Surface Transportation Board
Washington, D.C. 20423-0001

# Minutes of the National Grain Car Council Meeting

Thursday, September 13, 2018
Kansas City Marriott Downtown
200 West 12th Street
Kansas City, Missouri 64105

**Attendance**

Thirty-five members or designated substitutes and 73 members of the public attended. (Attendance sheets are appended to these minutes.) Designated substitutes included the following.

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| Phil Van Tassel | Montana Rail Link |
| Andy Laurent | Iowa Interstate Railroad, Ltd. |
| Amy Homan | Iowa Northern Railway |
| Matt Branch | Chicago Freight Car Leasing Co. |
| Mark Stefani | Citibank |
| Kira Murphy | Canadian Pacific |
| James Sobie | Trinity Rail |
| James Skeens | Norfolk Southern |

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## *AGENDA*

1:00 pm 1) Welcome, call to order, and introductions
- Chair Sharon Clark
- Safety Briefing – Vice Chair Doug Story
- Roger Fray or Bob Petersen – TEGMA
- Introductions
  Fred Forstall – Approved substitutes
  Members – self introductions

2) Adoption of 2017 Minutes – Sharon Clark

3) U.S. Competitiveness in a Turbulent Global Market
Mike Steenhoek, Executive Director, Soy Transportation Coalition

4) A Wall Street View of the Rail Markets
Jason Seidl, Managing Director and Senior Research Analyst, Cowan & Co

3:00-3:15 pm Break

5) Shipper Panel Moderator: Terry McDermott, Bunge
- Oilseeds supply & demand dynamics
  Brad Hildebrand, Cargill
- US domestic market supply & demand dynamics
  Bruce Sutherland, Michigan Agricultural Commodities (MAC)
- Feed grain/wheat market supply & demand dynamics
  Charlie Threlkeld, Consolidated Grain & Barge (CGB)

6) Railroad Reports – Moderator: Doug Story
Class I reports
Class II/III reports

7) Rail Equipment Overview, John Glynn, CIT

8) Closing Remarks
- Chairman Ann Begeman
- Cochair Deb Miller

5:00 pm 9) Adjourn – Sharon Clark

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**Welcome, call to order, and introductions**

After being called to order, Doug Story gave the safety briefing, after which Terry McDermott welcomed the NGCC on behalf of TEGMA. He noted that this was the ninth year that the NGCC annual meeting had been held in conjunction with the TEGMA fall symposium. DFO Fred Forstall reviewed and introduced approved substitutes, and members introduced themselves.

**Adoption of 2017 Minutes**

The 2017 minutes were approved as written.

**U.S. Competitiveness in a Turbulent Global Market** - Mike Steenhoek

The United States is both a producer for the rest of the world and a consumer of the products of the world. There has been a growth in global demand for protein and nutrition, and the United States is positioned to meet that demand with its farmers, shippers, and rail. With respect to agricultural products, the United States produces for the world. Supply has increased with a growth in demand for nutrition and protein. The transportation system must keep up. Demand growth has been most dramatic for soybeans, which move to many customers half way around the world. Although farmers are a declining constituency, they nevertheless remain a potent force on Capitol Hill. However, there is a transportation dilemma. Moving freight is not foremost in most people's thinking. The Soy Transportation Coalition has been in China since 1982. China has gone from zero soybean imports to importing 94 million tons (EU is the next-largest market at 14 million tons). China gets 38% of its soybeans from the U.S. China's growth in demand for soybeans has been exponential. There is no substitute for the Chinese market. The trade imbroglio has had an impact on the reputation of US producers relative to other producers of soybeans. It has been hard for US producers to adjust to the new paradigm, and farmers are looking for what to do with their "refugee soybeans," (i.e., soybeans without a home.) Brazil, United States, Argentina are suppliers to China in that order. A retreat in demand can have a big impact on price, and soybeans have low margins. Why should farmers care about transportation? Because our international competitiveness depends on it. YTD exports through August have declined 22.7 percent year over year as other countries have increased. Exports to Egypt and others have increased. but this surge does not equal profitability—Toys "R" Us saw a surge in sales before closing. A driver of the increased sales is a substantially lower price of soybeans. The U.S. has the best infrastructure for transportation in the world (better than Brazil) with its rail and barge advantages. Generally, free trade agreements have been beneficial, but the trade standoff is further inducement for buyers to look elsewhere. The Coalition has a top 10 list of infrastructure priorities, among them maintaining roads to waterways, dredging the lower Mississippi River to 50 feet (desired but "perpetually in the on-deck circle"), and reducing the likelihood of load restrictions on bridges. Bridge Load Testing Initiative, local efforts where the problem is most pronounced can reduce detours. Visual assessments are not accurate. Using technology to remove subjectivity can reduce the cost of detours. For example, Midland County, MI saw a 10% to 30% increased load, with $100,000 annual savings from three bridges due to reduced fuel costs. The Federal Government should consider infrastructure as a tool, in addition to subsidies, to reduce the costs of the trade dispute while enhancing long-term competitiveness.

