

2018: The Year that Roiled the Protein Complex



Independent Agri-Food Policy Note
December 2018

Al Mussell, Douglas Hedley, and Ted Bilyea

The Issue

The year 2018 has proven remarkable in its disruptive trade policy effects; nowhere is this greater than in markets that form the global protein complex.

Actions initiated by the US under Section 232 of the Trade Expansion Act took effect on June 1, 2018. The US placed duties of 10 percent on imports of aluminum and 25 percent on imports of steel. Selected countries, notably Argentina, Australia, Brazil, and South Korea, agreed to quotas on exports of steel and aluminum to the US. Other countries exporting steel and aluminum to the US are subject to the duties.

In the wake of this move, a number of countries, including Canada, introduced retaliatory duties. Many of these impacted agri-food products. Mexico introduced two tranches of retaliatory tariffs, initially on June 5, 2018 and again on July 5, 2018 ultimately resulting in a 20 percent tariff against US pork. In early July 2018, China implemented a 25 percent retaliatory tariff on US soybeans, announced earlier in the year. China also placed duties on US pork—initially 25% on most pork products, and this has since been increased to much higher levels in response to tariffs invoked under US Section 301 against China.

Mexico has been a large market for US pork exports; China is a large market for US soybean exports, and the US a major supplier of pork to both China and Mexico. The US, in turn, has challenged the legality of these retaliatory duties.

As this situation was developing, reports from China indicated that it had experienced an outbreak of African Swine Fever (ASF), a highly virulent and

contagious, reportable, swine disease, not considered to be transmissible to humans or other animals. Many cases of ASF have now been reported across regions in China, and recent reports suggest that ASF may have transferred to the wild boar population in China. Concurrently, new outbreaks of ASF were reported in Romania and Belgium. The immediate impact of these ASF outbreaks has been pork import bans, attempted culls and controls on pig movement to control spread; ultimately significant death and cull losses of pigs affected by ASF have occurred and more are expected. As local hog supply gaps open up in locations scattered across northeast, central, and southern China, the implied lost pork supplies will mount; however, the global supply of competing meats available to backfill, notably beef, appears limited.

As a major exporter of proteins—pork, beef, canola, and soybeans—Canada has a major stake in the market adjustments to this developing situation. The purpose of this policy note is to provide the economic and trade context from which to understand rational adjustments to these disruptions in the protein complex, and to offer an initial assessment of potential implications for Canada.

What Tariffs/Duties Do

When a country establishes a tariff or duty against another, it increases the within-country price of imports from the targeted country.

In turn, this can have a range of effects within the country initiating or retaliating using duties:

- If the imports targeted are insignificant it may have little practical effect. Prices for the targeted country's product simply increase by the amount of the duty, but if the volume is

insignificant then the domestic price will not be impacted much, and no major adjustments occur.

- Conversely, if the imports are highly significant and there is no alternative supply available (either domestic or alternative source of imports) the in-country price will increase by the amount of the duty and existing trade flows continue, with some softening in demand due to the increased price. In turn, this provides the incentive for new or increased production within the country raising the retaliatory tariff.
- Alternatively, if imports are an important source of supply and there are alternative suppliers to the targeted imports, then the price within the country will increase by an amount just under the duty, and imports will shift toward alternative suppliers and away from countries targeted by duties.
- If the country invoking the tariff is a major or dominant buyer, the effect can shift world prices. The effect of a smaller country enacting the same tariff does not have the same impact.

The Soybean Market

The Chinese market is the source of major changes in the global soy complex. First, China raised a 25% duty against US soybean imports. Secondly, China plans to significantly reduce the inclusion rates of soymeal fed in swine feed rations¹. Third, an impact of ASF in the Chinese swine herd will be to reduce hog feed demand in China, including soymeal demand, regardless of the decrease in soymeal inclusion in swine diets. China imports relatively little soymeal;

rather, imported soybeans are crushed for oil and meal in China, so the principal impact of reduced soymeal demand is to further reduce the Chinese demand for soybeans.

According to the UN Comtrade database, based on volume, the Brazil is the largest exporter of soybeans; in 2017 Brazil had a world-wide export market share of about 45 percent. The US had a share of 37 percent of soybean exports, Argentina just under 5 percent, and Paraguay and Canada each with just under 4 percent.

China is by far the largest importer, at 64 percent of global imports. Mexico, the Netherlands, and Japan each imported 2-3 percent of the world total in 2017, followed by Spain, at about 2 percent.

