



November 2017

# 2018-2020: Pressure on Grain and Farm Supply Sectors to Persist

by **Tanner Ehmke**

*Manager, Knowledge Exchange*

## Inside...

<i>Grains, Oilseed, and Ethanol Outlook</i> .....	1
<i>Corn</i> .....	2
<i>Wheat</i> .....	3
<i>Soybeans</i> .....	3
<i>Ethanol</i> .....	4
<i>Farm Supply Outlook</i> .....	5

## Key Points:

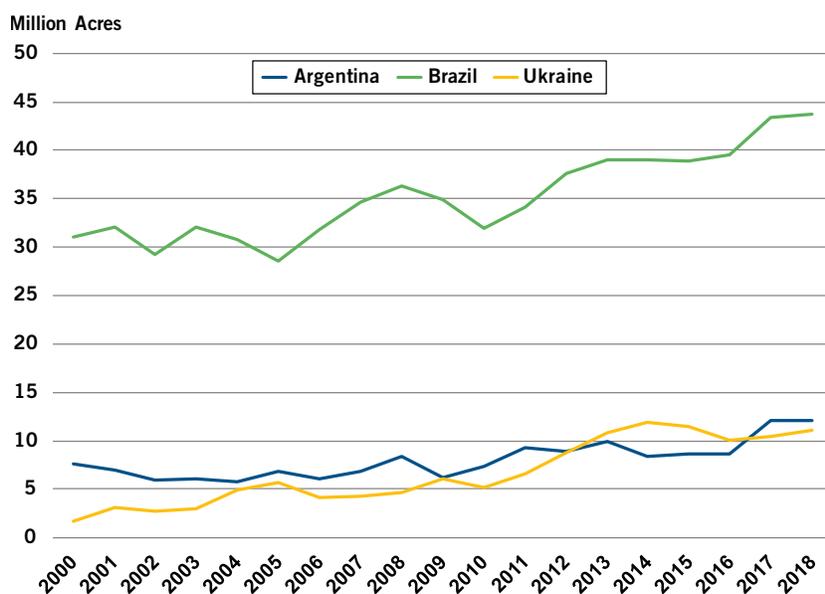
- Grain handlers will benefit most from persistent large grain supplies and good carry.
- Trade agreement renegotiations will cast a shadow of uncertainty over U.S. grain exports.
- Growth in U.S. corn demand will slow. Domestic livestock and broiler expansions will lose steam and export competition will limit global market share.
- Russia will exert increasing influence on the world wheat market. A weak currency, expanding acreage, improving yields and infrastructure, and proximity to key markets will solidify Russia's lead position in wheat exports. Opportunities for the U.S. are in Southeast Asia and Latin America.
- Powered by a currency advantage, Brazil will expand its soybean acreage by 2-3 percent annually through 2020. Concerns about its transportation infrastructure are subsiding.
- Brazil's expansion in corn ethanol production and its tariff on U.S. ethanol will also hurt U.S. ethanol margins.
- Excess fertilizer warehouse capacity will pressure input retailers as they compete for market share in an increasingly competitive market amid a consolidating customer base.

## Grains, Oilseed, and Ethanol Outlook

The long-term outlook for grains and ethanol is one of cautious optimism, with domestic and global demand expected to continue rising as export competition builds abroad.

In the absence of major weather disruptions, global grain surpluses are expected to persist in the near term. Acreage expansions and improvements to yields in major competing export hubs like South America and the Former Soviet Union will be headwinds to U.S. exports. Renegotiations on trade agreements like NAFTA, which is hugely important for U.S. grain, oilseed and ethanol exports to Canada and Mexico, will heighten uncertainty on the export front just as Free Trade Agreements (FTAs) around the world are enhancing concern about increasing competitiveness in commodities.

## Exhibit 1: Harvested Corn Acreage



Source: USDA-FAS

The bright spot will be the continual growth on the demand side of the ledger for global grains, oilseeds and biofuels. As the global middle class grows, so will the growth opportunities for U.S. exports. The continual expansion of the global middle class is expected to underpin further demand growth for animal proteins and feed grains, and the switch to more Western-style diets in Southeast Asia and Latin America will create export opportunities for quality U.S. milling wheat. Ethanol consumption worldwide is expected to continue expanding as major population centers seek to improve air quality, offering hope for ethanol exporters to grow market share in emerging markets.