Q&A:

Someone asked about Brazil's ability to ramp up production. Mike said that Brazil has land but is reticent because the paradigm is not shifting. Brazil has also had a truck driver strike.

**A Wall Street View of the Rail Markets** - Jason Seidl,

Jason is responsible for his firm's macro railroad and motor carrier (both TL and LTL) views. At the macro level, GDP is good/above trend. There is a low risk of recession and low unemployment, and the yield curve is not inverted. It is a good time to produce stuff. Railroads are also good; volume is up 4 percent year to date. There is strength in various commodities but expect intermodal to increase as shippers are frustrated by trucking. Agriculture is up 5%, but coal is dipping slightly. There is strength across all modes of freight. Storm impact? With respect to agriculture, there has been greater than expected production and inventories of corn and soybeans. Shippers expect a 4.7% increase in rail prices due to the economy and the trucking supply, and they expect 3.5% growth. Crude by rail is also expected to increase.

The economy and tight truck supply are driving the increases. There was all good news at a recent freight conference. The upcoming peak season is expected to be strong. The truckload market is as strong and the supply of truck drivers as tight as Jason has ever seen, and deliveries are low right now due to the supply chain. He expects mid-single digit price increases in 2019. Temporary impact of storm. Supply chain issue for components. "What is it going to take to get drivers back in the marketplace. Trucking companies are failing to attract young drivers even though pay is up double digits to $55k; that number will keep inching up to the magic number. Easing regulations will create some bump in capacity. There are big orders for trucks right now, but OEMs can't deliver new trucks due to parts issues (plastic parts) and the driver shortage (USA Trucks example). Hiring is better for railroads than for trucking (unionized, pensions, higher starting salaries), but railroads are having difficulty finding candidates who pass drug tests.

Q&A:

Jason was asked about the Wall Street focus on operating ratios (OR) and whether there is a correlation between low OR and reduced service; share buybacks; autonomous vehicles and electric trucks; Class I investments in infrastructure; and freight demand. Jason noted that railroads are all about operating profits. (NS is more conservative but is "not good enough" for some investors.) Railroads are not as nimble, but there is no correlation over time between OR and reduced service. CSX may have reduced OR too much, but over time he doesn't expect low OR to impact performance. CSX has seen a massive improvement. Jason thinks that the focus on OR, which started with PSR, is ironic. He noted a correlation between capital spending and return on capital and suggested that railroads should properly focus on the return on invested capital. Jason thinks that share buy backs are like "crack" to railroad executives, who cannot stop because investors want buybacks. Thus, there is pressure on senior managers to continue them. Railroads are also borrowing to do it, but that will probably stop as interest rates rise. He thinks that completely autonomous trucks are decades away but that limited airline-style autonomy (i.e., drivers still required) is closer, perhaps 8-10 years away. To facilitate platooning," a massive investment in road maintenance is necessary. Also, Washington may not like the impact on jobs. He expects that sensitivity to employment (or unemployment) will create drag (i.e., a public factor). Autonomy makes more sense in rail as railroads build on PTC and as Rio Tinto is doing in Australia and passenger rail is doing in the U.S. Unions and the FRA are factors. Electric trucks are being tried out but still need 18-24 months for testing. Greater purchases are necessary. Class I investments in infrastructure are #1 in the world because the railroads control the right of way. Regarding freight demand, he sees a lack of workers and wage inflation as issues. Railroads will go after the intermodal market, but they need to be more consistent to gain market share.

