

The Market for U.S. Meat Exports in Eastern Canada

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THE MARKET FOR U.S. MEAT EXPORTS IN EASTERN CANADA

Trade in livestock and livestock products between the United States and Canada has become controversial in recent years. Trucks containing Canadian cattle have been stopped at the U.S. border, for example, and the importation of live Canadian hogs in the fall of 1998 was widely perceived as a contributor to the slaughter capacity problem in the United States at that time. At the same time, however, the United States has found an important export market for beef and pork in Canada, and these U.S. exports may increase substantially in the future.

The purpose of this report is to describe some of the factors that have caused trade patterns between the two countries to change and some opportunities that may exist for additional trade between the two countries. The first section of the report describes meat and live animal trade in both directions. Then, we attempt to explain why these patterns have occurred and to project how they might evolve in the future. A critical factor in both the trade pattern change and in projected trade is the strength of the Canadian dollar. Therefore, we spend some time describing why the Canadian dollar has continued to depreciate and argue that this depreciation may continue. The final section of the report describes the type of products the United States has been successfully exporting and describes some export opportunities that will continue to exist, even if the Canadian dollar continues to weaken.

Trade Patterns

Figures 1 and 2 compare U.S. and Canadian pork and beef production since 1960. As shown, production of beef and pork in both countries has increased during the period, but the United

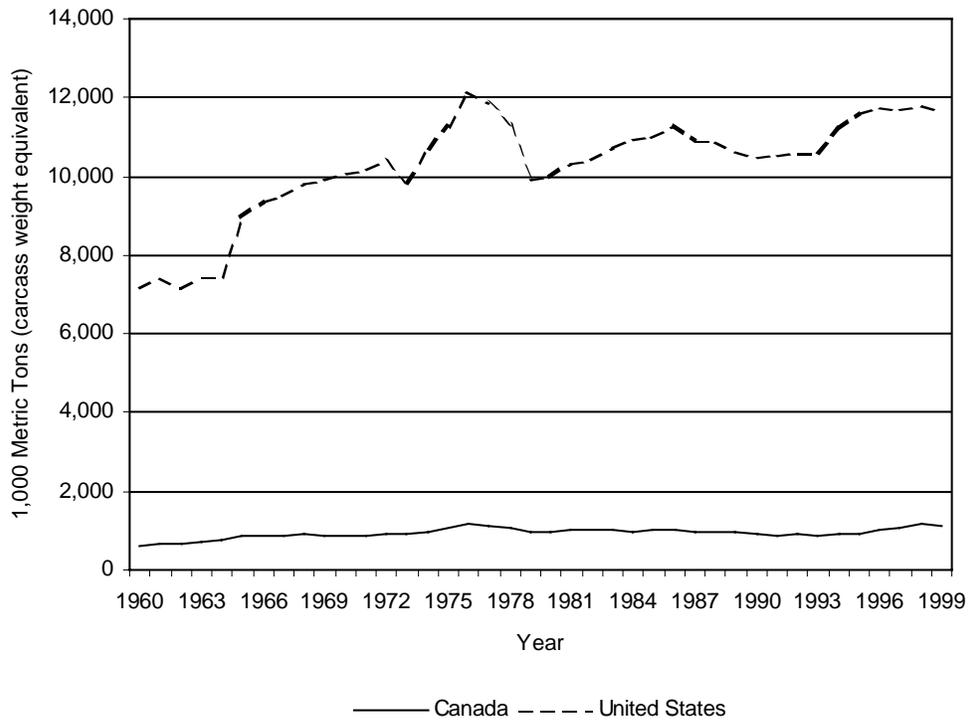


Figure 1. Canadian and U.S. beef production, 1960-99.
 Source: USDA 1999b. 1998 data are estimates; 1999 data are projections.