An overview of the global soybean market situation, in terms of volumes traded, is presented in Table 1 below. The table presents data on soybean imports by major importing countries from major exporting countries in 2017; it excludes year over year changes in storage stocks, and thus provides a simplified indicator from which the analysis of shifts in the soybean market can begin. Based on 2017 data, and ignoring the decrease in soybean demand from reduced Chinese soymeal use in hog rations, the following is evident:

- In the immediate term, based on last year's import levels, China needs to import about 96 million tonnes of soybeans.
- Doing so would require the drawdown of existing soybean stocks in China and/or the reallocation of existing exports of Brazil, Argentina, Canada, Paraguay, and Uruguay. These will be priced at a level just under the delivered US price plus 25 percent.

¹ <https://www.reuters.com/article/us-usa-trade-china-soymeal-insight/inside-chinas-strategy-in-the-soybean-trade-war-idUSKCN1LZ0J9>

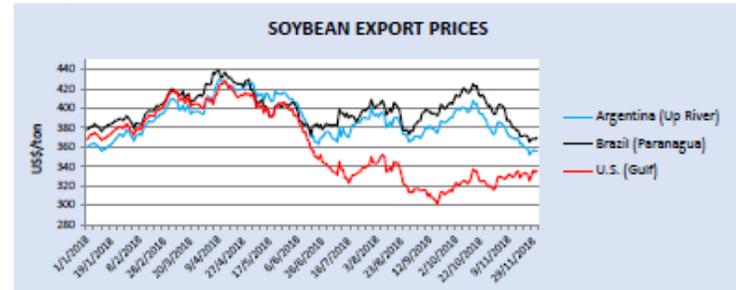
- Significant diversion of US soybean exports and or buildup of US soybean stocks will result, as product previously exported to China must find a new home. This will backfill the markets abandoned by the other major exporters now supplying China.
- The duty levied by China has (or will) raise the prices received by Argentina, Brazil, Canada, and Paraguay. It does not raise the price received by the US for product exported to China (because the tariff is collected by the Chinese government). The need to find a new market for US product previously exported to China may entail additional costs of market development, and/or price cutting.
- Price cutting to move displaced US product into alternative markets creates the risk of dumping- that some US export sales occur at much lower prices than in the US domestic market. This could trigger trade disputes and retaliation in relation to dumping under the provisions of WTO or trade agreements to which the US is a party.

The immediate term impact is illustrated in the Figure 1 below, depicting current and past soybean prices at export locations in the US, Argentina, and Brazil. Since the Chinese duties against US soybeans went into place, the price spread pattern- which had been a very tight arbitrage relationship- has changed suddenly to reflect the duties payable against Chinese imports of US soybeans, but not against Argentinian and Brazilian soybeans (net of the higher shipping cost from Argentina and Brazil), and the influence of China as a dominant importer.

The discussion above illustrates the essence of short-term patterns of trade adjustment. It is also simplistic. As noted, it does not attempt to capture the decrease in Chinese soymeal demand, so it understates the required shifts. Soybean production varies in

exporting countries and in China, which impacts available export supplies and export demand.

Figure 1 US vs Brazil Soybean Export Prices, \$US/tonne



Source: USDA-FAS Oilseeds: World Markets and Trade, Dec. 2018

With the duties in place, incentive exists to expand soybean production in China. Not all exporters will be prepared to abandon existing export customers and shift soybean exports to China. For example, Canada has a well-developed food grade soybean export trade with Japan; there will be some resistance to giving up these established trading relationships for the opportunity presented by the Chinese duties against the US.

There are also clear alternatives to soybeans. China has not placed duties on imports of soybean oil or soybean meal from the US, so in principle these could be exported by the US to China as substitutes for soybeans. China is a major producer of lysine that substitutes for soymeal as a protein ingredient in feeds. Canola is a substitute for soybean; Chinese imports of canola and canola products will be supported by the soybean duties. In particular, canola meal substitutes for soymeal in swine diets, up to certain limits.

Each of these will tend to dampen the effects within China of the duties on US soybeans, especially the longer that they are in place. But clearly the immediate impact is a price benefit for the competing suppliers to the US, and lower prices for the US.

