This system was designed to prohibit low-value processing pork from the Japanese market. Widespread “over-invoicing” has circumvented the system somewhat but ongoing government indictments have created an unstable environment. Japanese pork production is highly-subsidized using a variety of government payments. Also a safeguard mechanism can be implemented against pork import surges to protect domestic producers.

- ◆ **Protectionism and home and abroad:** Protectionism has seen resurgence, driven by tighter economic conditions around the globe. A recent survey asked, “Is Trade Good for Your Country?” The results are shown in **Chart 3 – Growing Protectionism. (Chart 3)**

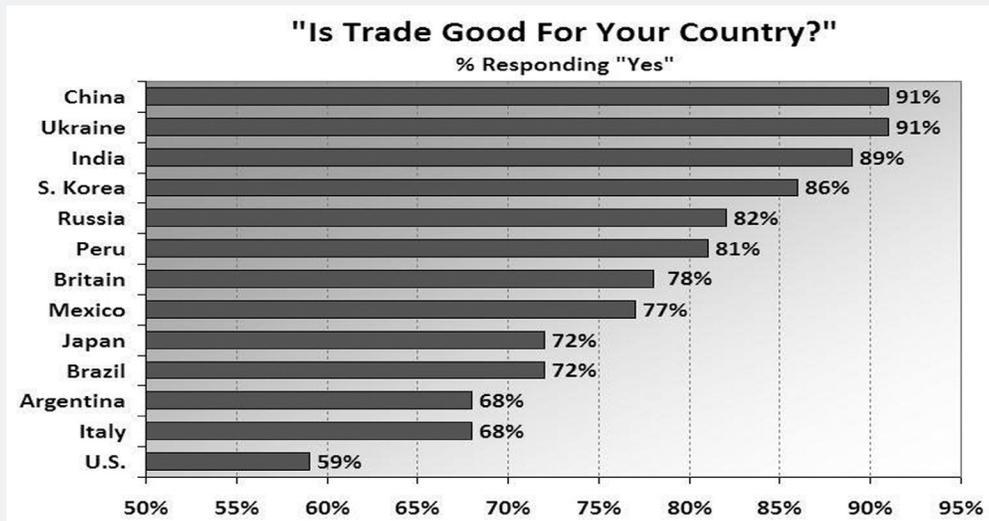
- ✕ **Exchange rates:** The continued weakening of the US dollar in relation to other currencies has had a significant and direct impact on exporting and competitive advantage. As the US dollar weakens, export buyers are using “stronger” currencies to buy US pork, thus having the effect of buying “cheaper” US pork. These currency rates also affect US competitors. Brazil, Canada, and the E.U. region have all seen strong currency appreciation against the US dollar. Rubles and yen have more “buying power” against the weak US dollar, then a strong euro and Brazilian real, driving larger US pork exports. **Chart 4 – Currency Fluctuations Against the US Dollar** shows the recent percent movements. **(Chart 4)**

- ✓ **US production and export-ability.** The abundant feedgrain supplies (even at higher prices) and weak US dollar have met with Chinese supply issues, ballooning US export volumes. **Chart 5 – US Pork Exports and Percent of Production** shows the historical growth rates of these US export volumes. **(Chart 5)**

