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## **Canadian Perspective**

*Edward W. Tyrczniewicz*

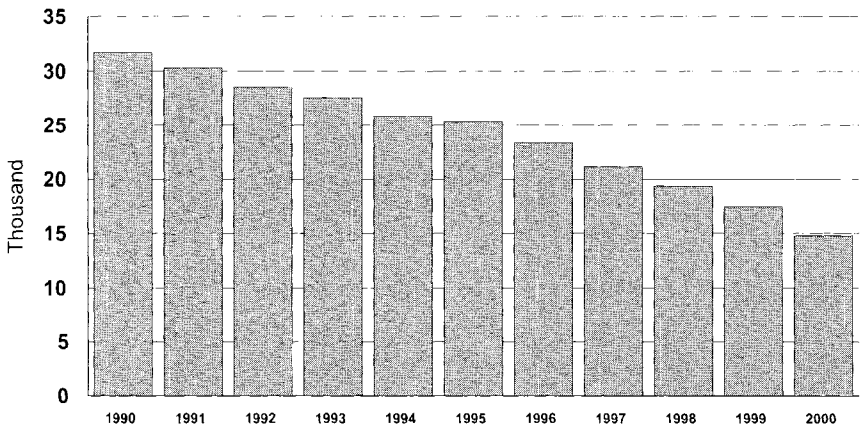
Meyer and Rice have done a good job of outlining the implications for trade tensions and disparities arising from structural impacts of NAFTA as applied to the U.S. and Canadian pork sectors. I generally agree with their analysis and conclusions. My remarks will focus on two areas: further elaboration on Meyer's point that competitive pressure of generally larger, more efficient units will drive the hog production sectors of all three countries over the next 20 years, and a point that neither author mentioned, namely the increasing opposition to large-scale hog operations.

With respect to concentration in the Canadian hog sector, Figures 1 and 2 illustrate that the number of hog farms has decreased by more than 50 percent during the period 1990-2000. At the same time, the number of hogs per farm has almost tripled. What these numbers do not address is the change in ownership structure of the production units. One term that is often applied to the evolving structure is "production system franchising."

*Successful Farming* provides a list of the 50 largest commercial pork producers in North America in 2000. The top five producers account for almost 50 percent of the sows identified by this listing, with Smithfield Foods alone accounting for almost 25 percent. The top three producers have expanded significantly between 1999 and 2000. Seven Canadian producers make up about six percent of the sows, while four Mexican companies account for just under five percent.

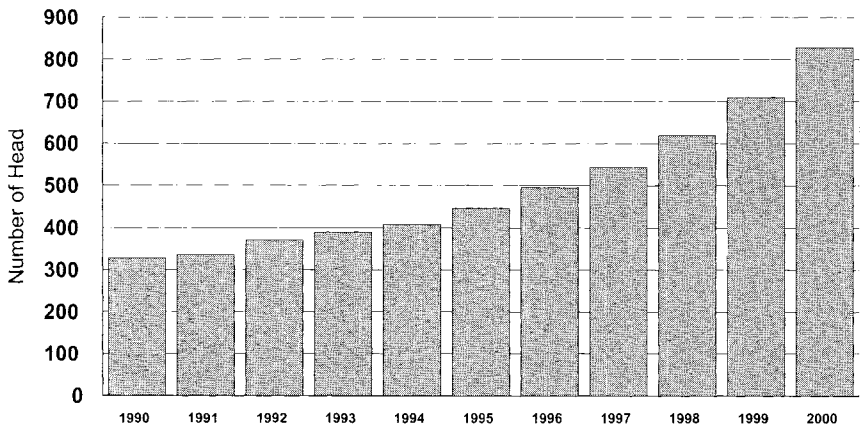
An obvious question is... where will future growth in hog production take place? Table 1 illustrates the cost per market hog for various sizes of production units in selected regions and countries. One clear conclusion from this Table is that costs per market hog decline as size of production unit declines, regardless of location. A second observation is that lowest production costs are to be found on the Canadian Prairies, the U.S. Corn Belt and the South

**Figure 1:     Number of Canadian Hog Farms, January 1, 1990-2000.**



Source: Statistics Canada

**Figure 2:     Average Number of Hogs on Canadian Hog Farms, January 1, 1990-2000.**



Source: Statistics Canada

Eastern United States. These results are consistent with where hog production has been expanding.