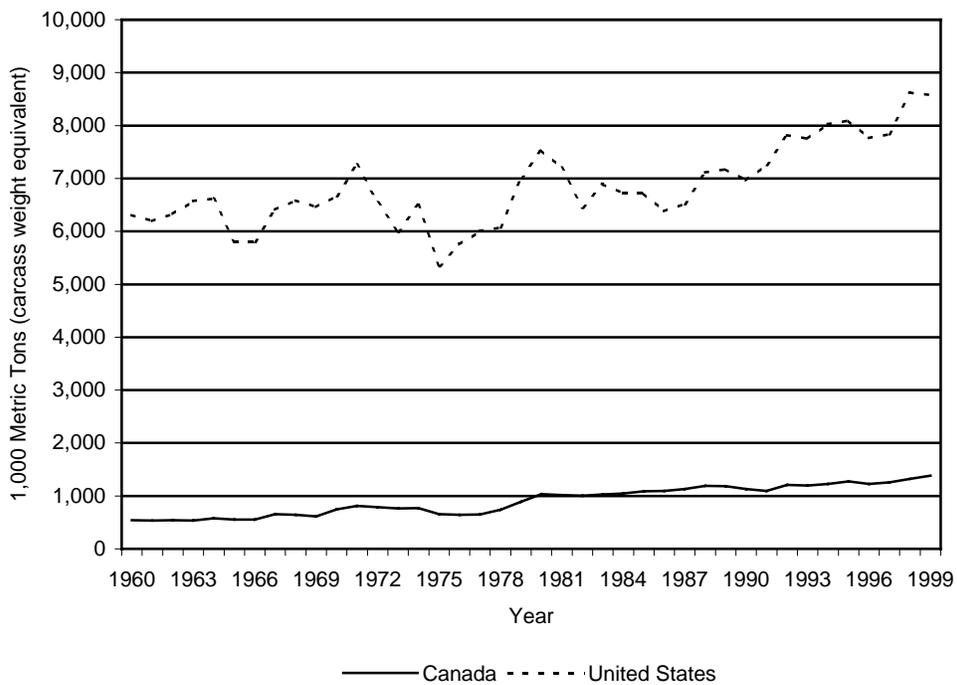


Figure 2. Canadian and U.S. pork production, 1960-99.
 Source: USDA 1999b. 1998 data are estimates; 1999 data are projections.

States clearly dominates Canada both in terms of production volume and production growth. In 1998, the United States produced 11.80 million metric tons of beef and 8.62 million metric tons of pork, compared with Canadian beef production of 1.17 million metric tons and pork production of 1.32 million metric tons (about as much beef and pork as Iowa produces).

Figures 3 and 4 show trends in Canadian production, consumption, and trade since 1960. It is clear from these figures that Canada has experienced export-led growth in both pork and beef. For beef, imports have also increased during the period, so net exports are relatively small. However, because Canada was a net beef importer for almost the entire 1960-98 period, the country's emergence as a net exporter has been impressive. In 1998, Canada ranked fourth in volume terms among the world's beef-exporting countries. As shown in Figure 3, Canada's pork situation is even more dramatic. With exports of 425,000 metric tons in 1998, Canada exported more than 30 percent of domestic pork production and ranked third among exporting countries.

When live animal trade is added to meat trade, Canada's export ability becomes even more apparent. Table 1 shows Canadian exports of live cattle and hogs to the United States in 1998, almost all of which were shipped to slaughter plants for processing. The carcass equivalent of all Canadian meat and live animal exports to the United States approximately equals total U.S. beef and pork exports to all countries outside of North America (based on a mature carcass weight for all live animals). In other words, all the red meat exported out of North America is from animals born in Canada. Table 2 shows the much smaller flow of U.S. live animals to Canada.

Despite the enormous surplus of red meat in Canada, the United States exports significant quantities of beef and pork to Canada. As shown in Table 3, Canada was the third largest market for U.S. beef by volume and value in 1998. For U.S. pork, Canada was the fourth largest market

