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Abstract

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Market Integration in the North American Hog Industries

Mildred M. Haley

In 15 years, Canadian hog exports to the United States have increased by more than eight-fold. Canadian hogs have flowed into the U.S. in response to significant structural changes in the U.S. hog industry, concurrent with policy changes in Canada. This, combined with a strong U.S./Canadian dollar exchange rate, an open border, and pronounced Canadian breeding herd efficiencies created incentives to expand Canadian hog operations. About 8 percent of the 100 million hogs slaughtered in the U.S. in 2004 will originate in Canada. Market integration is not specific to just the U.S.-Canadian hog industries, but encompasses many commodity sectors in an era of greater trade openness.

What Is the Issue?

The United States imported 8 million hogs from Canada in 2004, far eclipsing the 1 million head imported just 15 years ago. The composition of hog imports has changed over time as well. In 1989, just 16 percent of imported Canadian hogs were feeder pigs (young pigs weighing between 10 and 60 pounds), versus close to 65 percent of hog imports in 2004. The rising influx of Canadian hogs has stirred up considerable controversy in the industry. This growth and re-composition of U.S. demand for Canadian hogs raises two questions: What economic factors changed to create the Canada-to-U.S flow of hogs? Why are hog imports now mostly feeder pigs?

What Did the Project Find?

The U.S. and Canadian hog industries have become closely integrated, with Canada exporting increasing numbers of hogs and pigs to the United States for finishing and/or slaughter. Prior to policy changes in Canada, and structural change in the United States, it was reasonable to talk about "the U.S. pork industry" and "the Canadian pork industry" as separate, stand-alone industries, because there was so little integration between them. But today, it is more accurate to talk about a North American pork industry, in which significant numbers of low-cost feeder pigs are produced in Canada, exported to U.S. Corn Belt States for finishing on low-cost U.S. corn and soybean meal, and then slaughtered in large, highly efficient U.S. processing facilities.

The U.S. pork industry has undergone significant restructuring in the last 20 years, resulting in packer/processor demand for hogs in excess of U.S. supply. There are now fewer, often very large operations that specialize in one stage of hog production, rather than many smaller operations in Corn Belt States (which often followed the complete production process, from breeding and birth of pigs to feeding hogs to slaughter weight). Now, operations that feed hogs from weaning to slaughter weight (called finishing operations) are particularly prevalent, because they are conducive to large-

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scale production and scale economies. Demand for feeder pigs derives from these finishing operations, which are largely centered in the Corn Belt-particularly in Iowa-where feed costs are relatively low.

At the same time, factors including policy change in Canada have created a supply of hogs in excess of Canadian slaughter capacity. The Canadian Government sharply reduced its subsidies to agriculture in the mid-1990s, both to reduce the Federal deficit and to meet its WTO commitments. The 1995 abolition of the Western Grain Transportation Act (WGTA), which subsidized rail transport of grain, created an incentive to produce livestock in the Western Provinces, a region historically dedicated to grain production. The absence of transport subsidies made shipping wheat and barley to coastal export points less profitable. Instead, marketing grain through livestock-particularly hogs-has provided a profitable alternative use for grain.

Why are U.S. hog imports from Canada mostly feeder pigs? The Canadian hog industry has gained a competitive edge from breeding herd efficiencies. By 2003, Canadian producers averaged 3.4 pigs per animal per year more than in the United States, largely due to the cooler Canadian climate and lower herd densities. Canada's cooler climate is less hospitable to swine diseases and improves lactation quantity and quality in nursing sows, thus enhancing litter health. The U.S. breeding herd has also become more efficient with the exit of small, inefficient farrow-to-finish operations. However, there remains a wide disparity between Canadian and U.S. efficiency indicators, suggesting why Canadian pigs are competitive with feeder pigs produced in the United States.

Another factor is the open-border situation that now characterizes U.S.-Canadian live hog trade. U.S. packers can "outbid" Canadian packers for slaughter hogs. U.S. packers can do so because of lower costs that derive in part from lower U.S. wages and more flexible work rules. Work rules in the U.S. allow Saturday slaughters and second shifts that have never been common practice in Canada. Combined with the above factors, a strong U.S./Canadian dollar exchange rate has created incentives to expand hog operations in Ontario, where hog production has been an institution for years, and start production in Manitoba, a grain-surplus region.

How Was the Project Conducted?

The conceptual economic framework used in this report combines expert knowledge of the U.S. and Canadian hog industries with USDA and Canadian data sources to provide a picture of market dynamics over the past 15 years. Key data sources include USDA's National Agricultural Statistics Service and Agricultural Marketing Service, Statistics Canada, and the Iowa State Department of Agriculture.