

# The global context of the US farm bill in 2018: world markets, instability and policy preferences in agriculture

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## Themed Content: U.S. Farm Bill: Policy, Politics, and Potential

**Cite this article:** Winders B (2020). The global context of the US farm bill in 2018: world markets, instability and policy preferences in agriculture. *Renewable Agriculture and Food Systems* **35**, 367–375. <https://doi.org/10.1017/S1742170518000303>

Received: 10 February 2018

Revised: 17 June 2018

Accepted: 3 July 2018

First published online: 10 August 2018

**Key words:**

Commodities; farm bill; global context; prices; trade

**Author for correspondence:**Bill Winders, E-mail: [bill.winders@gatech.edu](mailto:bill.winders@gatech.edu)**Abstract**

As the 2018 farm bill approaches, some important trends have emerged regarding the policy preferences of different commodity producers. While some farm organizations like the American Farm Bureau advocate for expanding free trade, other groups argue for more trade protections and even greater support from the federal government. This paper examines the global context that shapes such divergent policy positions. I argue that global demand has expanded for particular commodities (especially, feed grains and meat), leading producers of those commodities to push for free trade and weaker political regulations of agriculture. At the same time, however, greater liberalization over the past 25 years has contributed to greater competition for some commodities, such as wheat. Liberalization in the world economy has also contributed to greater market instability, especially in terms of prices and production. This instability and increased competition have pushed some commodity producers to favor national regulations and trade protections for agriculture. Focusing corn, soybeans and wheat, I argue that these three aspects of the global context—global demand, international competition and price instability—shape the policy preferences of US producers regarding the 2018 farm bill. I draw on statistics from the United States Department of Agriculture and Food and Agriculture Organization to illustrate these aspects of the global context.

As a Republican presidential candidate, Donald Trump sharply criticized the North American Free Trade Agreement (NAFTA) as ‘the worst trade deal the U.S. ever signed’ (Gandel, 2016; Gillespie, 2016). As president, Trump has continued his critique of NAFTA, saying he would sign an executive order calling for the renegotiation of NAFTA (Smith, 2017a). And on January 23, 2017, President Trump signed an executive order withdrawing the USA from the Trans-Pacific Partnership (TPP), another free trade agreement (Smith, 2017b). Such positions on free trade are remarkable for a Republican president in the twenty-first century, but they are also important in considering the global context of agriculture and how it might influence the 2018 farm bill. Such critiques of free trade might appeal to some segments of US agriculture that are seeking protection from global competition, such as blueberry producers or perhaps wheat producers.<sup>1</sup> But other segments of US agriculture are strongly in favor of free trade, including corn and soybean producers, and these segments tend to exert more political power—including within the Republican Party—at this historical moment. Consequently, strong stances against free trade may heighten divisions within agriculture that could lead to political battles over the next farm bill.<sup>2</sup> In fact, shortly after the president signed the executive order regarding the TPP, representatives of the American Farm Bureau Federation noted that US agriculture would be a net loser without the access to Asian markets that TPP offered (Bickel, 2017). Furthermore, representatives of several agricultural organizations have pointed to the TPP negotiations as demonstrating ways to improve NAFTA (US House, 2017). Meanwhile, other organizations, such as the Organization for Competitive Markets, applauded the president for the action (OCM 2017).<sup>3</sup> Such political divisions over agricultural trade policy are not new: when the passage of NAFTA was debated in the early 1990s, organizations representing wheat producers voiced opposition, while organizations representing corn and soybean producers favored the free trade agreement (Orden, 1996; Winders, 2009).

Similar divisions emerge over agricultural policy as well. In the twentieth century, different segments of US agriculture voiced competing and sometimes directly opposed positions on the

<sup>1</sup>See for example, Kanell and Hallerman (2017), who note that ‘... NAFTA has brought down trade barriers to the point where [Georgia blueberry farmers] have a hard time competing with their Mexican counterparts.’ While President Trump’s critiques of NAFTA tend to focus on Mexico, either explicitly or implicitly, US agricultural producers—such as dairy and wheat farmers—are much more likely focus on trade with Canada in their calls to reform NAFTA (e.g., see U.S. House 2017).

<sup>2</sup>This situation also holds the potential to undermine Republican support from some important segments of agriculture. While not a focus of this paper, this point seems to have gone largely unnoticed, certainly by the Trump Administration. See for example, Stolberg and Swanson (2018).

<sup>3</sup>The Organization for Competitive Markets is a ‘public policy research and advocacy organization ... focusing strictly on antitrust and trade policy in agriculture.’ See <http://competitivemarkets.com/about/>.

question of supply management policy and its main programs of price supports, production controls and export subsidies (Winders, 2009). Such disagreements remain today over counter-cyclical payments, marketing orders, conservation programs, among others (e.g., see Lehrer and Baker, 2010; Graddy-Lovelace and Diamond, 2017; Lehrer, 2018). While some producers favor national policies that support farmers' incomes or regulate production, other producers oppose such policies. How can we explain such divisions within US agriculture over the issues of trade and agricultural policy?

Beneath this surface of trade politics is a complex global context that has long shaped the economic interests and policy preferences of different segments of US agriculture. In this paper, I argue that three particular dimensions of the global context might contribute to such divergent policy positions as the next farm bill approaches: global demand, international competition and price instability. In examining these dimensions of the global context, I focus on corn, soybeans and wheat—three of the primary field crops in the USA. I also explore the global demand for meat, which helps to explain the divergent policy preferences for feed grains and food grains. First, I examine how global demand has expanded for particular commodities (especially, feed grains and meat), leading producers of such commodities to push for more free trade and less regulation in agricultural policy. Secondly, I discuss how liberalization over the past 45 years has contributed to greater competition for some commodities, such as wheat. Thirdly, I demonstrate how liberalization in the world economy has contributed to greater market instability, especially in terms of market prices and production. Drawing on statistics from the United States Department of Agriculture and the Food and Agriculture Organization to illustrate these aspects of the world economy, I argue that these three dimensions of the global context—global demand, international competition and price instability—might shape the policy preferences of US producers regarding the 2018 farm bill. Before tackling the global context, however, I first discuss briefly the recent history of coalitions and divisions within US agriculture.