**Shipper Panel**

Terry McDermott moderated the shipper panel initially noting that it has been "something" every year since 2012. Continuous change.

**Oilseeds supply & demand dynamics** - Brad Hildebrand

These are the most uncertain times in the past 30 years. As of July, most states saw an increase in soybean production due to more acres and ideal growing conditions, with 4.693 billion bushels expected in 2018 as of yesterday. It it an optimal year for production, above the trend line.

Expect a record year with "lots of beans," an increase in production of 100 million bushels. A record crush is expected (2.07 billion bushels) due in part to the Argentinean drought. There is a "cloud over the market," but Brad would much rather have good production than not. US exports are at 2.06 billion, which is strong but without tariffs it could have been 150-200 million more. China will still need to import 5-8 million because it is harder for China to wean off oil since it needs to keep the population happy. What is the impact of tariff? – a "good year but could have been a lot better." There is plenty of stocks but bean prices are in the tank now, some below the cost of production. The government has budgeted $1.65 billion for assistance. Brad hopes cooler heads will prevail but doesn't expect either President Trump or China to back down. In the coming year, he expects to see the highest stocks-to-use ratio in a long time.

**US domestic market supply & demand dynamics** - Bruce Sutherland

With respect to Midwest (IN, IL, MI) supply and demand, record yields are expected. The USDA is calling for a bumper crop (despite a July drought in Michigan), and all three states have seen an increase in corn feed/fuel. Expect record beans in all three states; acres of beans equaled acres of corn for the very first time. There is an increase in processing in all three states. Domestic consumption has increased for both feed and fuel. Hog production up across all three states. Michigan has one of the largest hog processing plants in Coldwater. Also, expect an increase in milk cows. Milk production is up in Michigan and Indiana 11% and 14%, respectively but down 5% in Ohio. Egg production is up 19% (organic especially). More trucks will be on the road delivering beans to new producers. Bruce thinks that the average corn crop will offset the tariff issues, but that we will be storing soybeans. Elevators will hold back beans and ship corn during harvest. His company has 43 million bushels of space. He expects "difficult execution" logistically, noting both truck capacity and infrastructure issues. Michigan highways are a problem, and it will also be hard to move soybeans with a lack of trucks and drivers. The logistical situation will weaken basis values. With respect to rail, he expects delays in rail service because MI is "last in line." He expects shorter line hauls and less revenue for MI short lines. Increasing Class I rates have changed values, and Bruce is worried about the overall health of the short lines since most of Michigan is served by short lines. He wonders if there are ways to reduce paper barriers, and suspects that Class Is may need to move grain shorter distances.

**Feed grain/wheat market supply & demand dynamics** - Charlie Threlkeld,

On the corn side, the US had 2.425 billion in corn exports last year and expects 2.4 billion this year. Looking at the world competition, South America is countercyclical but has less available. Brazil is countercyclical for season, has two corn crops, but corn acres are less. The United States could have record exports next year amid the second largest corn crop. With respect to wheat, the United States are in the "back of the bus" among the "big 7." The EU, Canada, Australia, Russia, Ukraine, and others are also big. The EU struggled with warm weather. Russia, Ukraine, and Australia also had issues with adverse weather. But our exports are projected to be up. Where are barge rates – trend is higher which will push grain back to rail. Cheaper barges would tend to pull more bushels to the Mississippi River, but the trend is 150 points higher than last year, pushing grain back to rail.

Q&A for the panel:

The panel was asked whether covered barge capacity was increasing. The largest manufacturing facility shut down, and fracking sand is taking barges out of supply, but the size of the fleet hasn't changed. Operators put covers on the open fleet, but then Southern Illinois coal recovered, so they pulled the covers off. The panel was also asked about bean flows and bottlenecks. Flows will probably go to St. Louis rather than the West Coast, but lots of beans will be kept off market.

**Railroad Reports**

Doug Story gave introductions and posed initial questions.

