Potential Impacts of US Voluntary Country-of-Origin Labeling (COOL)

Prepared for:

Cross Provincial Initiative[1]

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[1] Includes Alberta Pork, Saskatchewan Pork, Manitoba Pork, Ontario Pork

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1.0 Introduction

Country of origin labeling (COOL) of food products is a way of identifying where a commodity was produced such as in a particular country or region. While some proponents of COOL suggest that there are consumers looking for this information, others report that in the past labeling did not impact purchasing decisions (Taylor and Tonsor, 2013). This indicated that if there was demand from consumers for labels, then it would have happened without the need for regulations (Taylor and Tonsor, 2013; Pouliot, 2013). In 2003, Buhr reported that COOL could result in further consolidation of the US pork supply chain while Grier and Kohl (2003) predicted a decline in the number of independent US farms and lower prices at the farm gate.

The North American hog and pork sector has had experience with COOL. For example, in 2002 the US announced guidelines for mandatory COOL that, in the case of pork, to use a 'Product of USA' label the pork had to be from hogs that were born, raised and slaughtered in the US. In June 2003, funding for the program was pulled and COOL didn't go into effect as originally intended.

Interim implementation of US COOL did go into effect on September 30, 2008 with full implementation in 2009 (referred to as implemented in 2008/9 in this document). This resulted in a reduction in the numbers of feeder pigs and market hogs that Canada exported to the US. Pigs that were exported were priced lower to cover the costs associated with labeling (e.g. segregating imported animals and meat products, administration costs, etc). Canadian pig producers received $US3 to $US4/head less for feeder pigs and $10/head less for hogs in 2009 as a result of COOL[2].

In 2009, Canada began the dispute settlement process at the World Trade Organization (WTO) stating that the regulations discriminated against imported animals (i.e. pigs and cattle). In 2015 WTO's final ruling indicated that US COOL was not consistent with global trading rules and Canada could initiate retaliatory measures. As a result of the ruling the US repealed the regulation.

The issue of country-of-origin labeling resurfaced in March 2024 when the US published the final "Voluntary Labeling of FSIS-Regulated Products With U.S.-Origin Claims" regulation. It becomes effective on January 1, 2026. COOL is deemed to be voluntary, however, the regulation states that to label a product as 'Product of USA' or 'Made in the USA', the product must be "*derived from animals born, raised, slaughtered, and processed in the United States.*"[3] For example, for sausage to be labeled as Product of USA, all meat ingredients would need to be from animals that were born, raised, slaughtered and processed in the US.

[2] Reported by K. Grier, 2011
[3] FSIS, USDA. FSIS-2022-0015-Final.pdf

If retailers and processing plants are planning to use these labels, this could significantly impact the number of Canadian feeder pigs and market hogs exported to the US.

This document will review what happened previously with COOL and discuss potential impacts on Canada's swine production industry when COOL comes into effect in 2026. It begins with background on industry impacts in Canada and the US related to the previous iteration of US COOL. The potential impacts of COOL's implementation in 2026 on Canada and the US are then discussed before ending with summary comments. Any potential impacts related to the trade of Canadian pork to the US are not included in this analysis.

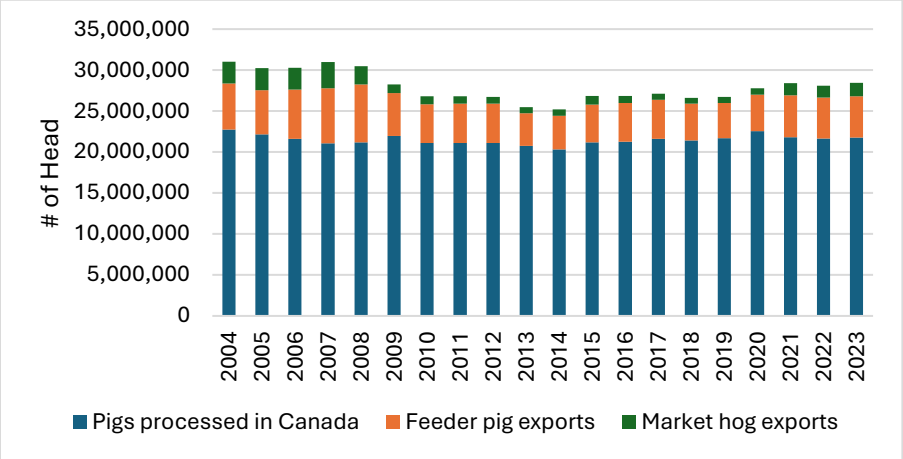
2.0 Industry Background

This section contains background information on the Canadian swine industry over time followed by US industry information. The impact of US COOL in 2008/9 is a focus of this section.