Independent Agri-Food Policy Notes provide non-commissioned, independent perspectives on issues in agri-food

Agri-Food Economic Systems 104-100 Stone Road West, Guelph Ontario N1G 5L3 (519) 827-6239
www.agrifoodecon.ca

China has begun importing from the US for the period January to March 2019, but the quantities are still small in relation to Chinese needs/demands. These imports coincide with the 90 day grace period between the US and China discussions on wider and longer term trade concerns. With supplies from last year's crop largely depleted in South America, it will also take China into a period that follows the South American soy harvest and the new crop availability.

The Pork Market

The global pork market faces adjustments from four factors: retaliatory duties against US imports enacted by China (the largest importer, by volume) and Mexico (the fifth largest importer); ASF opening up a pork supply/demand gap in China; trade restrictions following new cases of ASF in China, Romania, and Belgium; and reduced Chinese pork production due to lower utilization of soymeal in swine rations.

As well as being the world's largest pork producer, China is the largest importer of pork. However, its imports are frozen product, amenable to significant stockholding, and thus can be volatile. Consistent with this, Chinese pork imports more than doubled in 2016 versus 2015, and then decreased by about 25 percent in 2017 versus 2016.

Of the top five pork exporters (volume) in 2017, three were European (Germany (1), Spain (3), Denmark (4)) and the others are the US (2) and Canada (5). Belgium was the 7th ranked exporter, just ahead of Brazil. The significance of the European countries is that much of their exports are intra-EU trade²; this is not entirely the case as, for example, Danish Crown recently concluded an agreement to supply pork to Alibaba and a Chinese supermarket chain through investment in a plant in China, and the EU also has a large share of frozen pork exported to Japan. Rather, the point is that there are relatively few significant

pork exporters outside of regional trading blocs with the capacity to fill gaps in the Chinese supply.

Table 2 provides an overview of the global pork market situation, in terms of volumes traded by major importers and exporters for 2017. It excludes year over year changes in storage stocks, and thus provides a simplified indicator from which the analysis of shifts in trade can begin. The data in the table provide the basis for the following:

- The US has pork exports to Mexico and China- almost 880,000 tonnes based on actual 2017 data- that are theoretically undermined by sustained retaliatory duties. In relation to total US pork exports, this would be about half. In the period since Mexico enacted its retaliatory duties, this concern appears not to have occurred as US exports are steady relative to recent years; US pork exports to China are down under China's retaliatory duties, year to date³. The point is that the duties create an incentive for Mexico and China to substitute for US product; displaced US pork exports would need to find an alternative market.
- Based on 2017, China imported 1.216 million tonnes of pork. If it suffers major production losses due to ASF, surely this will increase, perhaps significantly. The magnitude of increase in future pork imports depends on the reduction in supply due to slower pig growth rates from based on reduced use of soymeal in hog rations, the success of ASF control/mitigation efforts in China, the virulence of ASF in reducing hog/pork supplies, the local price impact due to

² To illustrate, in 2017 Italy was the second largest pork importer, and Germany was the fourth largest

³ Based on USDA monthly trade data
<https://apps.fas.usda.gov/Gats/>

hog/pork transport controls, and consumer perception of ASF pork in China⁴.

- Among major importing countries, import bans from Belgium are of little direct significance; the impact will be on other pork importers.
- A high proportion of Canada's pork exports go to the US; in 2017 the US imported 430,849 tonnes of pork from Canada. Canada imported about 124,000 tonnes of pork from the US in 2017.
- With the exception of China, Germany's pork exports are dominated by intra-EU trade. Spain and Denmark are somewhat more diversified with customers outside of the EU. With the recent trade agreement with Mexico, the EU creates the prospect of developing a pork export trade with Mexico in the future. The major fear and highly disruptive development would be ASF being reported in Germany, Spain, Denmark or Holland.

The above suggests the following. In the immediate term, US pork faces some lost revenue in Mexican export markets due to increased competition from Canada. The prospect is being created of increased competition from EU frozen product in the future under its new trade agreement with Mexico. And if the Mexican duties against the US persist, there may be an incentive for Mexican investment in defrosting facilities to handle frozen pork from the EU, potentially Brazil, and ultimately from anywhere. With duties having escalated through the fall, the US may find itself out of the Chinese pork market unless shortages from ASF become severe. US product

displaced from China and to a lesser degree Mexico could flow back into the US market and replace imported pork product (largely Canadian) and move into alternative export markets, especially the Canadian market where US product already figures prominently- bolstered by increased US pork production.