**Class I reports**

Kansas City Southern – Mike Bilovesky

PTC will be operational by year end. KCS obtained a two-year extension for interoperability testing. No operational problems yet but going forward? The expectation is for increased traffic to Gulf Coast. KCS has been spending more revenue on CAPEX. In 2016, it spent 18% of revenue on CAPEX and in 2018, 29%. The CEO is adamant that fast growth means KCS can spend more. Is KCS ready for harvest? It was "Blah" in August, and today KCS has a "service blip," Mike is not as comfortable as in previous years. Though KCS expects to generate more loads in the 4th quarter, KCS is not ready for the increase today. He attributed the "blip" to the Mexican national union elections, which effectively shut down the railroad for two days. On average, 24 trains cross the border each day (12 KCS, 12 UP). The blip dropped 602 cars because of a 10% drop in velocity. Congestion at Laredo filled up sidings. Half of the sidings are blocked from Kansas City to Mexico City (1950 miles). There are 6025 grain cars in the KCS fleet. Average turns are 1.2 trips per month. A decrease to 1.1 trips per month would reduce capacity by 600 carloads. An 8 percent increase in ag business is expected (7,700 carloads). Mike expects KCS "will struggle filling orders." Running international crews has provided a bump in capacity at the border (33% capacity increase). When asked about staff, he said KCS is up year over year.

CN – David Przednowek

CN is catching up from being "behind the eight ball." With respect to capex for infrastructure, CN spent $3.5 billion, putting it in the densest areas and adding 60 miles of double track and sidings before winter. Trying to get ahead of the curve. CN has 1900 high horsepower locomotives and is spending heavily for locomotives with 150 leased units and 200 new units on order being built. An order for another 60 was announced last week. Aggressive hiring and training are under way for the Southern Region (i.e., the United States) with a net increase of 200 T&E crewmen expected by December. Trying to take a "fair approach to assessorial charges by adding days of service. Demand can change quickly, and the future is uncertain, but the goal is growth. CN relies on customers to project demand and is "one tweet away from more business." CN has had to deal with minor storm damage (wash outs and such). CN expects to implement PTC fully by 2020; 58 percent of the footprint is implemented. PTC is operable on 35 subs, which satisfies all milestones, and there are only four subs left to be completed.

Norfolk Southern – Jim Skeens

It has been a challenging year. NS was not resourced at the beginning of the year but is now hiring, leasing locomotives, and increasing velocity, an aggressive "resourcing up." There are 1,800 new T&E crewmen (against a plan of 1,100) or a net increase of 300 T&E crewmen. NS is not where it needs to be, but resources are better than in January. For weekend service, NS is "clean-sheeting" and determining what is best for each yard. Demand is strong. Velocity is not where it needs to be. Drilling down to each serving yard. Making slow progress toward. Help to move unscheduled trains. Speed and dwell statistics progressing by fits and starts. NS is trying to add service and are reviewing charges to provide credits where it is under performing. NS has spent 17%-18% on capex (the goal is growth) and has partially implemented PTC. Jim answered questions about growth (if the opportunity is there, NS will take it) and Hurricane Florence (better prepared this year with more T&E employees available, but NS is not where it needs to be). Chairman Begeman asked when NS will get where it wants to be, and Jim said that hiring is a challenge; NS will add 200-300 employees net by year end who are needed to move unscheduled trains. When asked if NS was moving headquarters, Jim said he hasn't heard anything official.

Locomotives

- Total units in service (including leased units) – 3,950 (average MTD as of 08/16/18)
- Units stored serviceable – 0

Grain cars

- Total cars in grain fleet – 3538 (as of 08/16/18)
- No. in unit trains 3150
- No. in single car service 384
- Plan to keep 30-32 sets in service for harvest

CSX – Rob Finch

CSX is ready for harvest. The network is running better, and the metric are moving in the right direction. Most [operational] changes are “behind us.” Year to date, train velocity is up, and dwell is down from 11.5 hours to 9.7 hours. The railroad is running as good or better than before PSR. 500 locomotives are in storage. There are enough T&E crews to meet demand; 180 T&E are on furlough, but 56 were recently called back. The fleet includes 3500 covered hopper cars. The CSX Express Program is doing well, with 69 participants (15-hour turnaround). According to the demand forecast that CSX receives from its customers, the last half of October and the first half of November are expected to be the peak. Prior to Hurricane Florence, CSX expedited key shipments, drew resources out, has five ballast trains ready, and worked with unions to have people ready. PTC work is on track to meet the 2018 extension. CSX does not expect much going to the PNW but rather expects incremental ag volumes to the Gulf and East Coasts. There are no other plans on the radar right now. CSX believes that you can have a lower operating ratio and a better product. Vice Chairman Deb Miller asked about reorganization of regions and divisions (still too early to tell effects, and still have positions to fill) and about accessorial charges and shipper complaints. CSX claimed it does not want to drive revenue with supplemental charges but rather move cars faster. The goal of assessorial charges is moving equipment. Board Chairman Begeman asked whether CSX is reopening Nashville. CSX confirmed it had reopened the Nashville hump but said that there are no other yard opening plans.