2.1 Canada

Canada has been exporting pigs to the US for decades. Of these exports, market hogs are exported for slaughter and feeder pigs that are born in Canada are sent to the US for finishing and slaughter. Figure 1 displays total Canadian pig production over time including pigs processed in Canada and exports of feeder pigs and market hogs. From 2004 to 2008 total production averaged 30.6 million pigs. In 2009, total production declined by 7.2% to 28.3 million due to fewer feeder pig and market hog exports. More recently, from 2021 to 2023 total production averaged 28.3 million per year. During the 20 years shown in Figure 1, hogs processed in Canada varied from 20.3 million in 2014 to 22.7 million in 2004. Feeder pig exports ranged from 4.0 million in 2013 to 7.0 million in 2008 while market hog exports ranged from 695,000 in 2018 to 3.2 million in 2007.

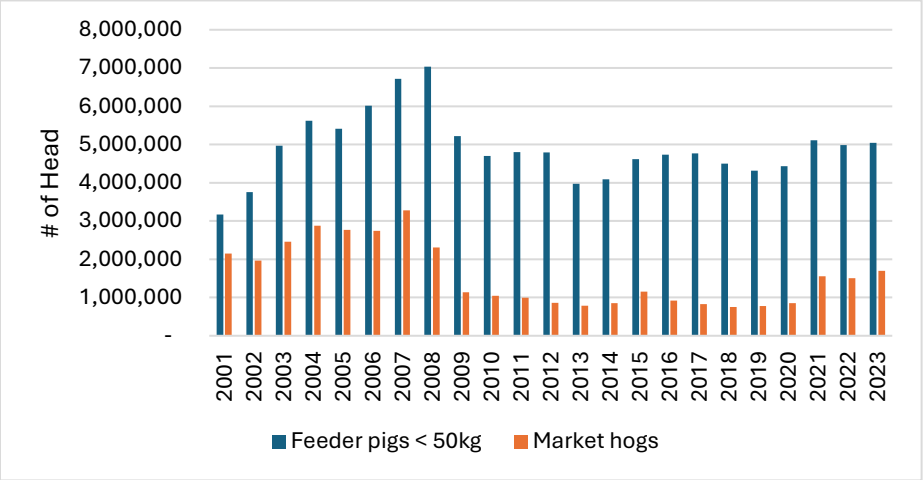
Figure 1: Canadian Pig Production Over Time



Source: Canadian Food Inspection Agency and Provincial Establishments; Statistics Canada, Prepared by AAFC/MISB/AID/Market Information Section

Figure 2 shows growth in exports from 2001 to 2008 and the impact of COOL on Canadian feeder pig and market hog exports. Feeder pig exports (< 50kg) were 7.0 million in 2008 and declined to 5.2 million in 2009, a decrease of 26%. Market hog exports declined by 51% from 2.3 million to 1.1 million during the same time.

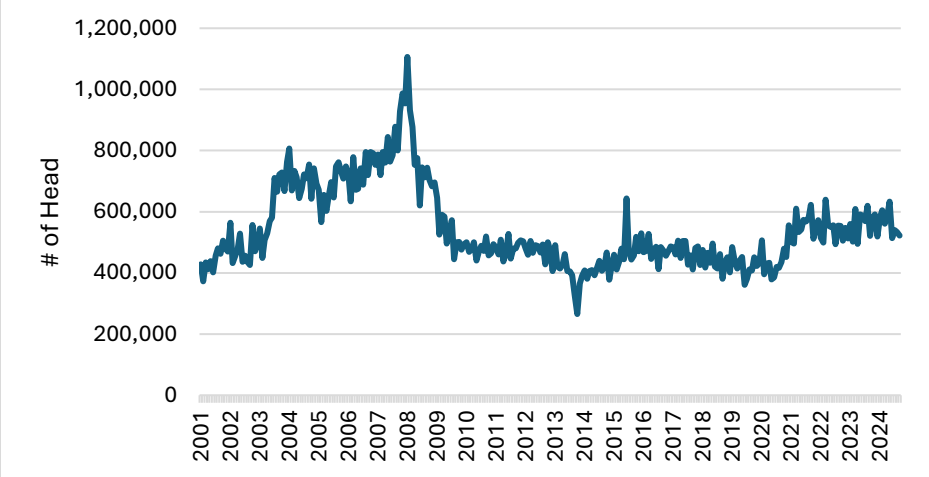
Figure 2: Canadian Exports by Year



Source: Statistics Canada, Prepared by AAFC/MISB/AID/Market Information Section

With the interim implementation date of September 30, 2008, there were considerable numbers of pigs exported early in 2008. Figure 3 shows total monthly exports (including breeding stock) decreasing 37% from January to December 2008. From 2009 through 2020 total exports remained fairly consistent, averaging 457,856 per month. From 2021, exports averaged 554,825 head per month.