The other major exporters will have the opportunity, at least temporarily, to replace US exports to China at a preferred price point (essentially, US price plus duty). Canada already has a significant Chinese pork market it can build on. Each of the major EU pork exporters have significant established export relationships in China, but it is unclear to what extent these can grow without impacting integrated intra-EU trade. Brazil has had a large pork export business with Russia; as it further integrates with China in the soybean trade and Russian pork production increases, it may choose to redirect pork exports to China.⁵

The Beef Market

The adjustments in the pork market present the prospect of expansion in the beef market to fill gaps in the red meat supply. However, for the countries that are the preferred export suppliers of beef, capacity is constraining and probably will be for some time.

Table 3 gives some context for global beef exports, based on 2017 volume. Well over half of the beef trade is frozen; the fresh/chilled beef trade is primarily among developed countries with the refrigeration infrastructure to manage it, and within regional trading blocs. India is the largest exporter, based on sales of frozen beef throughout southern Asia and Africa. Brazil is largely a frozen beef supplier with some fresh beef exported to Chile and smaller

⁴ There is no risk of ASF to humans, and this has been communicated by the Chinese government. However it appears that some decrease in pork demand in China is occurring. See the recent Rabobank study "Will the Trade War Truce Boost China's Imports from the US" <https://research.rabobank.com/far/en/sectors/animal->

[protein/will-the-trade-war-truce-boost-China-s-pork-imports-from-the-US.html](https://research.rabobank.com/far/en/sectors/animal-protein/will-the-trade-war-truce-boost-China-s-pork-imports-from-the-US.html)

⁵ In 2017, Brazil reported exports to Hong Kong that were about double that to China. It must be assumed that at least some of this product was ultimately marketed in China

volumes to the Middle East. Australia exports just over one-quarter of its million tonnes as fresh beef. The US is approximately balanced in terms of fresh versus frozen export volume, with Canada and the EU countries more oriented to exported volumes of fresh beef.

In thinking about the opening of a red meat supply gap and the prospects for beef, the following considerations apply:

- Most of the export volume is frozen product.
- Much of the export demand growth is in fresh beef. The major suppliers of fresh beef are the US and the EU countries, followed by Canada and Australia, and then Brazil and Argentina. However, this trade is mostly within trading blocs (intra-NAFTA, intra-EU, intra Mercosur) and between developed country suppliers and Japan.
- The vast majority of both fresh and frozen beef exports are derived from grass-fed production systems. The US and Canada are dominated by grain-fed beef production, and grain feeding of cattle is increasing in Australia and South American countries (albeit from very low levels). Grain-fed beef production systems can adjust and expand much more rapidly, and do not face the same constraint on production posed by land as grass-fed.

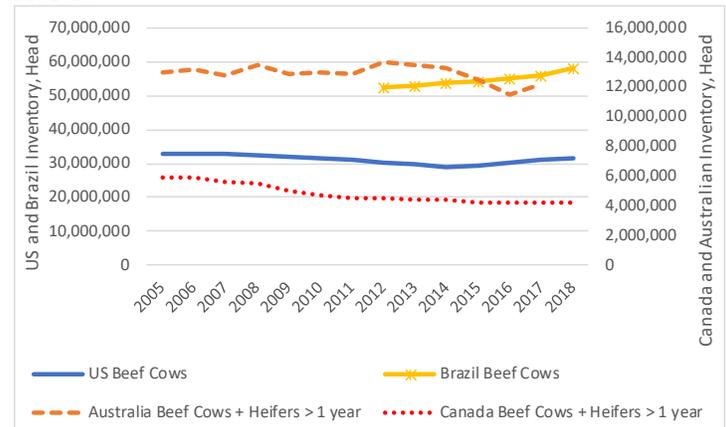
This provides the background context to look at production of beef in the context of filling the red meat supply gap from Chinese pork. The evidence on capacity of key beef exporting countries is not promising, however.

Figure 2 presents the estimated sizes of the beef cow herd in the US, Brazil, Australia, and Canada. It shows that the US cow herd has clearly been expanding since 2014, but that both Australia and Canada have been in decline. The cow herd in

Brazil has been growing consistently every year since 2012.

Figure 3 shows the levels of slaughter of beef cows and heifers. The slaughter of beef cows and heifers has been increasing in the US and Canada since 2015, and was up in again in 2018 versus previous years, consistent with drought in the US Plains and parts of the Canadian prairies. The Australian beef cow and heifer slaughter began to increase in 2017 and this has continued with drought in the first half of 2018. The implication is that the beef herds in the countries with capacity to supply volumes of grass fed and/or grain fed beef for export, outside of regional blocs, will struggle to grow or even remain at existing levels projecting out into the future.