**Table 1: Total Costs Dollars Per Market Hog For Selected Regions/Countries.**

<b>Region/Country</b>	<b>Size of Production Unit</b>			
	<b>180 Sow</b>	<b>600 Sow</b>	<b>1200 Sow</b>	<b>3000 Sow</b>
US West Corn Belt	84.86	79.71	76.64	72.87
US East Corn Belt	89.41	83.94	80.13	75.49
US South East	92.35	86.09	82.96	78.88
US Mountain	97.48	91.09	87.85	83.66
Maritimes	106.15	96.92	94.00	89.26
Quebec	102.34	93.00	89.81	84.86
Ontario	92.57	84.24	79.28	73.22
Eastern Prairies	80.78	71.16	68.48	63.82
Western Prairies	89.02	80.64	77.76	72.63
Netherlands	185.82	154.23	150.24	143.48
Denmark	180.58	149.82	145.28	138.03

Source: Martin

**Table 2: Factors Limiting Hog Production.**

<b>Factor</b>	<b>U.S.</b>	<b>Russia</b>	<b>Denmark</b>	<b>Canada</b>	<b>Poland</b>	<b>Netherlands</b>
Land	X	X	X	X	X	X
Capital		X	X		X	X
Feed Grains		X				X
Environment	X		X	X		X
Disease	X				X	X
On-farm Technology		X			X	
Processing Technology		X			X	
Distribution		X				
Economic/						
Political Stability		X				
Animal Rights			X			X
<b>Factor</b>	<b>China</b>	<b>Taiwan</b>	<b>Mexico</b>	<b>Korea</b>	<b>Japan</b>	<b>Brazil</b>
Land		X		X	X	
Capital	X			X		X
Feed Grains	X	X	X	X	X	
Environment		X		X	X	
Disease	X	X		X		X
On-farm Technology	X		X			
Processing Technology	X		X	X	X	X
Distribution	X		X			X
Economic/						
Political Stability			?	X		X
Animal Rights						

Source: Giordano

But will hog production continue to expand in these areas? Table 2 provides a summary of factors limiting hog production in various countries in the world. It is interesting to observe that environmental concerns are identified as the limiting factor in both Canada and the United States. For Mexico, there are a number of limiting factors including availability of feed grains, on-farm technology, processing technology, and distribution.

These observations lead into the second area of my remarks, namely why is there growing apprehension in the public mind about the growth of intensive hog operations? I have had the opportunity to chair a panel that looked into sustainable livestock development in Manitoba. The panel obtained some first hand reactions to that question, and recently released its report. In essence, there are four main reasons for public apprehension:

- experiences from other jurisdictions with large scale livestock operations;
- local “horror stories;”
- perceptions of inadequate monitoring and enforcement of environmental regulations;
- and perhaps most importantly, declining familiarity with what actually goes on at a large farm/production unit.

The key environmental issues were water quality, odor, disease transmission, and swine housing. The key socio-economic issue was displacement of family farms by large corporate “factory farms.”

How significant are these concerns and will they impact future development of the hog sector in Canada and the United States? The expression “beauty is in the eye of the beholder” springs to mind. Opposition to large-scale livestock operations is strongly held by many rural nonfarm residents, smaller farmers, and urban environmentalists and better organized than proponents of intensive livestock operations. To dismiss this opposition as the babble of a small number of environmentalists who will someday find something else to complain about would be short sighted and foolish. As to the evidence brought forward in support of the claims of environmental damage by large-scale livestock operations, there is need for further scientific scrutiny.

On balance, I believe that further expansion of hog production in Canada and the United States can take place provided that three challenges are adequately addressed. These challenges are:

- to think in terms of “sustainable livestock development,” i.e., environmental stewardship and social issues, as well as economic viability. To restrict our thinking and analysis only to economic considerations is unlikely to foster the longer run development of the hog sector.
- credible scientific information, and not just rhetoric, must be brought to the debate. This requirement will be increasingly challenging as data become more difficult to obtain, in no small measure the result of increased concentration of ownership of production and reluctance to make proprietary information accessible to researchers.
- we must move beyond talking to ourselves on these issues. Although trade and marketing economists and large commercial farmers bring a high degree of knowledge to discussions such as this workshop, perhaps the viewpoints of environmental economists and social activists would have pushed us into thinking in a broader context.

## REFERENCES

- Giordano, Nick. 2000. “Factors Limiting Hog Production”. *Western Hog Journal* . (Special Edition - Banff Pork Seminar). p 17.
- Gregory, Heather. 2000. *Quarterly Pork Report April-June 2000*. Agriculture and Agri-Food Canada. July.
- Martin, Larry. 2000. “Costs of Production of Market Hogs”. *Western Hog Journal* (Special Edition - Banff Pork Seminar). p 24.
- Tyrchniewicz, E.W. 2000. “Agricultural Economics and Sustainable Development: A Courtship of Two Solitudes”. *Canadian Journal of Agricultural Economics*. Forthcoming December 2000 (Invited CAES Fellows Address).
- Tyrchniewicz, Ed, Nick Carter, and John Whitaker. 2000. *Sustainable Livestock Development in Manitoba: Finding Common Ground*. Report prepared by the Livestock Stewardship Panel for the Government of Manitoba.

Statistics Canada. various. *Number of Farms Reporting Pigs and Average Number of Pigs Per Farm*. Cat. No. 23-603-UPE.

Statistics Canada. various. *Pigs on Farms, Sows Farrowed, Pigs Born and Farrowing Intentions*. Cat. No. 23-603-UPE.