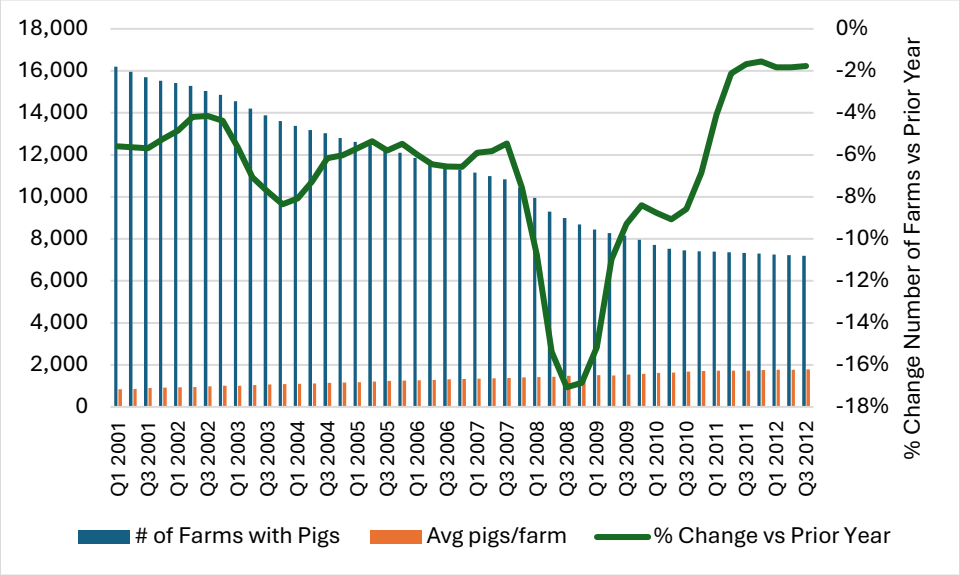
Figure 3: Total Exports by Month



Source: Statistics Canada. Canadian International Merchandise Trade Web Application

In terms of the effects at the farm level, Figure 4 shows the number of Canadian farms with pigs (blue bars) declining from 2001 to 2012 while the number of pigs per farm (orange bars) increased. This trend toward fewer but larger farms is consistent with other regions and commodities but there is a significant decline in the number of farms during 2008 and 2009 compared to the previous year (shown by the green line). For example, the number of farms in 2008 Q4 is17% lower compared to the number of farms in 2007 Q4. It's possible that some of this decline in farm numbers was due to COOL but it's important to note that there were other factors that could have also contributed to the decline such as disease pressure and financial challenges. Still, the timing and severity of the decline relative to the implementation of COOL is worth noting.

Figure 4: Number and Size of Canadian Pig Farms by Quarter and % Change in Number of Farms Versus Year Prior



Source: Statistics Canada. Table 32-10-0338-01 Hogs statistics, number of farms reporting and average number of hogs per farm. Calculation by Ridgetown.

Table 1 provides a breakdown of pig exports by province and pig category for 2023. It shows that Manitoba and Ontario combined represented 82.2% of Canada's exports, at 47.8% and 34.4% respectively. Manitoba exported the most feeder pigs (i.e. 59.2% of Canada's feeder pig exports) while Ontario exported the majority of market hogs (i.e. 79.6% of Canada's market hog exports).

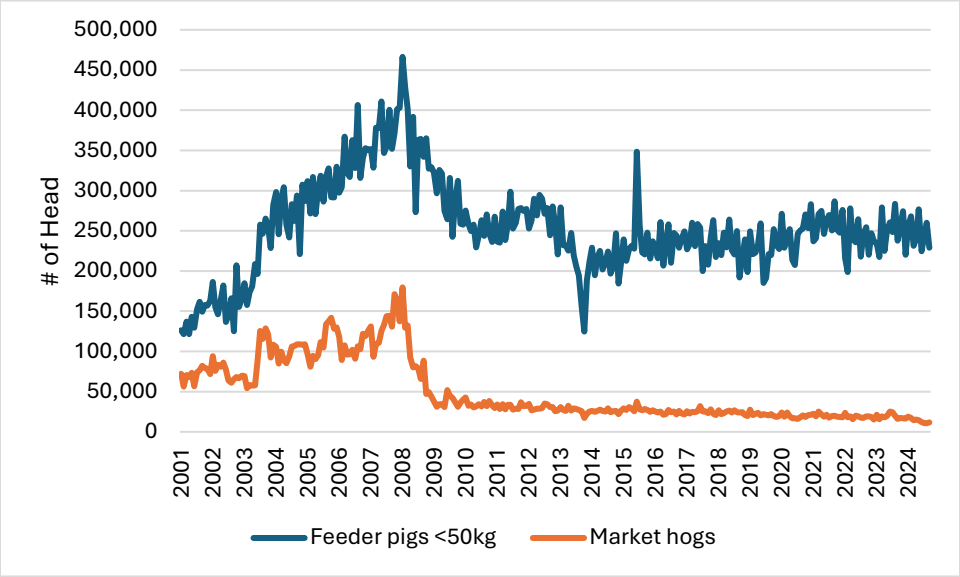
Table 1: Live Pig Exports by Province and Pig Category, 2023