Figure 2 US, Australian, and Canadian Beef Cow Herds

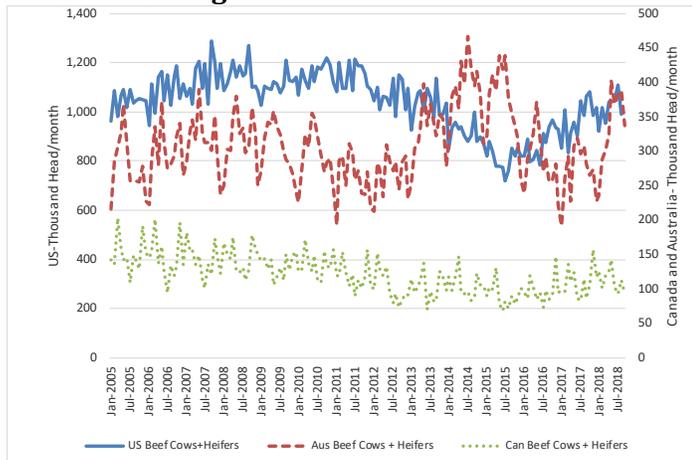


Source: USDA-NASS, Meat and Livestock Australia, USDA-FAS, Statistics Canada

The data reported by USDA-FAS for Brazil paints a somewhat different picture. The beef cow herd in Brazil is clearly increasing- from about 55 million head in 2016 to 58 million head in 2018, and projected to increase to over 59 million head in

2019.⁶ Annual data for Brazil indicate that the cow slaughter has decreased by almost 1.5 million head since 2012.

Figure 3 US, Australian, and Canadian Beef Cow and Heifer Slaughter



Source: USDA-NASS, Meat and Livestock Australia, Statistics Canada

Observations

For countries that are competitors to the US in international protein markets, the duties enacted by other countries in retaliation to the US duties on steel and aluminum present a prospective opportunity. But the nature of this opportunity is complex, and fraught with risk.

With US futures markets providing the global price reference in many of these markets, these retaliatory duties present the prospect for many countries of a significant price increases versus the US. For the US, retaliatory duties push it out of markets and into the search for others- with additional selling costs, in competition with others that have negotiated preferred access under trade agreements, and the prospect of having to lower prices to move displaced volume, creating the potential of trade action in response to dumping. Moreover, the current US

commitment to subsidies to offset the effects of its trade actions on ag products and the prospect of continuation of subsidies into the future (now being mooted) may push the US toward its WTO domestic support limits and/or attract unwanted action by other countries.

More generally, increases in market volatility can be expected. An illustration is provided by the Ontario soybean basis in Figure 4 below. In the early summer of 2018, the Ontario soybean cash-futures basis began to strengthen relative to its normal pattern, consistent with the duties imposed by China against US soybean imports. This strengthening continued into the early fall, with increased shipments of Ontario soybeans to China, and Ontario soybean processors supplied with US soybeans. However, in the fall of 2018 the supply of ocean vessels prepared to move soybeans to China began to tighten, and the basis collapsed- now held down by imports from the US of soybeans for crushing in Ontario, and the seasonal close of navigation on the St Lawrence Seaway..

Conditions can change quickly. Following his meeting with Premier Xi Jinping in late November, US President Trump suggested that China would suddenly be buying large quantities of soybeans. The initial reaction of the US grain trade was surprise and disbelief. Then, during the week of December 10th, the US announced export sales of soybeans to China of about 1.5 million tonnes. Early in the week of December 17th, it appears that further US export sales of soybeans have occurred. Since the meeting of the two leaders, soybean futures are up about \$US .60/bushel. But it is not clear that this is really a material development; the fact remains that US soybean exports to China are down drastically (recently announced at around 3 million tonnes for early 2019 vs. 32 million tonnes in 2017), US soybean stocks are way up and building, and nearby Chicago futures prices are hovering around \$US 9/bushel,

⁶USDA-FAS Brazil Livestock and Products Annual September, 2018 GAIN Report Number: BR 1814

Independent Agri-Food Policy Notes provide non-commissioned, independent perspectives on issues in agri-food

Agri-Food Economic Systems 104-100 Stone Road West, Guelph Ontario N1G 5L3 (519) 827-6239 www.agrifoodecon.ca

down from well over \$US 10/bushel in the early summer.