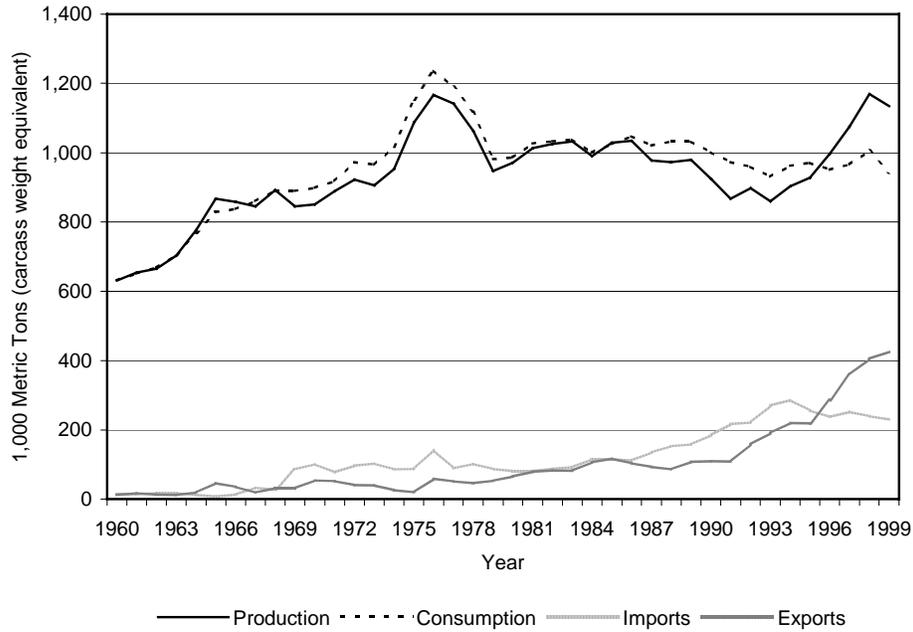


Figure 3. Canadian beef production, consumption, imports, and exports, 1960-99. Source: USDA 1999b. 1998 data are estimates; 1999 data are projections.

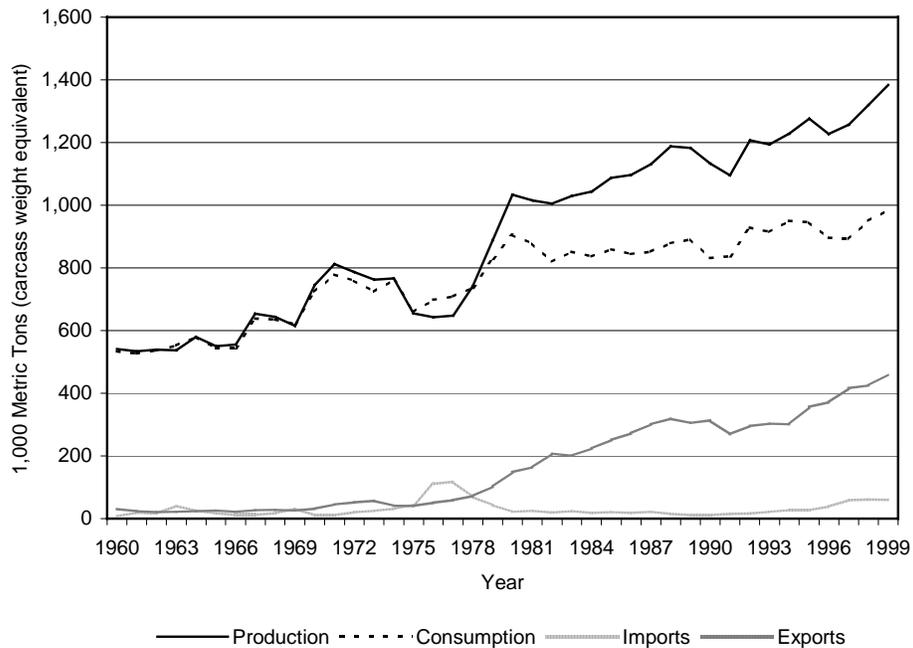


Figure 4. Canadian pork production, consumption, imports, and exports, 1960-99. Source: USDA 1999b. 1998 data are estimates; 1999 data are projections.

Table 1. Canadian livestock exports to the United States, by province and port of exit, 1998.

	B.C.		Alberta		Total	Sask.	Manitoba	Ontario			Quebec	Total 1998
	Washington	Idaho	Montana	North Dakota		Total	Mich.	New York	Total	Vermont		
Slaughter Cattle and Calves	(head)											
Steers and Heifers	4,971	220,278	320,537	540,815	16,830	151,469	168,299	47,622	23,793	71,415	5,509	791,009
Cows	26,092	423	0	423	11,445	103,004	114,449	11,167	69,922	81,089	21,993	244,046
Bulls	3,251	41	0	41	3,076	27,680	30,756	383	3,551	3,934	3,646	41,628
Total Slaughter Cattle	34,314	220,742	320,537	541,279	31,351	282,153	313,504	59,172	97,266	156,438	31,148	1,076,683
Feeder Cattle and Calves	1,946	23,169	34,140	57,309	3,913	35,218	39,131	17,300	9,361	26,661	18,321	143,368
Total Cattle and Calves	36,260	243,911	354,677	598,588	35,264	317,371	352,635	76,472	106,627	183,099	49,469	1,220,051
Hogs												
Slaughter	20,871	136,161	402,781	538,942	100,585	905,265	1,005,850	813,956	7,315	821,271	26,795	2,413,729
Feeder	1,359	4,394	12,112	16,506	93,150	838,353	931,503	350,792	367	351,159	264	1,300,791
Total Hogs	22,230	140,555	414,893	555,448	193,735	1,743,618	1,937,353	1,164,748	7,682	1,172,430	27,059	3,714,520