## References

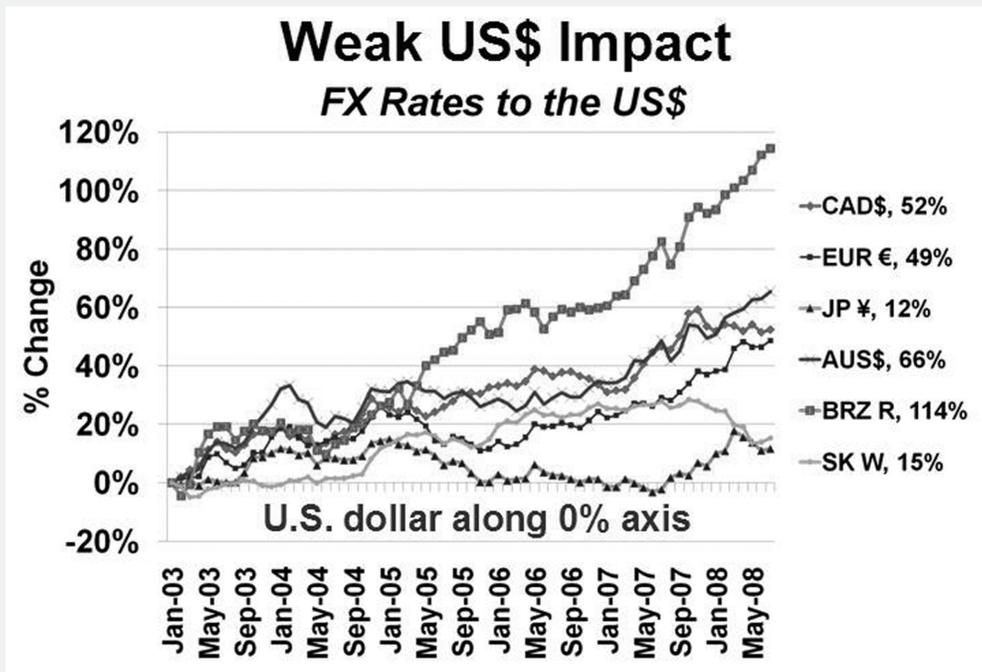
1. USDA/FAS, Production, Supply, Disappearance tables, 2008, Global AgriTrends forecasts
2. USDA/FAS, Production, Supply, Disappearance tables, 2008
3. USDA/AMS, Grain Market News, 2008
4. Per conversations with trade
5. Per conversations with trade
6. USDA/FAS, Production, Supply, Disappearance tables, 2008
7. USDA/FAS, Production, Supply, Disappearance tables, 2008

**Chart 3: Growing protectionism.**



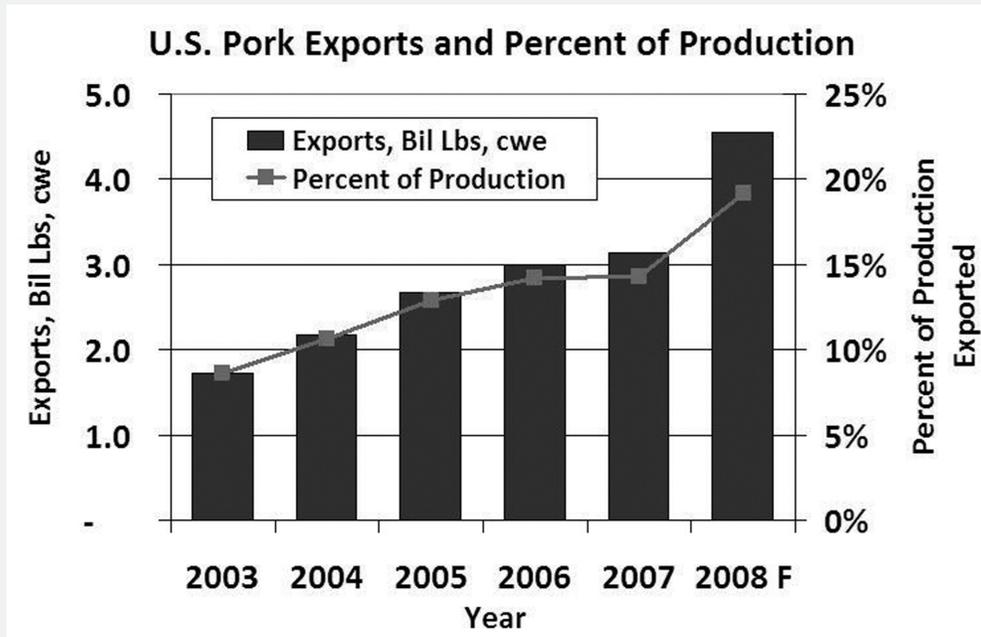
Source: Newsweek

**Chart 4: Currency fluctuations against the US dollar**



Source: Pacific Exchange Rate Service

Chart 5: US pork exports and percent of production



Source: USDA/ERS, USDA/NASS, Global AgriTrends Forecasts