The situation also presents the prospect of a range of secondary effects requiring better understanding and analysis. One is that if the US finds itself out of the Chinese export market in soybeans long-term, and facing much lower soybean prices, acreage will shift out of soybeans. Most market reports already indicate a marked shift from soybeans to corn for Spring 2019 plantings. This, in turn, will put the US in preferred position to Canada on feed grain pricing for livestock, but facing discounts on US pork exports owing to retaliatory duties. If this is correct, what can retain livestock feeding in Canada, especially hog production, will be the export price premium carried by Canadian origin pork vs. the US, and the willingness of processors to share it in Canadian hog pricing. It could also provide the platform from which to launch premium products for the higher end segment of the Chinese market and other markets where Canada has a tariff advantage, enhancing Canada's pork export revenue.

It is hard to escape the observation that the big winners in this reshaped protein market environment may be the South American countries- Brazil, Uruguay, Argentina, Paraguay. Brazil in particular has strong trade relationships with China on soybeans and beef, with large and growing capacity in soybeans and beef, and expanding capacity in pork.

Conclusions

For Canada, the key questions would seem to be how long the situation with duties directed at the US will last, and what the ultimate impact of ASF will be in terms of opening a gap in protein supply/demand balance in China, and the knock-on global spillover effects.

Because China is such a large market and such a large producer, even moderate effects of ASF on a sustained basis could trigger major changes. If the expectation is that the duties and ASF effects could last two years

or less, then Canada could expect some significant pricing benefits in soybeans, canola, and red meats- but observe caution in expansion based on these shorter-term price signals.

Conversely, if it becomes clear that the long-standing China-US trade relationship in soybeans has been disrupted long-term, and/or that the ASF situation in China is worsening- indicated by continuing lack of success in control efforts and significantly decreased Chinese pork production in 2019/20- it will lend support to the notion that the events of 2018 are indeed a game changer, and an expanded Canadian pork supply will be needed to help fill in the Chinese market gap.

The choices made by Canadian industries in this regard are crucial. First, Canada must remain free of ASF itself, as the results for a country as dependent upon pork exports as Canada would be simply devastating. A coordinated effort is underway among federal and provincial government agencies and swine industry associations to protect Canada from ASF through enhanced port of entry security and biosecurity on farms.

Second, Canada is a tertiary supplier of soybeans to the export market, with limited capacity. Its pork and beef segments are much larger, but still a limited volume supplier in the context of the size of Chinese or even the Mexican market. Export markets will need to be strategically targeted, and production increases occurring carefully on a prudent basis.

The pork segment will recall the events led by the Foot and Mouth Disease (FMD) outbreak in Taiwan in 1997, opening up a supply gap, increasing prices, and inducing expansion in North American hog production- but also leading to a shortage in available pork processing capacity and very low hog prices, leading to crisis in the fall of 1998. In turn, from this event Canada became a premium supplier of chilled pork to Japan. Taiwan was the main supplier to Japan of chilled pork in the mid-1990's. It turned out that FMD in Taiwan became recurring problem, and

**Independent Agri-Food Policy Notes provide non-commissioned, independent perspectives
on issues in agri-food**

Agri-Food Economic Systems 104-100 Stone Road West, Guelph Ontario N1G 5L3 (519) 827-6239
www.agrifoodecon.ca

Canada replaced Taiwan as a preferred supplier in Japan.

The significance of prospective changes in market and trade disruptions envisioned here, and the fact that they are connected- notably the soy complex and pork- suggest that the trade policy and livestock disease developments of 2018 could be sentinel events. They are not disruptions that represent deviations from the long-term norm, in which the crisis passes and normal conditions soon bring markets and trade reverts back to a long-run equilibrium. Rather, they signal a movement away from the established order, and the former equilibrium may no longer be attainable and may not be restored. Past importers become exporters, new suppliers emerge, and existing price relatives change fundamentally.

One would need to look at 1973 in the grain trade for a similar situation. In very short succession, the Soviet wheat crop failed, the Peruvian anchovy harvest was very short, and the US placed an embargo on grain exports (including soybeans). Global grain prices skyrocketed. Key importers found themselves short- notably Japan, Europe, and China- and in the search to prevent a recurrence, Japan in particular began investing in South America and developing soybean production as an alternative to dependence on imports from the US. As the Chinese economy grew it began ramping up buying from Brazil in the early 2000s also as a hedge against over dependence on U.S. soybeans.