Tailwinds might also come from weakness in the U.S. dollar. A continuation of global economic recovery would strengthen foreign currencies against the dollar, making U.S. exports comparatively cheaper and more competitive. Rising valuations of currencies among major exporters like Brazil, Argentina, Russia, Ukraine, Canada, Australia, and the European Union in particular will be key in the development of the U.S. ag export program.

### Corn

After more than a decade of demand growth driven largely by expansion in ethanol use, the demand outlook

for corn is turning more tepid. Corn's demand trajectory will continue on a growth path in the years ahead, but major expansions in both domestic use and exports are likely to be a challenge.

Domestically, feed demand is expected to plateau as the livestock and broiler expansion loses steam. Ethanol demand growth, meanwhile, hinges on the expansion of E15 (gasoline blended with 15 percent ethanol), which faces major challenges.

With domestic demand growth to remain lethargic, growth in the industry will be largely dependent on exports. However, rising competition from abroad

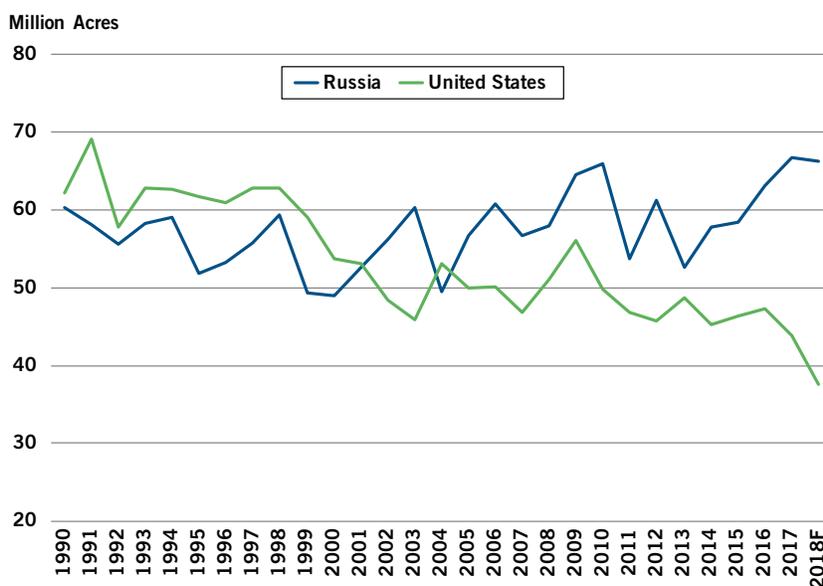
is expected to create strong headwinds for corn's export program. Brazil will continue to expand area planted to its short-season "safrinha" crop that immediately follows soybean harvest as transportation and storage infrastructure expands deeper into Brazil's main growing regions. (See Exhibit 1.)

Argentina and Ukraine are also expected to continue expanding acreage in the coming years as more farms include corn in crop rotations. Argentina's corn production has nearly doubled in the last five years. And Argentina's new government is expected to gradually reduce export taxes on corn in the years ahead, incentivizing increased plantings.

Productivity outside the U.S. is also on the rise. This is particularly true in Ukraine where corn yields have more than doubled since 2000. The Former Soviet Union (FSU) region is closing the yield gap via improved farming practices and higher performing seed genetics, which will put further pressure on the U.S. in the global export market.

The combination of anemic demand growth domestically and rising export competition abroad will limit usage increases in the years ahead. Only major weather events that significantly curtail corn production will have a

## Exhibit 2: Harvested Wheat Acreage



Source: USDA-FAS

material change on corn's current path of domestic supply surplus and global price competition.

However, the factors that hurt grain producers do not have the same impact on the rest of the supply chain. Abundant supply translates into positive trends for elevators in the form of grain storage, carry in the futures market, and throughput. Elevators, coops, and merchandisers are likely to fare well in a surplus corn market.

### Wheat

Russia will continue to impose the most influence on the global wheat export market, creating stiffer headwinds for U.S. exporters. Benefiting from a cheaper currency, expanding wheat acreage, rising yields, improving infrastructure and closer proximity to key export destinations in the Middle East and North Africa, Russia has room to grow in its export capabilities.

Russia's dominance in the world wheat market creates an uphill battle for U.S. wheat farmers, many of whom are reducing or eliminating wheat in their rotations in search for more profitable crops like corn and soybeans. (See Exhibit 2.) Most recently, wheat was planted to the smallest acreage in the U.S. since

WWI and all-wheat production fell to the lowest level since 2003. This had little effect on prices, as cash wheat prices continue to hover at multi-year lows.