### Divisions within US agriculture

Many observers—from scholars to policy analysts to the general public—often assume that there is some broad unity among agricultural groups on policy issues. For example, many people believe that farmers share a preference for subsidies from the government, or that all of the agriculture equally favors free trade. We can see this perspective in many scholarly analyses of shifts in US agricultural policy in the twentieth century, especially regarding policy retrenchment (Hansen, 1991; Sheingate, 2001). However, the history of US agricultural policy is one of fluctuating conflict between different segments of agriculture. Divisions among farmers, for example, frequently emerged along commodity lines during the twentieth century (Winders, 2009). Agricultural commodities can differ in several ways, including how they are used and their place in world markets (Winders, 2017). These differences can lead producers to have competing economic interests and policy preferences, as a brief look at the history of US agricultural policy demonstrates.

A farm bloc coalesced around the Agricultural Adjustment Acts of 1933 and 1938, including farmers, farm organizations and political representatives from the Corn Belt, the Wheat Belt and the South. These segments of agriculture coalesced around the price support and production control programs of the policy

of supply management set forth in this early legislation. While this Farm Bloc held through the Second World War, it fractured shortly thereafter. By 1947, the American Farm Bureau Federation was calling for price supports to be reduced and production controls to be weakened. Behind this call to change and weaken supply management policy were corn farmers, whose economic interests were shaped by increasing meat production and consumption. This growing demand for corn as livestock feed led farmers in the Corn Belt to increasingly oppose supply management policy, which aimed to restrict production. By contrast, cotton farmers and wheat farmers continued to favor both price supports and production controls. This cotton-wheat coalition won the expansion of supply management policy when export subsidies were added in 1954 through PL 480 and international food aid (Winders, 2009).<sup>4</sup>

In the 1960s, the global context shifted in ways that changed the economic interests of cotton and wheat farmers. In the South, cotton farmers faced continued international competition from countries such as India and Egypt, and they also faced increased competition from synthetic fibers (Mann, 1987). Consequently, US cotton farmers began to shift toward to soybean production, which led to a less favorable view of production controls that limited production based on historic production patterns. Regions that had not historically produced soybeans tended to receive smaller acreage allotments for soybean production. Production controls were, therefore, a potential obstacle to the expansion of soybean acreage and production in the South. For wheat producers, the global context facilitated reduced support for supply management policy as well, especially regarding production controls. The expansion of export subsidies and food aid in the 1950s and 1960s contributed to expanding markets for US wheat, which allowed wheat farmers to increase production rather than try to manage or restrict production. Wheat producers, then, also came to favor weakening production controls. The consequence of this shift in policy preferences was the Cotton-Wheat Act of 1964, which weakened production controls for wheat and cotton by changing them from mandatory to voluntary (Hansen, 1991; Winders, 2009).

In the middle of the twentieth century, the global context also shaped the economic interests and policy preferences of different segments of US agriculture in terms of the degree of competition in world export markets. From 1957 to 1970, the USA accounted for 57% of annual world corn exports, on average. During this same period, the USA also accounted for 85% of world soybean exports. These markets, then, were concentrated and contributed to some degree of stability for US corn and soybean producers. By contrast, the USA did not dominate export markets for wheat between 1957 and 1970, averaging only 38% of world wheat exports and not rising above 44% (Winders *et al.*, 2016). The USA faced competition in wheat exports from Australia, Canada and Europe (in particular, France). This greater degree of competition, especially between the USA and Canada (see Magnan, 2016), led US wheat producers to favor coordination and regulation in world markets, as seen in the International Wheat Agreement (IWA) that coordinated the world production

<sup>4</sup>I focus here on regions that reflect particular commodities—the Corn Belt, stretching from Ohio to Iowa; the Wheat Belt, cover the plains from the Dakotas, Nebraska and Kansas westward to Washington; and the Cotton Belt, covering the southern states from Texas to Virginia. See Winders (2009) for a more detailed discussion of agricultural regions and commodity production as they relate to the political economy of agricultural policy.

and international trade of wheat, as well as world prices. The IWA began in 1949 and was renewed several times until 1970. Corn and soybean producers were never compelled to favor such coordination at the level of the world economy because world markets and exports for these commodities were not competitive to the same degree as found in wheat. Furthermore, the competition in world wheat markets was intensified and made increasingly political by the spread of export subsidies among western industrialized nations (Hopkins, 1992). Corn and soybean markets did not exhibit this same escalation of competition because the USA did not use export subsidies to compete for export markets, nor did other countries. Wheat producers' policy preference for export subsidies and coordination and regulation in world markets was not shared by US corn and soybean producers. They experienced the global context differently, with the result that the global context led to different economic interests and policy preferences for wheat producers, on the one hand, and corn and soybean producers, on the other hand.