Canadian Pacific – Kira Murphy

CP is well-positioned to move the harvest, expects a large crop in Canada, and is working with customers to move it. Trade tensions are a wild card potentially leading to different traffic patterns. CP will hire 700 new T&E crew and will acquire 100 remanufactured high-horsepower locomotives. The grain car fleet is 16,500 cars, one third of which are moving in the United States. Also, CP is investing $500 million in new grain cars (shorter, higher cube cars) and invested $1.5 billion total in 2018. Dwell was longer earlier but is back down now. Train weights and lengths are up. The current target length is 8,500 feet. New cars will provide a 16 percent increase in capacity over a 7,000 foot train. CP expects 2-2.5 trips/month to the PNW. 8500-foot trains with new hopper cars has led to a 44% lift. The last PTC challenge is interoperability; a new implementation plan has been submitted. When asked about bean exports from Vancouver, Kira reported that Canadian beans are moving out well but was unsure about US beans. Eleven out of 154 high throughput elevators (16-hour load time and 24-hour turnaround time) have 8,500 foot capacity. CP sidings are mostly 10,000 feet long.

Union Pacific – Dan Hartmann

UP has 17,000 active T&E crews and a robust pipeline of new graduates, ~ 200 per month. There are 8,200 total locomotives with an average age of 20 years. Of those, 300 are stored for surge capacity. There are 15,000 grain cars with 14,000 in active service and an average age of 20 years. UP expects to implement fully PTC by 2020. PTC has been installed on 100 percent of the lines and locomotives and will be 75 percent completed by the end of the year. With respect to short lines, most have equipment in place already. UP is working with both Class Is and short lines on interoperability. Regarding trade, UP is looking at how to build up area bases if a shift to the Gulf of Mexico happens. UP can accommodate some growth and is embracing technology (e.g., mobile work order process, better accuracy of ETAs, new system incorporates GPS). Crews now have handhelds to log work events so that customers know instantly and ETAs are in GPS now, making real time adjustments. UP is making changes to increase consistency to instill higher confidence on the part of shippers.

BNSF – Scott Stoa

BNSF has 7544 locomotives, 80% of which are high horsepower, and a surge (stored) of fleet 430. BNSF has pulled many out of storage. Total fleet of ag covered hopper cars is 29,400, of which 7,000 are older 268 K and 22,400 are 286 K. 7100 are newer shorter cars. In 2018, 1018 new cars were added, but there has been no net growth to the overall fleet. BNSF has 140 shuttle sets, which looks solid to late spring. Total TY&E is 18,188 with ~ 2,300 new hires this year and continued hiring expected next year. Current furloughs are 41, near the Mississippi River. Manpower is a primary resource concern; it is a "tough job market." BNSF is trying to "keep people in the chair." The tariff situation is disappointing. Scot is not sure where the volume wants to go or will go but is ready if it comes. BNSF sees traffic increasing toward the Gulf, Mexico, and Mississippi River and away from the PNW. BNSF has met all PTC requirements with the exception of interoperability. It is proving to be worth the investment. With respect to metrics, operating ratio is less of a focus. Given BNSF ownership, return on invested capital is the more important number. Coal is not down as much as expected. In answer to a question about capacity at St. Louis for beans, Scot noted that BNSF hasn't tested what St. Louis can do and no one knows what the capacity is across all railroads. He expects that this will be a record year for BNSF.