		# of Head	% of Canada's Exports
AB	Market Hogs for Slaughter	44,212	
	Hogs for Breeding	438	
	Feeder Hogs (< 50 kg)	428,990	
	Total AB	**473,640**	**7.0%**
SK	Market Hogs for Slaughter	2,484	
	Hogs for Breeding	18,241	
	Feeder Hogs (< 50 kg)	579,865	
	Total SK	**600,590**	**8.9%**
MB	Market Hogs for Slaughter	229,624	
	Hogs for Breeding	9,078	
	Feeder Hogs (< 50 kg)	2,987,665	59.2%
	Total MB	**3,226,367**	**47.8%**
ON	Market Hogs for Slaughter	1,309,155	79.6%
	Hogs for Breeding	28,699	
	Feeder Hogs (< 50 kg)	981,633	
	Total ON	**2,319,487**	**34.4%**
Others	Market Hogs for Slaughter	58,232	
	Hogs for Breeding	654	
	Feeder Hogs (< 50 kg)	66,175	
	Total Others	**125,061**	**1.9%**
Total Canada	**Market Hogs for Slaughter**	**1,643,707**	
	Hogs for Breeding	**57,110**	
	Feeder Hogs (< 50 kg)	**5,044,328**	
	Total Canada	**6,745,145**	

Source: Statistics Canada, Prepared by AAFC/MISB/AID/Market Information Section

As shown in Table 1, Manitoba is the largest pig exporting province. Between 2001 and 2023 Manitoba shipped 57% of Canada's pig exports. In 2001, 65% of Manitoba's exports were feeder pigs less than 50 kg and 33% were market hogs for slaughter. Monthly feeder pig exports increased steadily until 2008, the timing of COOL's interim implementation in the US (see Figure 5). Feeder pig exports declined by 20.6% during 2009 relative to 2008. Since 2009 feeder pig exports have averaged 243,912 per month. Feeder pigs currently represent 93% of Manitoba's live pig exports. Market hog exports from Manitoba decreased by 57.6% in 2009 compared to 2008 and continued to decline over time.

Figure 5: Manitoba Exports by Month



Source: Statistics Canada. Canadian International Merchandise Trade Web Application

Each province is unique in terms of pig production and slaughter capacity. Table 2 shows the number of hogs that were slaughtered in each province in 2023 (i.e. Slaughter) and the number of hogs that originated in each province and were slaughtered in Canada (i.e. Province of Origin). Interprovincial trade is the difference between slaughter and province of origin. Where there is a positive number in the interprovincial trade column, it means that hogs were imported from other provinces for slaughter. A negative interprovincial trade number indicates some hogs were exported to other provinces. The information in Table 2 shows that in 2023 Saskatchewan, Ontario and the Atlantic provinces exported some hogs to other provinces to be slaughtered.

Table 2: Slaughter and Interprovincial Trade, 2023

	Slaughter* A	Province of Origin B	Interprovincial Trade C = A-B
British Columbia	470,646	155,416	315,230
Alberta	2,726,526	2,169,974	556,552
Saskatchewan	307,677	1,771,333	-1,463,656
Manitoba	6,085,909	5,313,961	771,948
Ontario	4,831,602	5,381,089	-549,487
Quebec	7,331,162	6,897,400	433,762
Atlantic	7,686	71,855	-64,169

Source: Statistics Canada, Prepared by AAFC/MISB/AID/Market Information Section
**Includes Federal and Provincial slaughter*

Table 3 provides the number of pigs slaughtered by province and estimated annual slaughter capacity (federal plus provincial) for 2023. Slaughter capacity utilization is slaughter divided

by estimated capacity. Ideally, achieving slaughter capacity utilization rates at or near 100% suggests that throughput is maximized and operating costs per unit are minimized.

Based on the data below, in 2023 Alberta and Ontario plants on average were operating above 90% utilization. For Canada, capacity utilization is estimated at 86% in 2023. It's important to note however that decreases in capacity occurred since 2023. A fire at Sunterra Meats in Alberta in June 2024 resulted in the plant being closed. Also, Olymel closed their Vallée-Jonction plant in December 2023. Together, these closures decreased Canada's annual slaughter capacity by approximately 1,638,000 (i.e. 31,500/week). Table 4 shows average weekly slaughter to date in 2024 (i.e. to the end of November) and estimated weekly capacity taking into account the closure of Sunterra and Vallée-Jonction. It shows that Canadian capacity utilization on average is at 89% and suggests that Canadian plants could potentially slaughter additional hogs. On an annual basis, 2024 capacity is estimated to be 23.8 million (i.e. 457,300/week x 52 weeks).

Table 3: Slaughter and Estimated Capacity and Utilization, by Province, 2023

	Slaughter in Province	Estimated Annual Capacity	% Capacity Utilization
BC	470,646	572,000	82
AB	2,726,526	2,990,000	91
SK	307,677	416,000	74
MB	6,085,909	7,285,200	84
ON	4,831,602	5,200,000	93
QC	7,331,162	8,954,400	82
Atl.	7,686	11,500	67
Total	21,761,208	25,429,100	86

Source: CFIA and provincial establishments; CPC, AAFC. Includes estimates of provincial capacity.