Source: Agriculture and Agri-Food Canada 1999a. USDA/APHIS data; province of origin estimated by Agriculture and Agri-Food Canada.

Table 2. Canadian imports of U.S. livestock, by province, 1998.

	British Columbia ^a	Alberta ^a	Saskatchewan	Manitoba	Ontario	Quebec	Atlantic Provinces	Total Canada
Slaughter Cattle	(head)							
Steers	—	—	0	0	11,790	0	220	12,659
Heifers	—	—	0	0	3,661	0	249	3,910
Cows	—	—	0	0	5,948	9,642	1,755	17,345
Bulls	—	—	0	0	282	0	136	418
Total	648	1	0	0	21,681	9,642	2,360	34,332
Slaughter Calves	76	1,493	0	0	1,231	689	0	3,489
Feeder Cattle	4,058	23,592	1,734	0	594	0	0	29,978
Feeder Calves	1,531	4,708	0	101	10,926	9,753	0	27,019

Source: Agriculture and Agri-Food Canada 1999a.

^aSex breakdown not available for slaughter cattle. Total represents all cattle types for British Columbia and Alberta.

Table 3. U.S. and Canadian beef and pork exports, top six markets, 1998.^a

1998 Rank/Country	Volume (metric tons)	Value (\$1,000)
U.S. Beef and Veal Exports		
1. Japan	368,703	1,302,348
2. Mexico	142,216	397,756
3. Canada	87,389	284,999
4. Republic of Korea	53,457	142,282
5. Hong Kong	11,770	34,422
6. Taiwan	7,297	28,113
U.S. Pork Exports		
1. Japan	173,636	595,806
2. Mexico	51,525	99,064
3. Russian Federation	41,419	71,859
4. Canada	39,588	95,271
5. Hong Kong	21,500	29,534
6. Taiwan	13,421	14,476
Canadian Beef and Veal Exports		
1. United States	327,368	1,166,400
2. Japan	21,541	86,900
3. South Korea	3,845	14,600
4. Mexico	3,544	8,700
5. Taiwan	1,321	6,800
6. Hong Kong	1,197	3,600
Canadian Pork Exports		
1. United States	227,288	651,862
2. Japan	92,977	262,947
3. Russia	20,166	28,689
4. Hong Kong	26,296	26,814
5. Australia	9,163	17,475
6. New Zealand	7,839	16,783

Source: U.S. Data: USDA 1999a; Agriculture and Agri-Food Canada 1999; Canfax Research Service 1999.

^aCalendar year, by volume; product-weight basis; fresh, frozen, and preserved.

by volume and the third largest market in value terms. Tables 4, 5, and 6 show Canadian dressed beef and pork exports and imports by country of destination or origin.

Forces Driving U.S.–Canadian Red Meat Trade

One key to understanding recent changes in U.S.-Canadian trade patterns is to realize that in 1988 the United States signed the U.S.-Canada Free Trade Agreement with a country that has almost twice as much arable land per capita and slightly more pasture land per capita than does the United States. The impact of this deal was to create a single free-trade zone with greater export potential than the United States had alone. From a U.S. perspective, the average amount of agricultural resources per capita increased when it entered into this free-trade deal. Freer trade with a country with more agricultural resources meant that, on average, consumers of farm commodities in the United States would benefit and, on average, the owners of farmland would lose. We also know, however, that most people in both countries gain after such deals are signed and that the benefits to those who gain will always outweigh the costs to those who lose.

The United States also became more internationally competitive as a result of having access to these additional agricultural resources. Had nothing else happened, we would have seen a modest increase in grain and livestock prices in Canada and a very slight decrease in those prices in the United States. However, all else did not remain the same. In particular, Canada removed grain transportation subsidies and followed macroeconomic policies that caused the Canadian dollar to depreciate against the U.S. dollar.