We can also see this dynamic of the global context shaping economic interests and policy preferences in the 1990s, with the passage of the Federal Agricultural Improvement and Reform (FAIR) Act of 1996. The FAIR Act ended supply management policy in that it eliminated production controls, but it also changed price supports and began to phase them out. Behind the most fundamental change of the FAIR Act—ending production controls—were the economic interests and policy preferences of corn and soybean producers, who called for the ability to plant 'fence row to fence row' (Winders, 2009). The global context had a significant role in creating this interest in being able to produce more corn and soybeans: new markets had recently emerged in former communist countries, in Asia, and in Latin America. For example, the NAFTA, which began in 1994, required Mexico to reduce and even eliminate its trade barriers and policies regulating corn (Barry, 1995). During the first 10 years of NAFTA, US corn and soybean exports to Mexico increased by 81 and 87%, respectively.<sup>5</sup> With such expanding opportunities for export, corn and soybean growers were more strongly in favor of expanding production and free trade than were wheat growers, who did not experience the same dramatic increase in global demand.

For much of the twentieth century, then, corn and soybean producers voiced policy preferences that were more market-oriented based on their particular economic interests. In part, these economic interests derived from the growing demand for corn as a feed grain, a processed food ingredient and a biofuel (Winders, 2017). The global context also played a fundamental role in shaping the economic interests and policy preferences of corn and soybean producers. The expanding markets in the former Soviet Union, China and countries in Eastern Europe and other regions prompted a preference for free trade and opposition to production controls. The increase in global meat production and consumption also increased the demand for US corn and soybeans during the twentieth century. Similarly, the economic interests and policy preferences of US wheat producers were influenced by the global context. When markets expanded in the middle of the twentieth century, wheat producers expressed less support for production controls. Yet they tended to favor supply

management policy and regulated international trade, largely because of the degree of competition in world wheat markets.

Similar dynamics and trends are likely to influence the economic interests and policy preferences of corn, soybean and wheat producers as the 2018 farm bill develops. The degree of division, of course, remains to be seen. Still, the global context is as important today as it was during the twentieth century.

### The global context as 2018 approaches

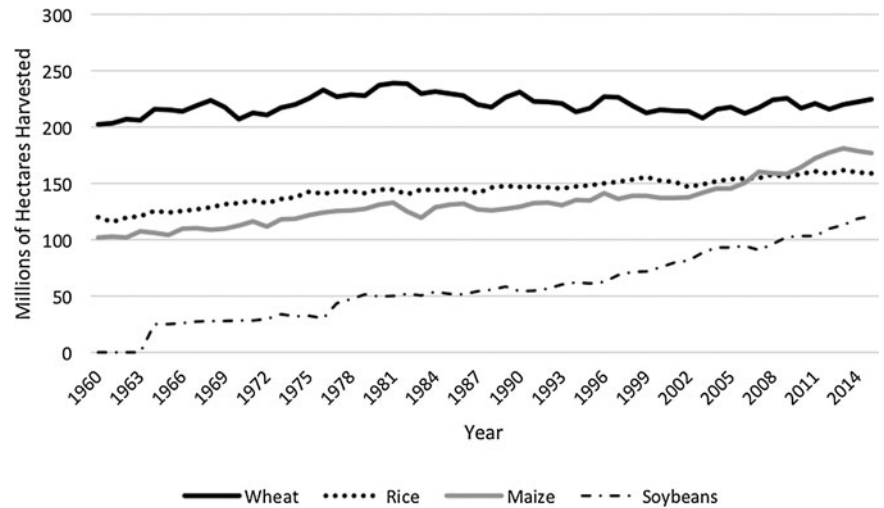
Understanding the global context is key to understanding the economic interests and policy preferences of competing segments of agriculture. Three aspects of the global context are especially important: global demand for agricultural commodities, the level of competition within world markets and the degree of instability in world prices. Here again, I focus on corn, soybeans and wheat because the USA is an important producer and exporter of each of these commodities.

#### Global demand for agricultural commodities

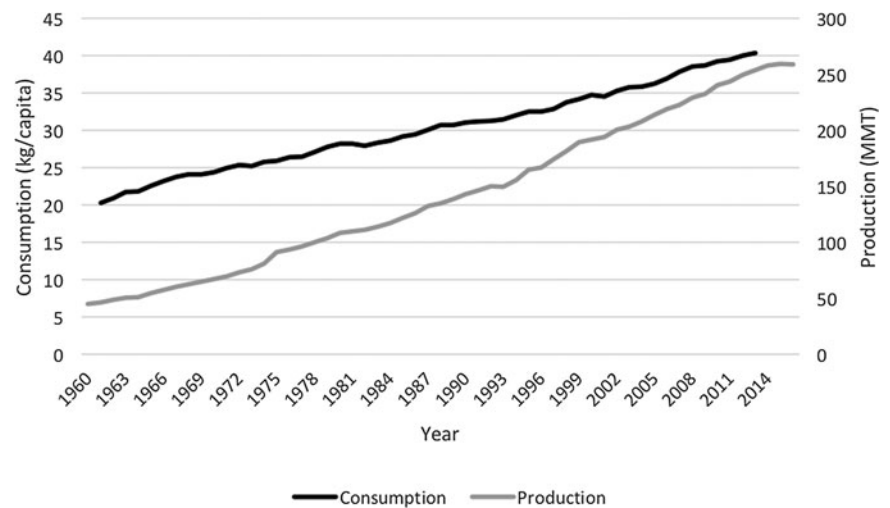
World markets have shown markedly distinct trends in demand over the past 25 years for corn and soybeans, on the one hand, and for wheat, on the other hand. While demand for food grains like wheat has increased over the past few decades, this increase has been far outpaced by the growth in global demand for feed grains. This divergence in the expansion of global demand is an important possible source of competing economic interests and policy preferences for producers of food and feed grains in the process leading up to the 2018 farm bill.