Table 4: Average Weekly Slaughter and Estimated Capacity and Utilization, 2024 Year-to-Date*

	Average Weekly Slaughter	Estimated Weekly Capacity	% Capacity Utilization
BC	8,222	11,000	75
AB	48,104	54,000	89
SK	6,716	8,000	84
MB	119,190	140,100	85
ON	95,468	100,000	95
QC	131,570	144,200	91
Atl.	160	221	72
Total	409,269	457,300	89

*Source: CFIA and provincial establishments; CPC, AAFC. Numbers subject to revision. Includes estimates of provincial capacity. *End of November 2024.*

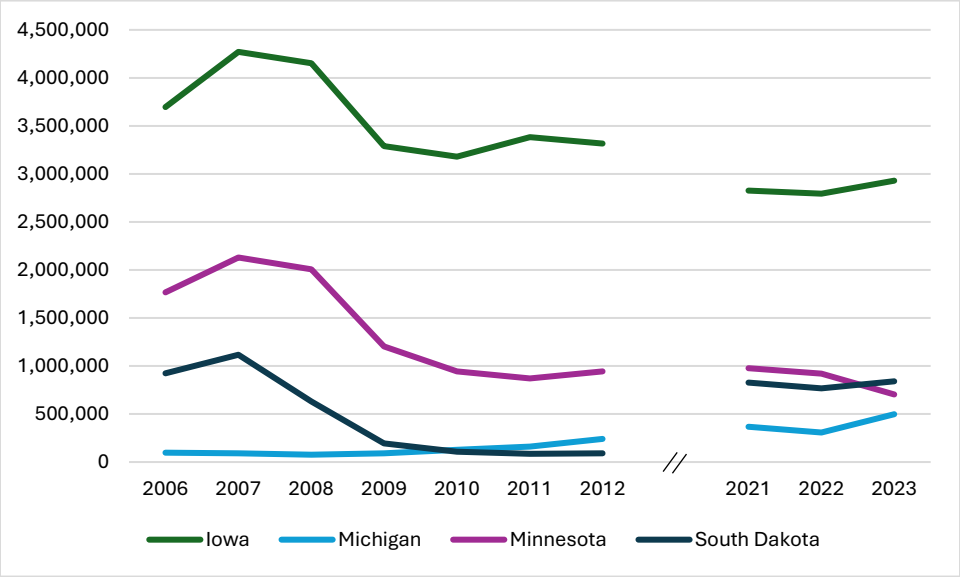
Although there may be sufficient capacity in Canada to process all of the hogs once COOL takes effect, it is likely that prices will be impacted. Hogs that were previously export-bound but must stay in Canada will be discounted. During the previous version of COOL Canadian

hogs were discounted at US packers by about $US10/head (Grier, 2011). It is expected that once COOL goes into effect, hogs that are forced to stay in Canada will be discounted at the same rate as if they were shipped to a US plant.

2.2 United States

The US and Canadian pork industry is highly integrated with Canadian pigs moving to the US for growing out and/or slaughter. Figure 6 shows the destination of Canadian pig exports for 4 States (i.e. Iowa, Michigan, Minnesota, South Dakota) that represent 73.7% of total Canadian pig exports in 2023. The decline in Canadian pig exports after COOL was implemented in 2008/9 is evident at the State level. The 4 States have a large portion of the US pig inventory. Combined, these States are home to 48% of the US nursery pigs and 54% of the finisher pigs as of September 1, 2024 (USDA, NASS).

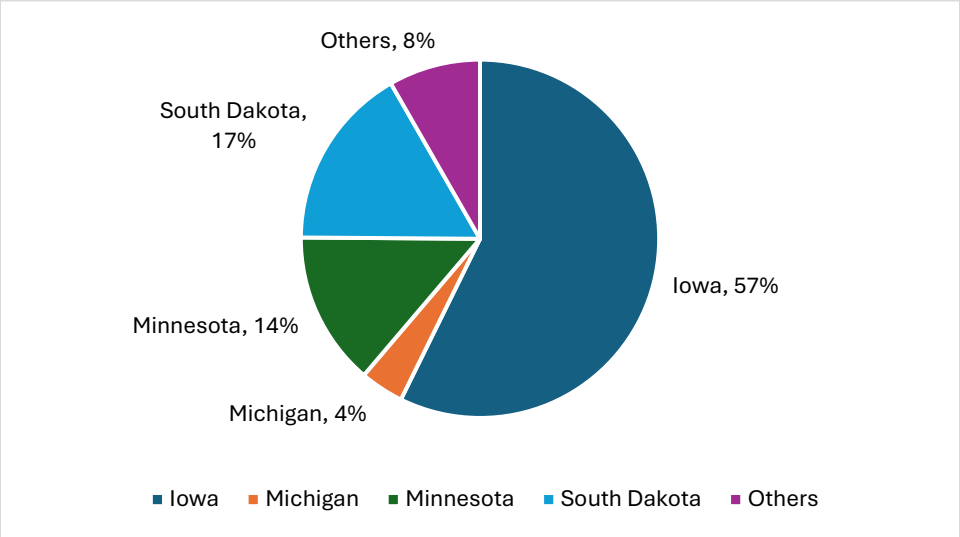
Figure 6: Canadian Pig Exports by State of Destination by Year