Locomotives

- Total fleet – 7,544 units
- 6,026 high HP units
- Surge Fleet set at 430, down from 800 in January

Grain Cars

- The current Ag covered hopper fleet is 29,400
- 268k fleet is at 7,000
- 286k fleet is 22,400 (includes 7,100 new generation) shuttle cars
- 2018 hopper acquisition set at 1,080
- 140 shuttle sets operating the full year 2018

Crew Resources

- 18,188 Active
- 2,288 new hires for 2018
- Current furlough count is 41

**Class II/III reports**

Montana Rail Link – Phil Van Tassel

MRL has 76 locomotives and 1,100 railcars. In 2017, MRL shipped 86,000 grain cars. Heavy volumes have continued. MRL has experienced issues finding employees. MRL hired 100 this year, is hiring 22 switchmen per quarter, and is investing $68 million in capital improvements.

Locomotives

- 76 locomotives in MRL fleet
- MRL acquired four additional SD70 ACE's that will be delivered this fall.

Grain Cars

- 106 cars in grain fleet, all in single car service.
- Shuttle Trains/UGT anticipated to operate during harvest, and shuttle turn time are BNSF driven metrics.

Crew resources

- Hired 100 new employees this year:
- 34 of which are track laborers, bringing total number of track laborers to 262.
- 40 of which are switchmen, bringing total number of operating employees to 430

- Plans to hire an additional 22 switchmen per quarter for the immediate future.
- MRL does not have any furloughed employees currently.

Nebraska Central (Rio Grande Pacific) – Mike Haeg

There are 21 locomotives in the fleet. With respect to car supply, singles have been a challenge. Labor is really "tough." After screening applicants for background, drug use, and physical condition, not many people are left. Nebraska Central is trying to hold on to its employees. Market condition expectations are erratic. The expected harvest outlook is 50% of the previous year for beans, and corn is better with a 26-cent spread.

Locomotives

- 21 locomotives in the NCRC fleet
- Class I run through power for unit/shuttle trains

Grain cars

- NCRC relies on class I car supply for both singles and units
- Unit/shuttle trains generally turned to and from Class I within 24 hours

Crew Resources

- Actively hiring crews in advance of harvest
- No furloughs – labor situation is tight

Harvest outlook

- Erratic market conditions
- Late Sept/Oct/Nov harvest push, especially for soybeans, will not be nearly the same push as last year. Expecting about 50% of previous years. Customers are expecting a delayed big push on soybeans in Jan/Feb/Mar 2019.

Iowa Interstate – Andy Laurent

On the service front, IAIS experienced high waters in Iowa. A July storm inundated the mainline, which was returned to service in four days. IAIS lost a bridge on the main line. Chicago is in better shape now than before; fluidity has improved. The storage market is strengthening. Car supply is well-sized for IAIS needs. There are 40 locomotives. At the moment, half are high horsepower, but this will increase. With respect to PTC, IAIS runs on Metra and got a federal grant. IAIS is hiring. Capital expenditures include replacing rail; the entire system to Des Moines is complete.

Rapid City, Pierre, & Eastern (Genesee & Wyoming) – Jon Harman

G&W has 6,012 grain cars in its US fleet. He expects a lighter harvest, is seeing interest in St. Louis, and is comfortable on car counts. There are no furloughs, and the railroad is actively hiring. The tariff situation has impacted the flow of other commodities.

Iowa Northern Railway – Amy Homan

On PTC, Iowa Northern got a grant and is complying. Motive power consists of 21 locomotives and 6 slugs. IN has the best trainmen around, and the Class Is keep "stealing" them. Car availability is not an issue. First mile, last mile is our business; we work closely with our shippers. Though proud to be independent, we expect continued consolidation in the short line industry.

Watco Transportation Services – Doug Story

Watco has 39 railroads with about 150 locomotives, and 1,700 covered hoppers across all railroads. They are staffed relatively well, but it is a tough market. They have experienced flooding in Wisconsin. The business model is to take care of the customers, to whom Watco depends on to grow. Watco railroads with grain traffic include KO, SKOL, WSOR, GDLK, AA, PCC, EIRR, ARS, and MSR. Locomotives – 143 locomotives across all railroads

Grain cars

- 1,675 covered hopper fleet across KO, SKOL, WSOR, and PCC.
- Shuttle trains across the Watco network use Class I power and Class I or private equipment and operate within the interchange times specified by Class I partners.

Crew Resources – All railroads are fully staffed.