Turzi (2017: 1) posits that four factors drive world demand for agricultural commodities: 'food, feed, fuel, and finance.' One of the key factors leading to greater demand for agricultural commodities as food is, not surprisingly, population growth. The world's population increased from 5.3 billion in 1990 to 7.2 billion in 2015, an increase of about 36%. Despite this increase in the world's population, some grains have actually declined in demand and production. Between 1990 and 2015, for example, world production declined for barley, oats and rye (Winders, 2017: 3, Table 1.1). Hence, a growing world population does not automatically lead to greater demand or expanding production. Still, the growing world population has played a role in driving up demand for grains central to many diets around the world, particularly food and feed grains. Rice and wheat each saw a notable increase in world production between 1990 and 2015: world wheat production increased by 25%, from 588 to 735 MMT (million metric tons); and, world rice production increased by 34%, from 351 to 470 MMT (Winders, 2017: 3, Table 1.1). Feed grain production increased much more sharply: world corn production more than doubled, from 481 to 967 MMT (Winders, 2017: 3, Table 1.1); and world soybean production increased by 200%, from 104 MMT in 1990 to 319 MMT in 2015 (Winders, 2017: 11). Figure 1 shows the global expansion in food and feed grain production in terms of land use. This figure shows that between 1990 and 2015, wheat hectares remained relatively constant and rice hectares increased slightly. By contrast, corn and soybean production showed a substantial expansion in hectares harvested of 25 and 100%, respectively. The increases in world production—in terms of volume and land used—of wheat and rice are due largely to greater demand in terms of food. Yet, there is a sharp divergence between the growth in feed grain production relative to the growth in the production of food grains.

<sup>5</sup>Computed using data from the Global Agricultural Trade Systems (GATS) online database at the Foreign Agricultural Service of the USDA. Available at <https://www.fas.usda.gov/data>.



**Fig. 1.** Land Area Used in Global Food and Feed Grain Production, 1960–2015.  
Source: USDA, 'PS&D Online Database.'



**Fig. 2.** Global Per Capita Meat Consumption and Total Global Meat Production, 1960–2016.  
Sources: USDA, 'PS&D Online Database;' and FAO, 'FAOSTAT.'

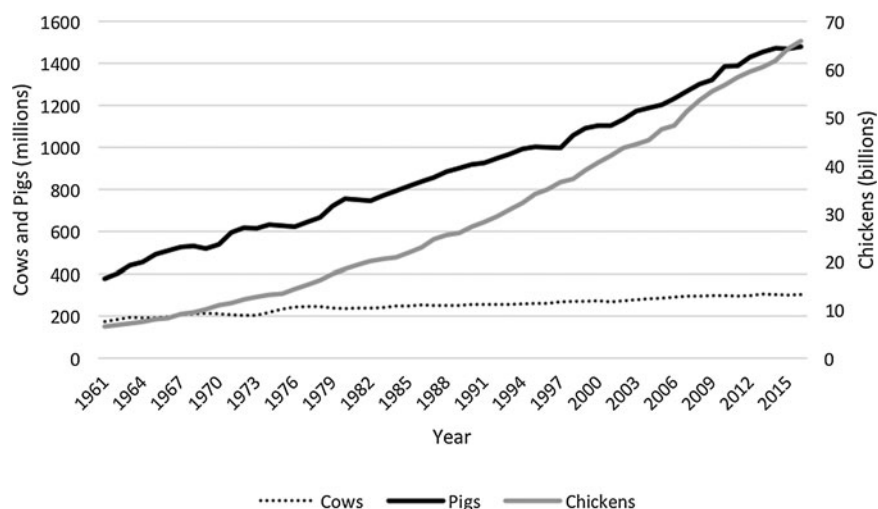
While some corn and soybeans are used as food and ingredients in processed foods, they are used primarily as biofuel and animal feed. Therefore, we must look beyond food and turn to feed, in particular, to see the factors creating greater demand for corn and soybeans.

There has been a tremendous growth in global meat consumption and production. Figure 2 shows the increase in both global meat consumption and production. From 1961 to 2013, global per capita meat consumption almost doubled, from 20.3 to 40.3 kg. While this is a substantial increase in the amount of meat the average person consumes, it does not fully capture the expansion in global meat consumption or in the global meat industry. At the same time that per capita meat consumption increased, the world's population increased as well, from about 3 billion in 1960 to about 7 billion in 2013. And more recently, global per capita meat consumption increased from 31.0 kg in 1990, when the population was 5.3 billion, to 40.3 in 2013, when the population had reached about 7 billion. That is a 30% increase in per capita meat consumption at the same time that the world population increased by 25%. Perhaps a more effective way to capture the expansion of the global meat industry is to look at meat production, which increased

from 45 MMT in 1960 to 143 MMT in 1990 to 259 MMT in 2016. This equals a 237% increase from 1961 to 1990, an 81% increase from 1990 to 2016 and a 500% increase over the entire period. Meat production increased faster than did either the world population or the global per capita meat consumption. The primary point, however, should not be lost: the global meat industry expanded dramatically in recent decades and this created a growing demand for feed grains.

This growing demand for feed grains is perhaps most clear in the number of animals used in the global meat industry. Figure 3 shows the number of cows, pigs and chickens killed in the global meat industry. In 2016, billions of animals were slaughtered for meat: 302 million cattle, 1.47 billion pigs and 65.8 billion chickens. The number of animals slaughtered has increased significantly over the past several decades, matching the trends in meat production and per capita consumption. As the global meat industry has expanded, the use of corn and soybeans in livestock feed has also increased because of the spread of industrial meat production methods that rely on feed grains. The industrial production of meat rests on the use of confined animal feeding operations (CAFOs) that bring together large numbers of animals in relatively small areas or facilities. The spread and adoption of





**Fig. 3.** Global Meat Production (Number of Animals Slaughtered), 1961–2016. Source: FAO, 'FAOSTAT.'

such intensive production of animals have been a central driving force behind the more than 60% increase in the slaughter of pigs and 140% increase in the slaughter of chickens. Weis (2013: 96–97) points out that industrial methods have been incorporated most for pigs and chickens, which account for the biggest growth in meat production and consumption.