In the near term, the U.S. faces stiff competition from a record Russian wheat crop in addition to abundant supplies in Europe. The long-term trend hints at further challenges for U.S. wheat growers. Without a major weather event, U.S. wheat acreage is expected to slip further.

Not all news is bad for U.S. wheat. While the U.S. has lost export markets in volume, the dollar value of U.S. wheat exports exceeds that of Russian exports. U.S. wheat exporters are filling orders and pursuing market share in emerging

markets that increasingly demand higher quality wheat. Southeast Asian countries like Indonesia, Vietnam, Malaysia, Myanmar, Taiwan and the Philippines, and Latin American countries like Mexico, Columbia and Ecuador remain key opportunities for the U.S. to increase shipments to regions with a growing middle class.

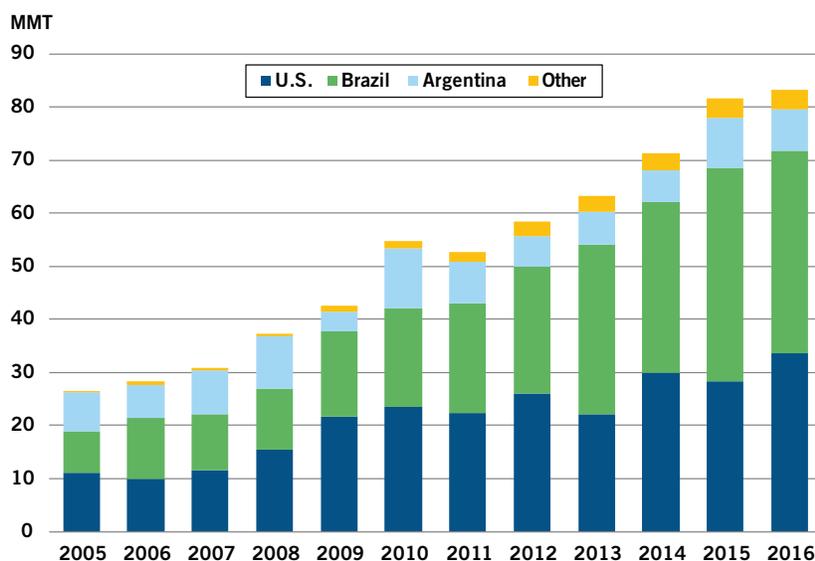
Similar to corn, wheat elevator operators and merchandisers will have opportunities to gain from storage and carry in the futures markets. Wheat's demand story is also a bright spot. Global demand for wheat marks new records each year as the market builds a stronger demand base amid low prices and creates opportunities for price recovery in the future.

### Soybeans

The U.S. is the world's largest soybean producer, but the mantle of chief world exporter has shifted to Brazil. Brazilian farmers are expected to continue expanding acreage in the years ahead to satiate ever-growing Chinese demand.

China imported yet another record tonnage during the 2016-17 growing season from each of the three major suppliers – Brazil, the U.S. and

### Exhibit 3: Chinese Soybean Imports by Origin



Source: China Customs General Administration

Argentina – with no sign of the import pace slowing. (See *Exhibit 3*.) Barring a shock to China’s economy, China’s middle class is expected to balloon by several million over the next three years, with demand for animal protein – and animal feed like soybean meal – to continue rising.

Brazilian soybean acreage is expected to continue growing at a pace of two to three percent each year through 2020. Brazilian growers will aim to fill as much of China’s increasing demand as possible, and the depressed value of the real will continue to offer Brazilian exporters a distinct advantage. The political turmoil in Brazil is expected to subside in coming years, allowing the Brazilian currency to stage a recovery. But the real has a long way to climb against the U.S. dollar to reach the highs achieved in 2011. The relatively weak real will continue to prod Brazilian farmers to expand soybean acreage deeper into the Cerrado region.

Concerns over Brazil’s transportation infrastructure and the means of delivering soybeans to China are also abating. Brazil’s government has announced plans to pave much of BR-163, a.k.a. “The Soybean Highway,” before the rainy season in January 2018. Other parts of the highway that have been notoriously impassable during the rainy season are scheduled to have a rock road bed in place, allowing more soybeans to move to northern

ports. A new railroad line stretching from the main soybean-growing province of Mato Grosso to the Amazon River is also scheduled to start construction in 2019, enabling even more efficient transport of soybeans to northern ports.