Source: Statistics Canada. Canadian International Merchandise Trade Web Application

Figure 7 shows that in 2023, the 4 States were the destinations for 92% of Canada's feeder pig exports (less than 50 kg) and Iowa was the destination for more than half (i.e. 57%).

Figure 7: % of Canadian Pigs <50kg Exported by State of Destination, 2023



Source: Statistics Canada. Canadian International Merchandise Trade Web Application

It's difficult to know how many US farms were directly impacted by COOL previously but Census data provides an opportunity to calculate the percentage change in farm numbers by Census year. Although there are 5 years between Census years, the 4 States reported a 21% decrease in the number of hog finishing operations between 2007 and 2012 (see Table 5). The farms got larger in size however from an average of 3,797 hogs sold/operation in 2007 to 5,104 sold in 2012, an increase of 34%. The number of nursery operations increased by 5% between 2007 and 2012 and could be indicative of US farms partially filling the void left by the decrease in Canadian exports. The average nursery farm also increased in size, by 10%, from 2007 to 2012.

Table 5: % Change in Number of Nursery and Finish Operations in 4 States 2012 Versus 2007

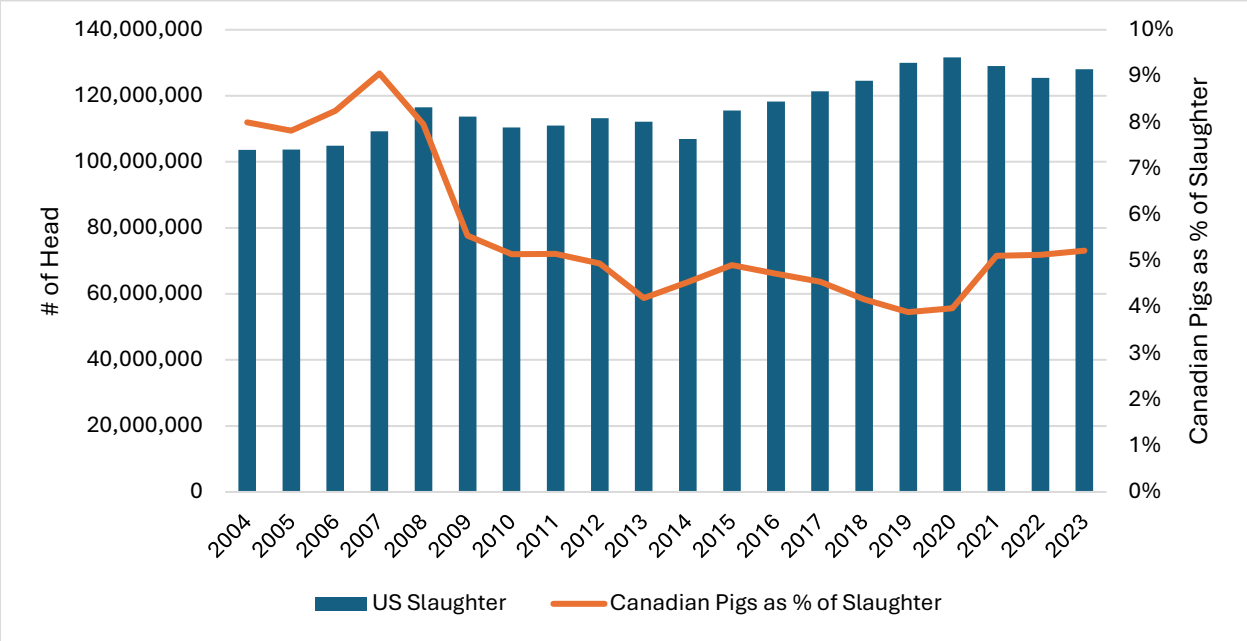
		2007	2012	2012 vs 2007
4 States (IA, MI, MN, SD)	Nursery - operations with sales	1,344	1,410	5%
	Nursery average sales/operation*	11,133	12,210	10%
	Finish - operations with sales	18,404	14,520	-21%
	Finish average sales/operation*	3,797	5,104	34%

*Source: USDA, Census of Agriculture. *Calculation by Ridgetown.*

During the last 15 years, Canadian pigs represented 5.7% of US slaughter on average. From 2004 to 2007, prior to the interim implementation of COOL in 2008, Canadian pigs represented 8.3% of US slaughter (see Figure 8). This takes into account market hogs exported for immediate slaughter plus the Canadian-born feeder pigs that are finished in the US. In 2009 Canadian pig exports represented 5.5% of US slaughter. Since 2021 Canadian born pigs accounted for 5.2% of US slaughter.