Because of the connection between feed grains and the global expansion of meat production, there is a geography to the demand for corn and soybeans. As liberalization set upon the world economy over the past 40 years or so, new markets emerged for feed grains. In particular, China and Eastern Europe each aimed to increase meat production and consumption and, therefore, began to import more feed grains during the 1990s. China was by far the world's biggest importer of soybeans in 2015, importing 85 MMT. The EU was a distant second, importing 13 MMT of soybeans. In each instance, the soybean imports fuel rising meat production. As Weis (2013: 86) puts it, 'in order to feed half of the world's pigs, China has become by far the leading importer of soybeans.'

As the global meat industry has expanded, the use of corn and soybeans in livestock feed has also increased. For several decades, then, the global meat industry has served as a source of growing demand for feed grains. And importantly for our purposes, the rate at which global demand for feed grains has increased has been much faster than the growth in demand for food grains. These different trends in global demand have the potential to lead to competing policy preferences as the 2018 farm bill approaches, particularly regarding issues of trade and production restrictions.

First, the faster growth in feed grains would lead us to expect that organizations representing corn and soybean growers would advocate strongly for free trade to take advantage of growing demand in the world economy. There is certainly evidence for this as organizations such as the American Farm Bureau Federation have raised concerns about Trump's protectionist rhetoric and executive orders, pointing out the potential of losing markets in the world economy. And the president of the National Oilseed Processors Association, a trade organization representing soybean processors, stated that 'Agriculture represents NAFTA's biggest success story,' and argued that NAFTA has benefitted 'the U.S. soy sector in two ways ... by increased exports of soybeans, soy meal, and soy oil ... [and] also increased meat and poultry products that use soymeal as a primary feed

ingredient' (US House, 2017: 36). A representative of the US Grains Council stated that 'The U.S. feed grains industry has benefitted substantially from NAFTA' (US House, 2017: 32). This is just a few examples of how organizations and producers in feed grains have advocated for trade policies favoring free trade. By contrast, wheat producers have been far less vocal or prevalent on this issue.<sup>6</sup>

Secondly, these diverging trends in global demand for feed and food grains would lead us to expect varying degrees of support for any possible return of production controls. Certainly, the American Farm Bureau Federation, which regularly aligns with the interests of feed grain producers, expressed concern about the potential of even environmental regulations in US agricultural policy, like the Conservation Reserve Program, to 'impose real costs and substantive burdens' on farmers (US Senate, 2018: 20). And the idea of controlling production for the sake of restricting production and managing supply does not fit with the broader market-oriented policies favored by the Farm Bureau or by feed grain producers (e.g., see US Senate, 2018). By contrast, the National Farmers Union, which more frequently aligns with the interests of wheat producers, has been supportive of expanding the Conservation Reserve Program, which removes some land from production (e.g., see National Farmers Union, 2018a). Furthermore, the National Farmers Union has continued to support some form of production controls to manage commodity supply and it recently proposed 'a voluntary, farmer-owned market-driven inventory system that reduces volatility in agricultural commodity markets' (National Farmers Union, 2018b: Article 1, section D-1). Particularly for feed grains, then, the global context facilitates the advocacy of market-oriented trade and agricultural policies, while wheat producers tend to remain open to the idea of production controls in some form.<sup>7</sup> Given the differences in global demand for feed and food grains, we should expect this divergence in policy preferences to continue in the formation of the 2018 farm bill.

<sup>6</sup>This is not to suggest that wheat producers or organizations are opposed to free trade policies but simply that they are less visible among those advocating for such policies, which is not unimportant. In fact, no representatives of the wheat sector appeared at the Congressional hearing on 'Renegotiating NAFTA' in July 2017 and the word 'wheat' appears only once in the hearing transcripts (see U.S. House, 2017).

<sup>7</sup>Other organizations, such as the National Family Farm Coalition and the National Milk Producers Federation, have also favored supply management programs in recent years (e.g., see Bosso, 2017: 88–91; National Family Farm Coalition, 2018).

### International competition in world grain markets

The second aspect of the global context important for understanding the economic interests and policy preferences of competing segments of agriculture is the degree of competition in world markets. As with global demand, the level of competition in world markets differs for corn and soybeans relative to wheat. Examining the concentration of world exports, we can see different degrees of competition in world markets for corn, soybeans and wheat: while the world market for wheat is quite competitive with several nations exporting wheat, the world markets for corn and soybeans are dominated by just a couple of nations, namely the USA and Brazil.

Looking at the geography of international trade, particularly exports, reveals the degree of competition in world markets. As noted previously, corn and soybeans are exported primarily from North and South America, particularly the USA, Brazil and Argentina. The primary importers of these feed grains include China and Europe. Wheat, by contrast, is exported mainly from Argentina, Australia, Canada, Europe, Russia, Ukraine and the USA. The larger number of exporters means greater competition for wheat markets, even as the number of possible destinations for wheat exports expanded with the opening of markets in Eastern Europe, China and the former Soviet Union during the 1990s.

Figure 4 shows the average annual share of world exports of corn, soybeans and wheat from 2010 to 2016. During this period, the USA and Brazil dominated world exports of corn and soybeans. In terms of world corn exports, the USA and Brazil accounted for an average of about 35 and 18%, respectively, of world exports. Together, then, the USA and Brazil accounted for more than half of world exports. And when Argentina is added in as the third leading exporter, these three countries accounted for 70% of world corn exports during this period. The USA and Brazil each accounted for about 40% of world soybean exports. With 80% of the market, these two countries had little competition in world markets. Their next closest competitor accounted for less than 8% of world exports during this period. In world feed grain markets, then, the USA and Brazil have dominated exports. There is no widespread competition for these markets, which have also been growing in size and number over the past several decades.