The events today revisit this, and take it one step further. On the sidelines of the G20 meeting in late November, China signed an agreement to provide the investment in Argentinian railways capable of shipping soybeans to China at greatly reduced costs. Meanwhile, Argentina is importing record volumes of soybeans to supply its soy processing infrastructure, as its own soybean supply is being exported to China *en masse*. Meanwhile, a new greenfield beef plant is being developed in Brazil, consistent with a growth in

the Brazilian cow herd and large and growing frozen beef export trade to China.

Finally, the prospect of a major gap in the protein complex would be undermined by a serious setback in global economic growth. There are any number of factors that could cause this- the costs of the China-US trade war on the economies of the participants (and the collateral damage), inflation in the US provoking a sharp increase in interest rates, disruption from the UK exiting the EU and the prospect of others (such as Italy) also defaulting or exiting, and the growing prospect of geo-political instability and conflict in multiple parts of the world.

This presents the prospect that the current situation is not a temporary aberration that will eventually return to normal, in which the US is the central exporter of soybeans and pork to major markets, and the supply gap will be reset with traditional exporters filling the gap. Ironically, this could be easily missed by those most involved in the trade and immersed in an understanding of how the trade has operated. If this is correct, it will be difficult to fully grasp all of the implications, and understand the opportunities and risks facing Canada.

Table 1 Soybean Imports by Major Importers, Sourced from Major Exporters, 2017 (tonnes)

		Exporters							
		Brazil	US	Argentina	Paraguay	Canada	Uruguay	Imports- Others	Total Imports
Imports, Major Importers	China	50,927,379	32,853,003	6,581,047		2,048,425	2,572,547	551,820	95,534,221
	Mexico	254,858	3,944,087		142,400			1	4,341,346
	Netherlands	1,139,590	1,887,108		43,120	113,569	361,463	300,393	3,845,243
	Japan	520,753	2,348,530		156	322,045		26,943	3,218,427
	Spain	1,791,639	661,553	78,024	464,565	241,762	40	158,172	3,395,755
Total Exports to all Countries		68,154,559	55,340,455	7,400,920	6,123,928	4,661,912	3,251,203		

Source: International Trade Centre, based on UN-Comtrade HS1201

Table 2 Pork Imports by Major Importers, Sourced from Major Exporters, 2017 (tonnes)

		Major Exporters									
		Germany	US	Spain	Denmark	Canada	Netherlands	Belgium	Brazil	Imports- Others	Total Imports
Imports, Major Importers	China	211,774	165,741	237,513	88,733	166,728	86,419	6,806	48,716	204,336	1,216,766
	Italy	327,195	66	148,374	96,283		141,397	23,246		229,582	966,143
	Japan	20,704	267,294	107,482	114,733	215,622	25,477	598	1,385	212,848	966,143
	Germany		579	54,911	298,962	127	123,516	254,216		144,159	876,470
	Mexico		713,503	200			89,669			104	803,476
Total Exports to all Countries		1,818,896	1,731,081	1,517,410	1,093,046	959,753	911,800	672,040 ⁷	592,614		

Source: International Trade Centre, based on UN-Comtrade HS 0203

Subject to retaliatory duties

Subject to pork import bans

⁷ Countries that have banned pork imports from Belgium: South Korea, China, Taiwan, Belarus, Mexico, The Philippines, Japan, South Africa, Serbia, Singapore, Uruguay, Australia, and Malaysia <https://www.euromeatnews.com/Article-Thirteen-countries-have-banned-pork-imports-from-Belgium/1943>

Independent Agri-Food Policy Notes provide non-commissioned, independent perspectives on issues in agri-food

Agri-Food Economic Systems 104-100 Stone Road West, Guelph Ontario N1G 5L3 (519) 827-6239