Harvest outlook

- The market conditions continue to be very inconsistent with the tariff issues.
- Expecting a very good soybean and corn harvest but it is still an unknown as to where and when it will move.

Question – With regard to the recent changes in OT-5 authority requirements, how is the extra information making the parties more efficient? Representatives answered that extra information allows better tracking and to avoid carrying empties, as well as helping with congestion.

**Rail Equipment Overview** - John Glynn

There are approximately 186 M covered hopper cars in the North American fleet (2017), of which about 67 M are 4750s. 59% of cars are less than 26 years old, and 25% have less than 10 years of service. Railroads have increased their level of ownership. Demand is expected to decrease. There are strong orders of covered hoppers. Scrapping picked up in 2017 and continued in 2018. The 56-foot car is the new standard, four feet shorter than older cars. On the horizon is the short footprint car – a 5200 cubic foot car with longitudinal gates. Canadian fleets are slightly larger.

**Closing Remarks**

Board Vice Chairman Deb Miller thanked the planning staff, Sharon, Doug, Mark, and Erica, and the meeting was adjourned by NGCC Chair Sharon Clark.

# NATIONAL GRAIN CAR COUNCIL

## MEMBER ATTENDANCE LIST 2018

| Please Initial | FIRST | LAST | TITLE | COMPANY |
|---|---|---|---|---|
| | Mike | Bilovesky | VP Marketing and Sales, Ag & Minerals Business Unit | Kansas City Southern |
| | Matt | Branch | Senior Manager, Fleet Marketing & Customer Support | Chicago Freight Car Leasing Co. |
| | Wyatt | Brummer | Director and Senior Merchant | Scoular |
| | Sharon G. | Clark | Senior Vice President Transportation & Regulatory Affairs | Perdue AgriBusiness LLC |
| | Jarad | Farmer | Managing Director - Sales | Canadian Pacific |
| R.F. | Rob | Finch | Director of Agricultural Marketing | CSX |
| | John | Glynn | Senior VP Leasing | CIT Rail |
| | Brian | Groskreutz | Transportation Coordinator/Grain Marketing | Farmers Cooperative |
| | Gregory | Guthrie | Director - Railway Agricultural Products | BNSF |
| | Michael A. | Haeg | VP - Marketing | Rio Grande Pacific Corporation |
| | Dana | Hansen | Director Rates and Fleet Management | Archer Daniels Midland |
| | Jon | Harman | VP Corporate Accounts | Genesee & Wyoming |
| | Daniel | Hartmann | Senior Director - Business Planning & Development | Union Pacific |
| BH | Brad | Hildebrand | Global Rail and Barge Lead | Cargill Inc. |
| | Amy | Homan | Director Carload Marketing | Iowa Northern Railway |
| | Mark A. | Huston | Director North America Transportation, VP | Louis Dreyfus Company Rail Services |
| MSJ | Michael S. | Jones | Vice President Transportation | North Dakota Mill & Elevator Assn. |
| BOK | Bruce | Kroese | Assistant Vice President - Ag. Products | Union Pacific |
| | Andy | Laurent | Director Business Development | Iowa Interstate Railroad, Ltd. |
| | Ryan | Leonard | Director Agriculture Marketing | Norfolk Southern |
| | Terry | McDermott | Director, Supply Chain | Bunge North America |
| TJM | Timothy J. | McNulty | VP Agricultural and Minerals Products | CSX |
| K.M. | Kira | Murphy | Director Marketing & Pricing, Grain & Fertilizers | Canadian Pacific |
| | Judy | Petry | President and General Manager | Farmrail System |
| | David | Pope | Senior Merchandiser – Rail Transportation | CHS Incorporated |
| DP | David | Przednowek | Director of Marketing - Grain | Canadian National |
| | Jerry | Rogers | Associate Director of Rail Grain Merchandising | Tysons Foods |
| | Dean | Sawyer | Director- Regional Sales | American Railcar Industries |
| | Daniel | Schueth | Network Planning Coordinator/Bulkdesk | Kansas City Southern Railroad |
| | James | Skeens | Director Unit Train Services | Norfolk Southern |
| | Mark | Stefani | Vice President, Citibank, Asset Finance Group | Citibank |
| SNS | Scot | Stoa | Director, Unit Grain Operations | BNSF |
| | Doug | Story | VP - Agricultural Marketing | Watco Transportation Services |
| | Bruce | Sutherland | President | Michigan Agricultural Commodities |
| | Charlie | Threlkeld | General Manager - Transportation | CGB Enterprises Inc. |
| | Gregory | Twist | Senior VP - Transportation | Ag Processing |
| | ~~Mark C.~~ | ~~Van Cleeve~~ | EVP, Industrial Leasing & Sales | TrinityRail |
| PVT | Phil | Van Tassel | | Montana Rail Link |
| | Jim | Sobie | Sr. VP Industrial Sales & Leasing | Trinity Rail |
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# NATIONAL GRAIN CAR COUNCIL