Removal of Grain Transportation Subsidies

In 1988, Canada replaced a set of grain transportation subsidies with large direct payments to producers. The effect of these subsidies had been to draw grain out of Canada's prairie

Table 4. Canadian dressed meat exports, by country of destination, 1998.

	United States	Japan	Mexico	South Korea	Other	Total
Beef	(metric tons)					
Carcasses	80,398	38	0	0	43	80,479
Cuts, Bone-in	25,138	2,919	478	1,580	1,351	31,466
Cuts, Boneless	113,124	14,305	3,503	2,542	1,435	134,909
Pickled and Cured	60	5	2	0	520	587
Cooked and Canned	33	0	0	0	0	33
Prepared	72	0	3	0	5	80
Trimming	53,248	254	77	0	220	53,799
Offals	8,547	5,249	2,277	76	17,168	33,317
Other	54,584	830	2,097	509	920	58,940
Canned	0	0	0	0	0	0
Total Beef	335,204	23,600	8,437	4,707	21,662	393,610
Veal						
Carcasses	4,804	0	0	0	5	4,809
Cuts, Bone-in	1,360	2	0	1	30	1,393
Cuts, Boneless	797	23	0	37	13	870
Trimming	84	0	0	0	0	84
Offals	104	0	49	0	6	159
Other	2	0	0	0	0	2
Total Veal	7,151	25	49	38	54	7,317
Pork						
<i>Fresh and Frozen</i>						
Carcasses	8,810	22	1,719	0	198	10,749
Hams	32,557	10,331	638	0	22,907	66,433
Backs, Loins	34,051	26,457	615	0	4,015	65,138
Bellies	19,205	12,459	1,856	3,130	4,024	40,674
Shoulder, Butt, Picnic	45,807	14,984	3,266	392	10,786	75,235
Side and Regular	14,795	243	0	57	3,141	18,236
Other Boneless	18,405	2,970	4,277	1,792	30,982	58,426
Other Bone-in	3,354	76	1,106	307	31,849	36,692
Offals	13,988	1,451	14,908	0	20,554	50,901
<i>Processed</i>						
Hams, Cured	15,772	3	20	0	217	16,012
Backs, Loins	1,108	0	0	0	18	1,126
Bellies, Side Bacon	11,372	24	211	0	1,864	13,471
Shoulder/Butt/Picnic/ Cottage Roll	3,519	2	0	0	215	3,736
Pickled in Barrels	1,541	0	0	0	3,609	5,150
Canned	57	0	0	0	5	62
Others	2,440	15,877	82	0	704	19,103
Total Pork	226,781	84,899	28,698	5,678	135,088	481,144

Source: Agriculture and Agri-Food Canada 1999a.

Table 5. Canadian beef and veal imports, by country of origin, 1998.

	United States	Australia	New Zealand	European Union	Uruguay	Argentina	Brazil	Total
	(metric tons)							
Beef								
Carcasses	19	0	5	0	0	0	0	24
Cuts, Bone-in	4,400	283	150	0	0	0	0	4,833
Cuts, Boneless	63,496	36,538	44,058	0	1,013	100	0	145,205
Pickled and Cured	54	0	0	0	0	0	0	54
Cooked and Canned	1,631	1,088	2	47	194	1,315	1,788	6,065
Prepared	1,876	0	0	0	0	0	0	1,876
Trimming	647	0	0	0	0	0	0	647
Offals	10,893	0	66	0	26	0	0	10,985
Other	0	0	0	0	0	0	0	0
Blood	1,345	0	0	0	0	0	0	1,345
Total Beef	84,361	37,909	44,281	47	1,233	1,415	1,788	171,034
Veal								
Carcasses	0	0	0	—	—	—	—	0
Cuts, bone-in	243	18	0	—	—	—	—	261
Cuts, boneless	428	1,444	14	—	—	—	—	1,886
Trimming	79	0	0	—	—	—	—	79
Offals	171	0	55	—	—	—	—	226
Other	105	0	0	—	—	—	—	105
Total veal	1,026	1,462	69	—	—	—	—	2,557
Total beef and veal	85,387	39,371	44,350	47	1,233	1,415	1,788	173,591

Source: Agriculture and Agri-Food Canada 1999.

Table 6. Canadian pork imports, by country of origin, 1998.