Figure 8 also shows total US slaughter over time. In 20 years it increased by 24%. Slaughter numbers decreased in 2009 relative to 2008 and continued to decline until 2011 when slaughter numbers stabilized. Increased slaughter activity started in 2015 as US pig production grew.[4]

Figure 8: US Hog Slaughter & % From Canada[5], Annual



Source: USDA, NASS; Statistics Canada. Canadian International Merchandise Trade Web Application

To summarize this section, Canadian live pig exports to the US declined after COOL was implemented in 2008/9. Canada remains an important part of the US pork industry with a total of 6,745,145 pigs exported during 2023 including breeding stock. Canadian slaughter capacity utilization is estimated at 89% in 2024, an indication that Canadian plants could possibly handle more hogs. Regarding the US, 4 States purchase 92% of Canada's feeder pig exports and Canadian-born pigs currently represent about 5.2% of US slaughter.

3.0 Potential Impacts from the Implementation of US COOL

It's unknown what the actual impacts of COOL will be but two scenarios are presented and they are:

Scenario 1: No exports of Canadian feeder pigs or market hogs once COOL begins.

Scenario 2: 50% reduction in Canadian feeder pig and market hog exports.

Breeding stock exports are not included in the analysis.

[4] Porcine Epidemic Diarrhea (PED) virus impacted US production in 2013 and 2014.
[5] % from Canada includes exported market hogs and feeder pigs.

3.1 Impacts in Canada

In analysing the two scenarios, information in Table 6 is used. The 3-year average (i.e. 2021 to 2023) was used to reflect recent market conditions.

Table 6: Scenario Assumptions

3-year Average	# of Head	$ Value
Feeder pigs	5,045,195	275,039,082
Market hogs	1,525,562	402,592,553
Pigs weaned/ sow/ year	25	

Scenario 1 – No exports of Canadian pigs

The elimination of all live exports would be disruptive to the Canadian industry. For feeder pigs, this impacts farrow-to-wean farms. If 5,045,195 feeder pigs on average can no longer be exported and 25 pigs are weaned/sow then 201,808 sows would be at risk. Using an average farm size of 1,600 sows/farm[6] then this means a potential reduction of 126 farms. Since Manitoba exports 59% of Canadian feeder pigs (i.e. the 3-year average), this could amount to the loss of about 74 farms in Manitoba.

Using Statistics Canada input-output multipliers for animal production, it's possible to estimate the economic impact of the elimination of feeder pig exports. The loss of $275.0 million in export sales translates into a reduction in GDP of $261.3 million, a loss of $756.6 million in economic output, and a loss of 2,665 full-time job equivalents in the Canadian economy with 1,022 being at the direct farm level.

Based on current slaughter capacity estimates, it's possible that the 1,525,562 market hogs for export could be slaughtered in Canada. Three-year average slaughter in Canada is 21.7 million hogs and 2024 capacity is estimated at 23.8 million. This suggests there is room for another 2.1 million hogs to be slaughtered. Capacity could be quite tight at times but it's possible that these hogs could be accommodated. Whether the industry could sustain this pace over the long term is unknown. If the Sunterra plant comes back into operation it could increase capacity by 182,000 per year based on 2023 capacity estimates.

It's important to note that while it may be possible to slaughter these additional pigs in Canada prices could be pressured. Canadian processors would be aware of the absence of the US market for slaughter hogs and this might impact the price offerings. The impact is estimated to be $C13.65/head for these market hogs that must stay in Canada[7]. This is equivalent to the estimated price discount that would be applied if Canadian hogs were exported (as explained in Scenario 2).

[6] Manitoba Pork

[7] Based on Grier (2011) and adjusted using 2024 year-to-date November exchange rate (Bank of Canada).

Assuming the price on 1,525,562 hogs is lowered by $13.65/head results in a reduction in revenue at the farm level of $20,825,447. In turn, this decreases GDP by $19.8 million, lowers output by $57.3 million, and results in 202 fewer full-time jobs.

In summary, the loss of the US market for Canadian feeder pig exports and lower prices received for the hogs that must stay in Canada (but that would have been exported) is estimated to result in a loss of 201,808 sows, a reduction in farm revenue of $295.8 million, $281.1 million less in GDP, a $813.9 million reduction in economic output and 2,867 fewer full-time jobs (1,099 at the direct level).

Scenario 2: 50% reduction in Canadian pig exports

Scenario 2 assumes a 50% reduction in exports of both feeder pigs and market hogs. This is similar to the percentage decline in market hog exports in 2009 after COOL was implemented. Although industry sources have reported that some packers have already indicated that they will not take Canadian pigs in 2026, it's possible that some will to fill their lines or to fill orders for a particular market. It's important to note that Canadian pigs are likely to be priced at a discount to cover the costs associated with labeling (e.g. segregating animals and pork product, administrative costs, etc.). The amount of the discounts for analysis purposes is $C4.78/head for feeder pigs and $C13.65/head for market hogs[8].