The world wheat market has presented a different story, just as it did during the twentieth century. The US wheat producers face much greater competition than seen in feed grain markets. Several countries have increased their average annual wheat exports since the early 2000s: Canada, the EU, Russia and Ukraine. Each of these countries, except for the Ukraine, has surpassed the USA in the volume of wheat exports during at least one of the previous 5 years. While the USA led the world in average wheat exports from 2010 to 2016, US wheat exports accounted for only about 17% of world wheat exports during this period (see Fig. 4). Table 1 shows annual wheat exports (in MMT) from 2010 to 2016 for the leading wheat exporting countries. In recent years, Russia, the EU and the USA have had similar levels of wheat exports, but the EU has challenged and even surpassed the USA in wheat exports, both in the past 7 years and over the past few decades.

While Brazil has emerged as a challenger to the USA in world corn and soybean markets, the world wheat market is far more competitive. This substantial difference in competition in world markets has the potential to lead to divergent or competing policy

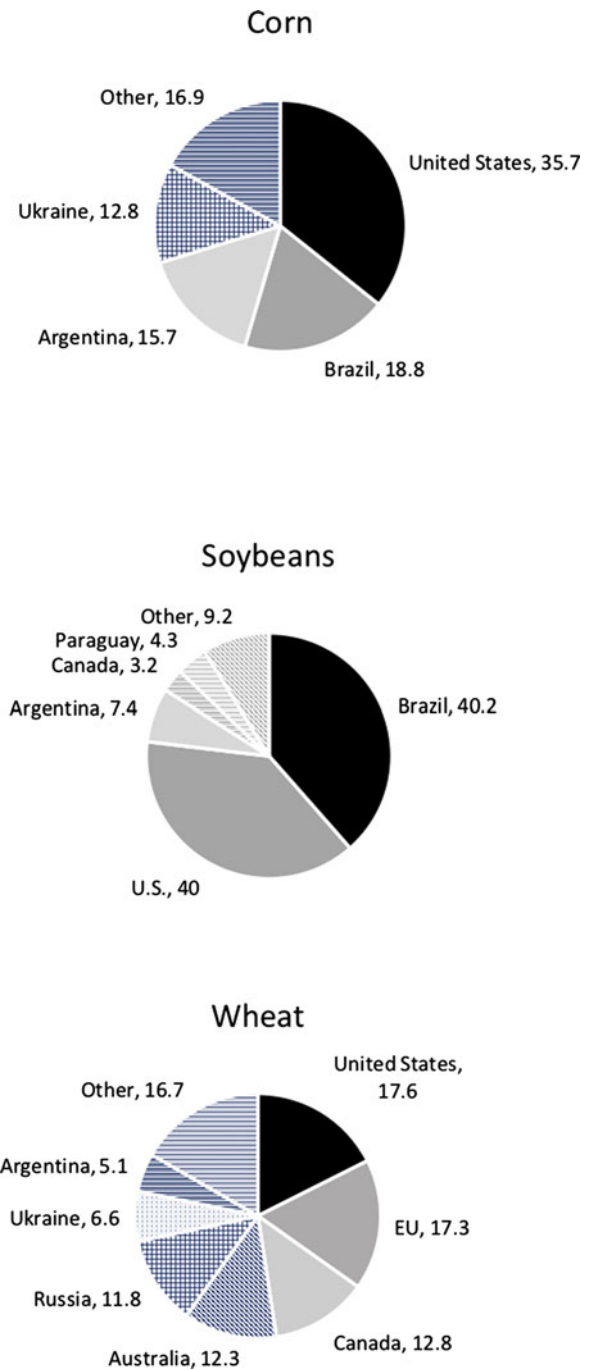


Fig. 4. Average Percentage Share of World Exports of Corn, Soybeans and Wheat, 2010–2016.

Source: Calculated using data from USDA, 'PS&D Online Database'.

preferences as the 2018 farm bill approaches, especially when considered with differences in the growth of global demand. This competition in world markets would lead us to expect greater support for free trade from corn and soybean producers and organizations than from those in wheat production. We have already seen this to be the case in our discussion of global demand. Furthermore, the level of competition for each commodity is likely to reinforce a reluctance to support any return to production controls or restrictions as corn and soybean producers see expanding markets and therefore the opportunity to expand

**Table 1.** Wheat Exports for Select Countries, 2010–2016 (in MMT).

Year	Argentina	Australia	Canada	EU	Russia	Ukraine	USA	World
2010	9.5	18.6	16.6	23.1	4.0	4.3	35.1	133.0
2011	12.9	24.7	17.4	16.7	21.6	5.4	28.6	157.6
2012	3.6	18.6	19.0	22.8	11.3	7.2	27.5	138.1
2013	2.3	18.6	23.2	32.0	18.6	9.8	32.0	165.9
2014	5.3	16.6	24.2	35.5	22.8	11.3	23.5	172.8
2015	9.6	16.1	22.1	34.7	25.5	17.4	21.2	183.4
2016	13.8	22.6	20.2	27.3	27.8	18.1	28.7	180.8

Source: USDA, 'PS&D Online Database.'

production, and as wheat producers face the potential of falling exports and losing world market share should production controls be enacted. Nonetheless, this competition in world markets is likely to lead wheat producers to favor some regulation or coordination of world markets, in contrast to the tendency of corn and soybean producers to favor free trade.