	United States	Denmark	Other	Total
Fresh or Frozen			(metric tons)	
Carcasses and Sides	0	0	0	0
Hams	4,653	0	0	4,653
Backs, Loins	1,004	3,666	402	5,072
Bellies	6,213	35	0	6,248
Shoulder, Butt, Picnic	1,860	20	0	1,880
Side and Regular Spare Ribs	119	64	43	226
Other Boneless	27,883	31	0	27,914
Other Bone-in	4,334	190	27	4,551
Offals	5,870	42	10	5,922
Processed				
Hams, Cured	2,434	9	4	2,447
Cured Backs, Loins, Ribs	0	0	0	0
Cured Bellies, Side Bacon	1,822	0	0	1,822
Shoulder, Butts, Picnic, Cottage Roll	9	0	0	9
Cured, Other	153	0	62	215
Prepared	637	0	0	637
Cooked or Canned	329	297	104	730
Other Processed	729	0	0	729
Total	58,049	4,354	652	63,055

Source: Agriculture and Agri-Food Canada 1999b.

provinces to livestock producers in eastern Canada and to export ports. For example, if it cost \$40 per metric ton to ship barley from an interior elevator to an export port and a \$40 dollar subsidy was available, the barley would cost the same amount at both locations. However, once the \$40 subsidy was removed, the price at the interior elevator must be \$40 dollars less than the port price to make it worthwhile to transport the grain. In general, removal of the subsidy meant that the price of grain in livestock-intensive areas of eastern Canada increased and the price in grain-surplus prairie provinces declined. It suddenly made more economic sense to raise livestock near where the grain was being produced, which caused a gradual movement of livestock production from east to west. This movement in livestock production is still under way, and we should see a continued increase in livestock production in the prairie provinces so

long as this area has a surplus of feed grains. Table 7 shows slaughter activity in 1992 and 1998, and Table 8 shows cattle and hog slaughter by province in 1998. These data also reveal the gradual consolidation occurring within Canada's packing industry.

The east-to-west movement just described has caused disequilibrium in the Canadian meat packing industry. New plants will eventually follow production to western Canada, but this has not yet occurred.¹ In the meantime, it does not make sense to expand and modernize plants in eastern Canada. The combined effect of an inefficient eastern packing sector and a capacity-constrained western packing sector has forced Canadian live animals into the United States.

The large flow of live animals into the United States has created more concern among producers than has the increase in U.S. meat imports from Canada, possibly because producers can more easily identify with live animal markets than with wholesale meat markets. It may also be due to concerns about packing plant capacity in the United States. From an economic perspective, it makes little difference whether Canadian live animals or the meat equivalent move into the United States. What matters is the location of new breeding and slaughter facilities—a factor that in turn depends on the price signals in each market. One factor that influences relative returns is the U.S.-Canadian currency exchange rate.

Continued Depreciation of the Canadian Dollar

In general, a country will have a depreciating currency if it has a higher level of inflation than its trading partners have. Likewise, countries with very low inflation tend to have appreciating currencies. Canada appears to be an exception to this rule because it has a slightly lower level of inflation than does the United States and yet the Canadian currency has persistently fallen in

¹Two large beef packing plants are being updated and expanded in Alberta, but a labor shortage has slowed the rate of slaughter capacity expansion. Also, a new hog slaughter plant is under construction in Manitoba, but again progress has been slow.

Table 7. Canadian cattle and hog slaughter activity in selected provinces, 1992 and 1998.^a

	Number of Plants	Average Annual Slaughter per Plant (head)	Percent of Slaughter at Four Largest Plants
Cattle			
British Columbia/Alberta			
1992	15	93,156	89
1998	11	192,308	98
Saskatchewan/Manitoba			
1992	6	41,242	99
1998	4	45,155	100
Ontario			
1992	15	39,502	77
1998	8	70,667	97
Quebec			
1992	21	10,727	75
1998	15	14,084	95
Total Canada			
1992	61	41,113	53
1998	43	72,821	75
Hogs			
British Columbia/Alberta			
1992	10	257,358	98
1998	8	198,469	97
Saskatchewan/Manitoba			
1992	10	299,819	96
1998	10	370,790	79
Ontario			
1992	8	456,266	97
1998	6	454,756	99
Quebec			
1992	17	272,709	86
1998	21	336,353	80
Total Canada			
1992	50	282,100	51
1998	49	317,555	56

Source: Agriculture and Agri-Food Canada 1999a.