Continued expansion of Brazil’s soybean acreage, coupled with investments in transportation infrastructure, will boost Brazil’s exports and cause its soybean marketing season to expand and encroach further on that of the U.S. Early planted short-season soybean varieties have already been shipped out of Brazil’s southern ports in the third week of January, cutting into the latter part of the peak U.S. shipping season. Further advances in

production will support Brazil’s export capabilities.

The upside for soybeans is the consistent growth in global demand for livestock feed in the form of soybean meal and for vegetable oils in emerging Asia. The modest but steady growth in biodiesel production will add further to demand long term.

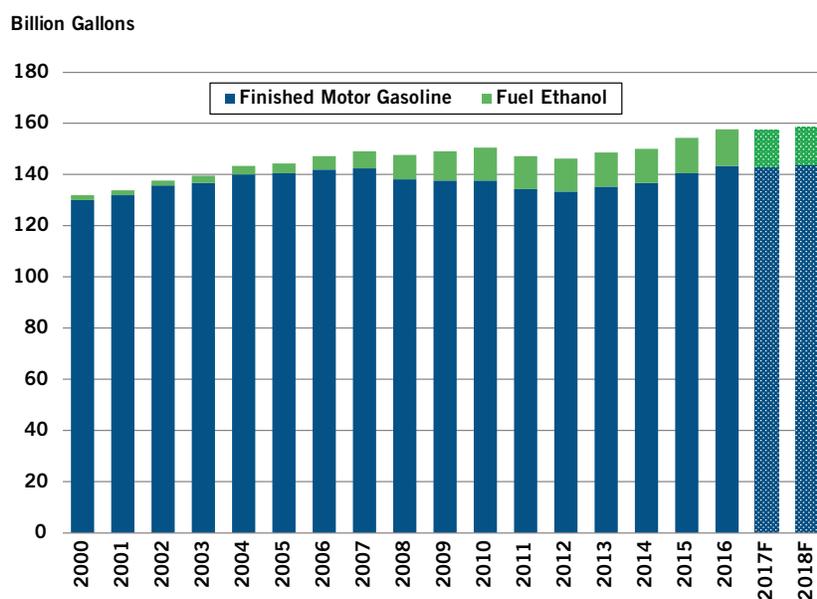
### Ethanol

Ethanol faces an uphill battle in the years ahead as demand for transportation fuel is expected to remain flat in the U.S., while ethanol exports come under pressure from the expansion of capacity in Brazil’s ethanol industry.

Domestically, rising fuel efficiency will continue to pressure per capita gasoline and ethanol consumption. (See *Exhibit 4*.) Total fuel consumption will grow along with the population and will be supported by drivers that switch to lower fuel efficient vehicles like SUVs amid low gas prices. However, the long-term structural changes to demand will create headwinds for growth in domestic consumption.

Ethanol exports also face headwinds from the likely reduction of exports to Brazil. In recent years, Brazil has been a major destination for U.S. ethanol due to sharp losses in the country’s sugar crop. With the growth of

## Exhibit 4: U.S. Gasoline and Ethanol Demand



Source: EIA

Brazil's "safrinha" corn crop, corn ethanol production is taking hold in addition to sugar ethanol production. Brazil's government also recently imposed a 20 percent tariff on U.S. ethanol imports that exceed the 600 million liter tariff rate quota. The tariff is expected to be in place for two years.

Brazil's expansion in corn ethanol production and its tariff on U.S. ethanol will hurt U.S. exports to Brazil and also create competition for U.S. exports elsewhere. Without Brazil as a major destination for U.S. ethanol, exporters will shift their focus to growth markets like Mexico, Thailand, Indonesia and India. Mexico, which recently raised its ethanol blend rate to 10 percent, is seen as the key growth market for U.S. ethanol exports in the near to medium term.

Without strong demand growth, ethanol producers face a future of weaker crush margins. A continuation of breakeven to negative margins will pressure marginal players (destination plants and/or aging facilities) to consider exiting the industry. Persistent low grain prices – in the absence of major weather events that sharply reduce corn production – will be the silver lining for ethanol producers.

## Farm Supply Outlook

Global abundance and price stagnation will continue to weigh on fertilizer markets for the next few years. In response to low fertilizer prices, capacity growth has stalled across the industry and expansion plans have been shelved. (See Exhibit 5.)