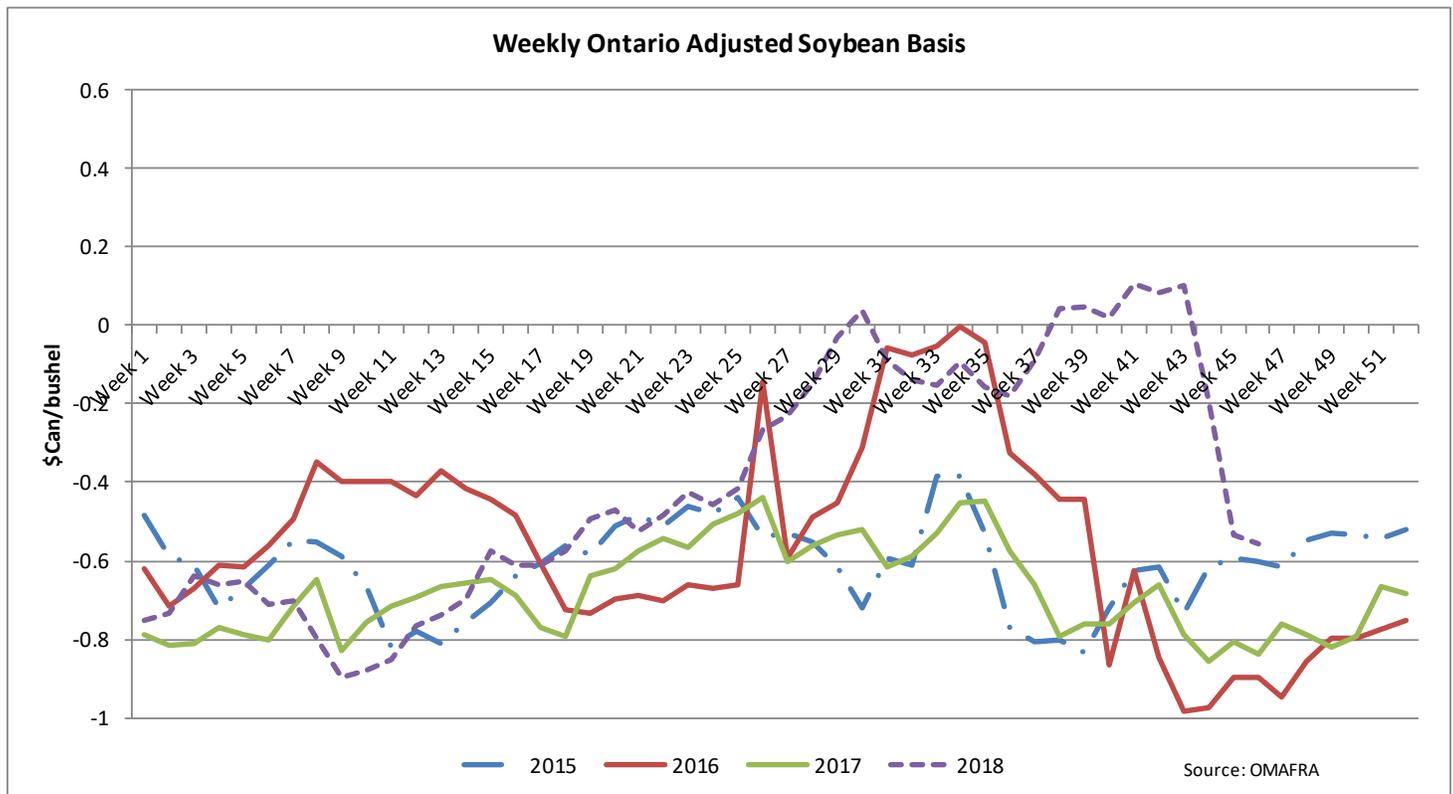
www.agrifoodecon.ca

Table 3 Exports of Beef, World total and Major Exporters, 2017, Tonnes

	Frozen	Fresh	Total
World Total	5,441,572	3,876,408	9,317,980
India	1,300,395	12,867	1,313,262
Brazil	1,081,279	125,088	1,206,367
Australia	782,241	280,864	1,063,105
US	478,464	439,541	918,005
New Zealand	383,331	25,907	409,238
Uruguay	262,607	42,136	304,743
Netherlands	47,868	394,306	442,174
Ireland	71,573	299,795	371,368
Poland		294,702	294,702
Canada	66,294	258,811	325,105
Argentina	137,896	70,681	208,577

Source: International Trade Centre, based on UN-Comtrade HS 0201 and 0202

Figure 4 Ontario Adjusted Soybean Basis



Independent Agri-Food Policy Notes provide non-commissioned, independent perspectives on issues in agri-food

Agri-Food Economic Systems 104-100 Stone Road West, Guelph Ontario N1G 5L3 (519) 827-6239
www.agrifoodecon.ca