^aSlaughter at federally inspected plants.

Table 8. Canadian federally and provincially inspected cattle and hog slaughter, 1998.

	Cattle			Hogs		
	Federally Inspected	Provincially Inspected	Total	Federally Inspected	Provincially Inspected	Total
British Columbia	41,566	7,023	48,589	197,897	100,165	298,062
Alberta	2,084,962	28,806	2,113,768	1,414,342	181,925	1,596,267
Saskatchewan ^a	180,460	17,885	198,345	1,014,176	20,745	1,034,921
Manitoba ^a	—	—	—	2,692,474	128,366	2,820,840
Ontario	566,209	111,590	677,799	2,710,233	647,793	3,358,026
Quebec	207,410	2,041	209,451	7,064,171	24,901	7,089,072
Atlantic Provinces	<u>58,065</u>	<u>10,642</u>	<u>68,707</u>	<u>478,743</u>	<u>22,446</u>	<u>501,189</u>
Total	3,138,672	177,987	3,316,659	15,572,036	1,126,341	16,698,377

Source: Agriculture and Agri-Food Canada 1999a.

^aSaskatchewan and Manitoba slaughter data are combined for cattle.

value against the U.S. dollar. This situation means that Canadian livestock producers face smaller increases in production costs than do U.S. producers and at the same time see output prices increasing faster (or not falling as fast) than output prices in the United States. For example, Canadian hog producers will see slightly lower growth rates in input costs such as medicine, labor, and utilities because inflation is lower. However, the price they receive for hogs is determined by the U.S. price. Thus, if the U.S. dollar is getting stronger against the Canadian dollar, the Canadian producer will appear to get a price increase every time the U.S. dollar strengthens.

As mentioned, sustained depreciation of a low-inflation currency is rare. One possible reason for the current situation is that Canada has a slightly less efficient economy than does the United States. If this is true, free trade would tend to give U.S. companies a competitive advantage and U.S. exports to Canada should surge. So long as the Canadian currency floats freely, this excess demand for imports will force the value of the Canadian currency down to compensate for the lack of competitiveness and in so doing will create a more balanced trade

pattern. The end result of this trend is that Canadian incomes will fall when measured in U.S. dollars in a way that reflects the relative lack of competitiveness of the Canadian economy. For example, Canada's 1997 per capita income was about 30 percent below the U.S. level. If the Canadian dollar rose to par with the U.S. dollar, incomes would be about the same in both countries and the Canadian industry would not be competitive in export markets.

This tendency to use exchange rate depreciations to compensate for slightly lower productivity growth should continue, but the trend will not affect all sectors of the economy equally. People who work in the service sector will see little impact unless they travel abroad or buy imported goods. However, those sectors of the Canadian economy that produce freely traded goods such as livestock products will find themselves at a competitive advantage, particularly if they are as efficient as their U.S. counterparts. In other words, the Canadian dollar will continue to fall so that Canadian exports in sectors such as agriculture rise to offset the increase in U.S. exports to Canada in other, less competitive sectors of the Canadian economy. As with the free trade agreement, the overall impact of this trend is positive for the average American, but the trend works to the disadvantage of those in the United States who must continue to compete with Canadian agriculture. This situation does not mean that all U.S. producers will lose from trade with Canada, nor does it mean that the trade flow in agricultural products must always be one-sided. As discussed in the following sections, there are at least two reasons why U.S. exports to Canada might expand, even in the face of such odds: geography and differences in consumer tastes.

Geographic Reasons for U.S.-Canadian Meat Trade

As mentioned, the center of the Canadian beef and pork industries are gradually moving westward. The population base in Canada is located in Ontario and Quebec, and the road

journey from Canada's prairie provinces must detour around the Great Lakes and thus takes approximately 17 hours. It costs about 40 percent less to transport meat from eastern Nebraska to Montreal than it costs to transport meat from Calgary to Montreal. A logical trade pattern would be for western Canadian beef and pork to move into the western United States and into Asia. Much of the eastern Canadian population base could then be supplied from the eastern Corn Belt states. Note that this pattern will make sense regardless of how much beef and pork are produced in western Canada and regardless of the strength of the Canadian dollar. This trade flow pattern reflects the full integration of Canadian agriculture into the U.S. economy and simply allows for a more efficient transportation pattern.