### Price instability

The third and final aspect of the global context to be considered as shaping the economic interests and policy preferences of segments of agriculture is market instability in terms of prices. To the extent that market prices are more volatile for some commodities than others, producers facing greater market instability may voice a preference for political policies aiming to regulate and stabilize the market. However, the most significant differences in market stability can be seen across time (i.e., comparing different historical periods) rather than between commodities (e.g., corn prices versus wheat prices). Nevertheless, prices for corn, soybeans and wheat have shown some notable differences in recent years.

Figure 5 shows the fluctuations in world prices for corn, soybeans and wheat from 1960 to 2016. In the middle of the twentieth century, world agricultural prices were relatively stable, with market prices generally showing little variation from year to year. This is not surprising given the policy emphasis on stabilizing markets. Supply management policy contributed to market stability through its two primary programs: price supports put a floor beneath prices, thereby preventing sharp declines; and production controls worked to prevent overproduction and create a stable reserve in case of shortages, helping to prevent sharp increases. Similarly, international commodity agreements, such as the IWA, helped to create a range within which prices could fluctuate and also worked to stabilize production and trade. The efficacy of such widespread policies and regulation is apparent in the price trends for these commodities: prices were much more stable before 1970 than they were thereafter when supply management policy experienced significant retrenchment (Winders, 2009).

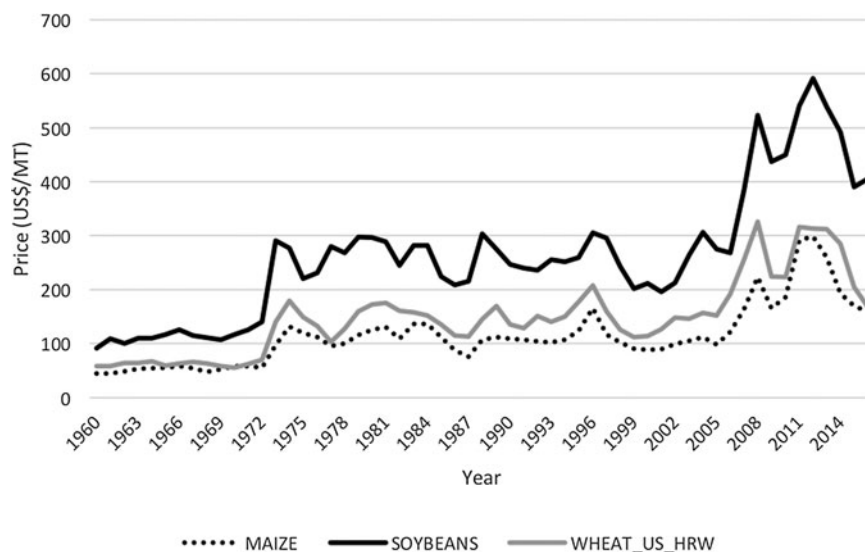
Beginning in the early 1970s, however, prices became much more volatile. World prices first spiked during the global food crisis that struck in 1972–1974, when world corn prices increased from US\$136/MT to US\$470/MT over 10 months—an increase of 245%. Similarly, world wheat prices increased by 255%, from US\$62/MT to US\$220/MT.<sup>8</sup> In the years leading up to this global food crisis, the annual variation in prices

for corn, soybeans and wheat did not surpass 20%: the average annual change in the prices for these commodities from 1960 to 1970 averaged 6% for corn, 7% for soybeans and 5% for wheat (Winders *et al.*, 2016: 80). From 1971 to 1995, by contrast, the average annual change in prices jumped to 13% for corn and soybeans, and 16% for wheat (Winders *et al.*, 2016: 82, Table 1). And perhaps more telling, while the annual price change for these commodities never reached 20% from 1960 to 1970, 'each of these commodities had annual price variations of 20 percent or more at least eight times' between 1970 and 1995 (Winders *et al.*, 2016: 80). The average annual fluctuation in prices for these commodities increased from 1996 to 2010, reaching 19.6% for corn, 15.5% for soybeans and 17.9% for wheat (Winders *et al.*, 2016: 82, Table 1). World prices for corn, soybeans and wheat have seen significant fluctuations from year to year over the past couple of decades, which included a sharp increase during the global food crisis of 2008 (see Fig. 5).

Most recently, trends in world prices since 2012 have differed among these commodities, in terms of instability. Corn prices were quite stable from September 2014 to October 2017, a period during which world corn prices ranged between US\$147/MT to US\$178/MT. By contrast, during this same period, world wheat prices fell from US\$243/MT to US\$172/MT, and then rose back up to US\$202/MT before falling again. Similarly, world soybean prices fell from US\$432/MT to US\$368/MT and then fluctuated thereafter. The gap was greatest for wheat prices at 41%, relative to 21% for corn prices and 17% for soybean prices. Yet, wheat prices suffered an even larger decline from US\$269/MT in December 2014 to US\$141/MT in December 2016—a decline of 47%, which was the largest for any of these commodities in recent years. Therefore, wheat farmers have faced the most market instability and volatility in recent years.

Such differences in the stability of market prices have the potential to influence the policy preferences of producers of different commodities in two basic ways. First, just as greater international competition can encourage producers to favor policies that coordinate markets, the same is true for greater market instability. Volatile prices, moving up or down from year to year, reduce producers' ability to anticipate or predict income. Hence, the preference for greater stability. As already noted, policies such as supply management can help create greater market

<sup>8</sup>Calculated by using data for monthly world prices from the World Bank, Global Economic Monitor Commodity online database. Available at <http://databank.worldbank.org/data/databases/commodity-price-data>.