A 50% reduction in feeder pig exports would result in $137.5 million less farm revenue and the loss of approximately 101,000 sows. This translates to a potential loss of 63 Canadian farrow-to-wean farms based on 1,600 sows/farm. In addition, the discount applied to the price of feeder pigs that are exported results in a reduction in farm revenue of $12.0 million. The impact of a 50% reduction in feeder pig exports therefore amounts to a decline in GDP of $142.1 million, a $411.5 million decrease in economic output and 1,449 fewer jobs.

In terms of market hogs, the 762,781 hogs that continue being exported (i.e. half of the 3-year average market hog exports) would be priced at an estimated $13.65/head discount. In addition, the other half of the export-bound hogs that are forced to stay in Canada would be priced lower. It's estimated that the discount would be the same (i.e. $13.65/hog). Combined, the price discounts amount to a $20,825,447 reduction in farm revenue. This would cause GDP to decline by $19.8 million, economic output would decrease by $57.3 million and 202 jobs would be impacted.

Combined, a 50% reduction in feeder pig and market hog exports would result in $170.4 million less in farm revenue, $161.9 million less in GDP, a $468.8 million reduction in economic output and 1,651 fewer full-time jobs (633 at the direct level).

[8] Based on Grier (2011) and adjusted using 2024 year-to-date November exchange rate (Bank of Canada).

3.2 Impacts in the US

It's important to note that the US pork industry will incur costs associated with labeling regardless of whether they use Canadian animals. This is because if a product is labeled "Product of USA" or "Made in the USA", they will have to prove it's US product. This will require maintaining documentation. The decision to use these labels will be based on individual markets and customers.

COOL will impact the US pork industry if there are changes in the number of Canadian feeder pigs that move to the US. An impact analysis can provide insight regarding potential effects on the US economy. Using 3-year average weights and prices, average revenue per hog is $US189.40 for this analysis. If 5,045,195 Canadian feeder pigs stop moving to the US this equates to approximately $US955.6 million in lost revenue annually on US farms.

A multiplier of 3.113[9] shows that the impact of this $955.6 million reduction in farm sales translates to a loss of an additional $2.97 billion in the US economy. US Census of Agriculture data for 2022 was used to calculate the average finishing farm size (i.e. 6,173 hogs sold/farm) in the 4 States that receive the majority of Canadian feeder pig exports. If 5,045,195 Canadian pigs are eliminated this could affect 817 farms (assuming 6,173 hogs sold/farm). When suppliers of goods and services to these farms are considered along with impacts at the farm level, job losses amount to 1,474 (817 direct jobs + 657 indirect jobs).[10] As stated previously, the 4 States of Iowa, Michigan, Minnesota and South Dakota receive the majority (i.e. 92 %) of Canadian feeder pig exports. As a result, they will be most impacted with possibly 752 farms closing in these States.

4.0 Summary

The impacts of US COOL when it comes into effect on January 1, 2026 will be disruptive to the Canada and US pork industry. If a US processing plant plans to use the Made in the USA or Product of USA labels documentation will be required confirming the meat is from animals that were born, raised, slaughtered and processed in the US. Some plants will decide to use these labels and purchase only animals that meet the regulatory criteria (i.e. they will only use animals that are born and raised in the US). This means that Canadian born pigs that are currently being grown for these plants would not be accepted.

US plants that do accept Canadian pigs will likely discount the price offered to account for added costs associated with complying with this regulation. This would be consistent with what happened when COOL was implemented in 2008/9. It is estimated that this discount might be $C13.65/head for market hogs.

[9] Based on the US Bureau of Economic Analysis multiplier used by Grier and Kohl (2003)
[10] Based on ISU hog farm multipliers as used by Grier and Kohl (2003)

Two scenarios were analysed. The first scenario assumed that there were no exports of Canadian pigs due to COOL. The elimination of feeder pig exports results in the loss of approximately 202,000 sows in Canada. Price discounts would be applied to market hogs forced to stay in Canada. Combined, there would be $295.8 million less revenue at the farm level, $281.1 million less GDP and 2,867 fewer jobs.

The second scenario assumes a 50% reduction in exports of feeder pigs and market hogs. This could see approximately 101,000 fewer sows in Canada, the price of exported feeder pigs would be discounted and market hogs would be priced at a discount whether they are exported or remain in Canada for slaughter. This scenario results in $170.4 million less farm revenue, $161.9 million less GDP and 1,651 fewer jobs.

The US will be impacted by COOL if Canadian feeder pig exports stop. This could mean a reduction in US farm revenue of $955.6 million and an impact on the total US economy of $2.97 billion. The four states of Iowa, Michigan, Minnesota and South Dakota receive about 92% of Canadian feeder pig exports.

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