When transportation costs are reduced in this way, the surplus that is created can benefit everyone involved because transportation costs drive a wedge between producer and consumer prices. When this wedge is reduced, consumer prices can decline at the same time that producer prices increase. However, it should also be noted that U.S. exports into eastern Canada will allow Canada to export more meat elsewhere with little net impact on the demand for U.S. livestock products. In this sense, Canada is probably not as useful an export market as Japan because increases in Japanese consumption of U.S. livestock products can potentially lead to price increases.

Taste-Driven Trade Patterns

Eastern Canada has retained much more of its original English and French cultures than has any part of the United States. Also, because the two countries operated different marketing systems and used different grading standards and pricing mechanisms prior to the U.S.-Canada Free Trade Agreement, there are subtle differences in demand for pork products and major differences in demand for beef products between the eastern Canadian and U.S. markets.

Canadian pork carcasses are slightly leaner than U.S. carcasses, for example, and Canadian beef is much leaner than is U.S. beef.

There are two ways to take advantage of these differences to expand U.S. exports. First, the natural range of quality among animals produced in both countries makes it easy to see how the United States and Canada might “swap” animals of different types. For example, high choice beef animals would flow south into the United States and select animals would flow north into Canada.

A second way to take advantage of the taste differences is based on the way carcasses are cut. Each carcass will produce fixed proportions of the various muscle groups, and some of these groups may be in more demand in one country than in the other. For example, the inside round is in great demand in French-speaking Canada, whereas ribeyes are in proportionally greater demand in the United States. The market has already begun to take advantage of many U.S. export opportunities for beef. Significant quantities of U.S. lean meat (in particular, inside rounds) are being exported to Canada, and well-marbled U.S. beef is being exported to satisfy demand from very-high-quality hotels and restaurants.

The U.S. pork industry does not appear to have had the opportunity to take advantage of many of these taste-driven differences. Much of the period since the U.S.-Canada Free Trade Agreement was implemented has been associated with large export levels of Canadian live animals and pork into the United States, and it is difficult to take advantage of minor and subtle taste differences when faced with the major trade and macroeconomic imbalances described in this paper. However, once the industries in the two countries have reached their new equilibrium, there should be additional taste-based export opportunities for some U.S. pork cuts.

To determine where such opportunities exist, we conducted the following analysis in the fall of 1998. First, we compared the relative prices of various cuts to boneless loins in both countries. For example, we measured the ratio of the price of pork fillet in Canada to the price of boneless pork loin in the United States. We then calculated the same ratio in Toronto, Montreal, and Saint Johns. Where we found major differences in these ratios, the differences were taken as a measure of the degree of taste difference, which suggested a possible export opportunity for the United States.

To see why this method for determining opportunities might work, consider the following extreme example. Suppose shoulder meat was four times more expensive than loin in Canada and only one-quarter as expensive in the United States. This price difference would suggest an opportunity to trade Canadian loins for U.S. shoulders. This opportunity should exist regardless of the U.S.-Canadian exchange rate or the relative price of live hogs in both countries. In general, we would also expect that U.S. exporters would find it much easier to export shoulders than to export loins under these circumstances.

Using the method just described, the following U.S. pork products showed promise in terms of potential export opportunities.

- Pork shoulder for roasting (sometimes called cottage roll)
- Bone-in shoulder pork chops
- Marinated pork cubes (shoulder meat) in a sausage casing
- Pork fat (large pieces in Toronto and small pieces in Saint Johns)
- Cooked boneless pork shoulder butt (deli-sliced)
- Hard salami
- Hocks

Some variety meats satisfied the ratio criteria, but these products have such low value in both countries that it seems unlikely that the minor taste difference would justify transportation costs.

A Scale-Based Export Opportunity?

One aspect of U.S.-Canadian trade that emerged from informal discussions during the price-ratio analysis is that, on occasion, Canadian packers will export U.S. product to fill out a load. For example, if a Japanese importer orders a 40,000-pound container of loins and only 35,000 pounds are locally available, then 5,000 pounds must be imported from the United States. This practice is not as common in the United States, where a large domestic market and much larger packing plants mean that almost all export orders can be filled from domestic sources. The extent to which U.S. product is re-exported in Canadian shipments is unknown, but as the size of both the Canadian pork industry and slaughter plants increases, these exports should slowly diminish.

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