**Fig. 5.** World Prices for Corn, Soybeans and Wheat, 1960–2016 (Nominal Prices).

Source: World Bank, 'Global Economic Monitor Commodities'.

stability.<sup>9</sup> In periods when prices for some commodities, such as wheat, are less stable than other commodities, such as corn or soybeans, producers of different commodities may develop competing policy preferences. We can see this kind of divergence, as mentioned already, in the National Farmers Union support for supply management policy, which is also further elaborated on in Schaffer and Ray's (2020) discussion.

Secondly, low or declining prices can also prompt producers to favor income supports or production controls. The declining or more volatile prices for wheat are more likely to lead to a preference for income supports as opposed to production controls. As discussed in the section about increasing global demand, wheat exports are increasing, so production controls would likely be less appealing. And when prices fell significantly after the passage of the FAIR Act, income supports returned in the form of counter-cyclical payments, but production controls did not. All of this would suggest that, if producers seek policy solutions to declining or unstable prices, they are more likely to succeed in gaining some form of income supports as opposed to production controls. Nevertheless, the return of production controls remains a possibility as WTO rules permit production controls even for economic purposes, as well as conservation and environmental purposes.

Another possible policy preference could arise from the greater market instability or even declining prices: the re-establishment of grain reserves. One of the factors contributing to the greater volatility in market prices for food grains has been the elimination of the world's grain reserves, which began to shrink particularly in the 1990s and 2000s. While the USA is one of the leading wheat exporters, Kaufman (2012: 248) notes that the '1996 farm bill abolished the grain reserve of the United States.' In the

<sup>9</sup>The combination of price supports and production controls in supply management policy can be seen as having undermined the primary function of that policy—managing the supply of agricultural commodities—because these programs together encouraged farmers to produce more grains and other commodities, thereby leading to overproduction. The overproduction and resulting surpluses, however, helped to even out supply and stabilize grain markets. Surpluses were used to create grain reserves that were released onto markets during shortfalls in production. Thus, the overproduction caused by supply management policy actually helped to stabilize markets. Therefore, the policy managed supply in a way to avoid or overcome significant shortfalls in production and help prevent periodic spikes in commodity prices. The elimination of supply management policy contributed to greater market instability (Winders, 2009; Winders *et al.*, 2016).

USA, the Food Security Wheat Reserve that was designed to 4 MMT tons of wheat and other grains is now known as the Bill Emerson Humanitarian Trust, which since 2008 no longer holds stocks of grains but is only a cash fund.<sup>10</sup> This policy shift by a leading wheat exporting nation, of course, had important implications for price volatility in the world wheat market. Furthermore, Murphy (2010: 3) of the Institute for Agriculture and Trade Policy notes that, while WTO rules allow for grain reserves, the rules 'do prohibit (though not especially effectively) some of the policies that a reserve is likely to depend upon if it is to work well.' Murphy (2010: 8) also points out that the language of WTO rules about grain reserves is ambiguous and creates 'confusion over what programs are acceptable and have a chilling effect on what kinds of programs governments are willing to experiment with.' Thus, global and national grain reserves do not have the presence that they once did. Volatile prices could create a push to return to such a system of grain reserves.<sup>11</sup>

As occurred in the twentieth century, these different aspects of the global context—expanding demand, market concentration and price instability—influence the economic interests and policy preferences of producers of different commodities. And as producers of particular commodities experience the global context differently, they can develop competing and conflicting policy preferences. This can then set up political battles over the farm bill.

### Conclusion: world markets, instability and policy preferences in agriculture

As with every farm bill, there is sure to be plenty of political wrangling and clashes as the 2018 bill takes shape. On questions concerning commodity programs—from income supports to production regulations and trade policy—the global context will inevitably influence not only which political battles occur but also the final outcome of the process because the USA is an important producer

<sup>10</sup>For more information, see <https://www.usaid.gov/news-information/fact-sheets/bill-emerson-humanitarian-trust>.

<sup>11</sup>Some organizations, including the National Family Farm Coalition, already advocate for a return of grain reserves (National Family Farm Coalition, 2018). The National Farmers Union seems to support a move in this direction as well with their market-driven inventory system (National Farmers Union, 2018b).



and exporter of corn, soybeans and wheat, among other commodities. That some commodities, such as corn and soybeans, are seeing more growth in global demand will surely lead to opposition to proposals for programs that might expand regulations, limit production, or reduce trade. Yet, such proposals might have some appeal to producers of other commodities, such as wheat, for which growth in global demand is slower, the world market is notably more competitive and monthly world prices have shown a greater decline over the past few years.

While these dimensions of the global context of agriculture help to make sense of what economic interests and policy preferences different segments of agriculture might develop, they do not go as far in explaining the ultimate outcome of the resulting conflicts over agricultural policy and trade. Political power, which I have not addressed much here, is central to understanding the outcome. For more than two decades, segments of agriculture favoring market-oriented policies have carried the political day, winning the end of supply management policy with the FAIR Act of 1996 and the increasing liberalization of agriculture in the world economy with the WTO and numerous regional free trade agreements, like NAFTA. Importantly, the free trade and market-oriented policy preferences of feed grain producers largely align not only with the expanding meat industry and increasingly powerful agri-food corporations but these policy preferences fit with the longer term direction of the international food regime. McMichael (2012) and others (e.g., see Pechlaner and Otero, 2010; Winders, 2017) have demonstrated how the international rules governing agriculture have become more market-oriented and corporate-friendly. Nonetheless, it is worth returning for just a moment to political circumstances noted at the outset of this paper: the Republican president has been outspoken in his opposition to free trade agreements—including NAFTA and the TPP—that have favored the interests of corn and soybean producers. Such pronouncements suggest that the 2018 farm bill could be an intriguing moment in the history of US agricultural policy, especially if those pronouncements are more than just political posturing.

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