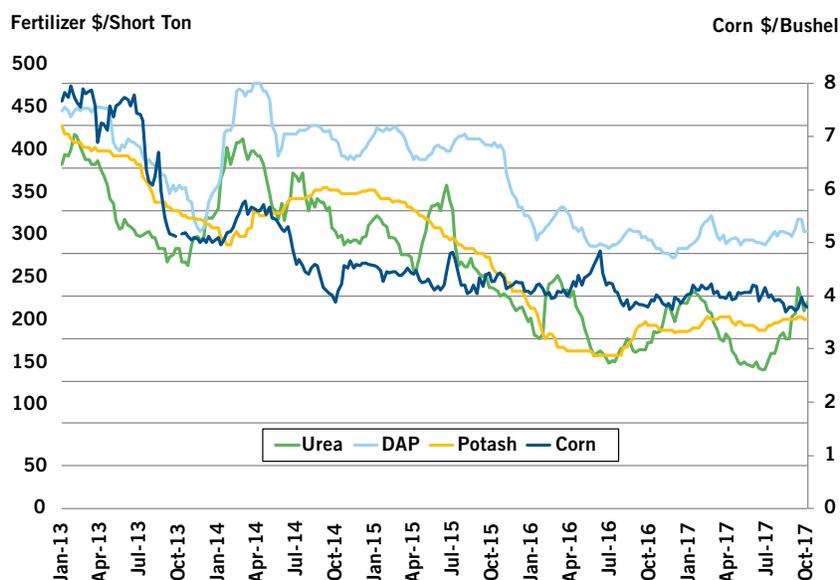
Margins for N fertilizer production will likely remain thin in the near term from over-capacity. The upswing in soybean acreage in the U.S. and the loss of corn acreage also dampens the outlook for N. The bright spot for N will be the price of natural gas, the main feedstock in N fertilizer, which is expected to remain subdued as shale oil drilling expands.

For retailers, overcapacity in the warehouse space will add to the pressure. Ag retailers that invested in new warehouse capacity will depend on growing their market share to cash flow the expansions. The forces of farm consolidation and potential losses of corn acreage may ultimately force retailers to consolidate or to shutter smaller facilities.

The global outlook for fertilizer is a little more encouraging. According to the latest projections by the United Nation's Food and Agriculture Organization (FAO), the demand for nitrogen (N), phosphorus (P) and potassium (K) products globally is forecast to grow at an annual rate of 1.5 percent, 2.2 percent and 2.4 respectively by 2020.

Pressure on seed and crop protection sales is also likely to persist as farmers continue to struggle with low commodity prices. However, farm financial stress is expected to remain localized. According to Farmer Mac, the increase in farm bankruptcy filings has been most common across Nebraska, eastern California, central Georgia, Kansas and Wisconsin. Farm debt levels will continue to rise and growers will seek out ways to cut production costs, such as switching to lower cost seed varieties.

### Exhibit 5: U.S. Gulf Corn and Fertilizer Prices



Source: Bloomberg

Mergers and acquisitions in the seed and crop protection space are expected to continue as companies seek to find efficiencies and lower costs during an extended period of weak farm profitability. A narrowing of competition ultimately puts upward pressure on product prices, as

indicated in a study conducted at Texas A&M University. Meanwhile, the Chinese government's harder stance on passing and enforcing environmental regulations against manufacturers deemed heavy polluters could add further support to farm input prices should chemical manufacturing be curtailed or come off-line. The tougher regulatory stance in China also raises risk in supply chain management for ag input companies and retailers.

Ag retailers will also face new and growing competition from the Amazon effect with greater market penetration coming from the internet. Start-ups like Farmers Business Network, or FBN, offer a fee-based platform where farmers can see the prices paid for farm input around the country. The leverage that farmers gain through services like FBN will put pressure on ag retailers to increase quality of service while being price competitive on inputs. ■

**CoBank's Knowledge Exchange Division welcomes readers' comments and suggestions. Please send them to [KEDRESEARCH@cobank.com](mailto:KEDRESEARCH@cobank.com).**

**Disclaimer:** The information provided in this report is not intended to be investment, tax, or legal advice and should not be relied upon by recipients for such purposes. The information contained in this report has been compiled from what CoBank regards as reliable sources. However, CoBank does not make any representation or warranty regarding the content, and disclaims any responsibility for the information, materials, third-party opinions, and data included in this report. In no event will CoBank be liable for any decision made or actions taken by any person or persons relying on the information contained in this report.