PUBLIC ATTENDANCE LIST 2018

| FIRST | LAST | TITLE | COMPANY |
|---|---|---|---|
| Tom | Wapp | Portfolio Mgr | POET Grain |
| Chris | Watson | Analyst | POET Grain |
| Eric | Mahaney | Manager | CGB |
| Mitch | Clementson | Market Manager | TC&W |
| Dave | Long | VP Marketing & Sales | TC&W |
| Lindsey | Fisher | Market Mgr | CN |
| DAN | SCHUETH | OPS PLANNING Mgr. MEMBER | KCS |
| RAUL | MORALES | MKETING AND SALES | KCS |
| Roger | Frasy | Agwest Commodities | |
| Russ | [illegible] | ATP - WABTEC - VP/GM | ~~TC~~ ATP/Wabtec |
| Kent | Whittaker | Sales Director | Wabtec/ATP |
| AL | Lullman | VP SALES | STRATO INC |
| Greg | Evans | Regional Sales | Strato, Inc. |
| Mark | Hafliger | President | AGMARK LLC |
| Kelsey | Dodd | Merchandiser | Agrex, Inc. |
| Vivian | Weng | Accounting Analyst | Agrex, Inc. |
| Ron | DeJongh | CMD | Landus Coop |
| JOSEPH | GUENLEY | DIR GRN MKTNG | WESTERN MILLING |
| Shaun | Meiners | Dir - Transportation | Lansing Trade Group |
| Terry | Finan | VP - Leasing | SMBC Rail |
| Josh | Blay | Business Development Manager | Livestock Nutrition Center |
| Joe | Smith | Merchandising Mgr | Arizona Grain |
| Aaron | Reid | Senior Vice President | J.D. Heiskell |
| Tom | Bright | Dir - Grain Merchandising | Astegra Cooperative |
| Ted | Schultz | C.O.O. | Team Marketing Alliance |
| LUKE | JONES | CORP. ACCT. MGR | GATX |
| CURT | GREINER | ~~The Scoular Co.~~ Sr. Mngr. | The Scoular Co. |
| Ross | Edwards | VP TRANSPORTATION | GAVILON |
| Joe | Griffith | S.V.P | Bartlett Grain Co. |
| Bob | Keller | Dir Feedgrains | BNSF Railway |
| PATRICK | BRYAN | PRESIDENT & CEO | PACIFICOR LLC |
| Anne | Erickson | General Director Ag Products | BNSF |
| MIKE | VAUPEL | MERCH MANAGER | ADM |
| Tyler | Scifers | Merchandiser | Grain Craft |
| Kory | Tanner | Regional Manager | West Plains LLC. |
| Darin | Hanson | VP | West Plains LLC |
| DUSTIN | BUNTROCK | ~~ASTERRA COOP~~ RAIL MANAGER | ASTERRA COOP |
| Michael | Carmichael | Regional Manager | West Plains. |
| Ryan | Pellett | CEO | J.D. Heiskell |
| Dave | Geraci | VP GWI - CENTRAL REGION | GWI |

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# NATIONAL GRAIN CAR COUNCIL

PUBLIC ATTENDANCE LIST 2018

| FIRST | LAST | TITLE | COMPANY |
|---|---|---|---|
| Tim | Schitter | VP Sales & Group Manager | The Greenbrier Companies |
| Tony | Germain | VP Regional Sales | The Greenbrier COS |
| Randy | Gordon | President | National Grain & Feed Assn |
| Sam | Sexton | Group VP Agricultural Products | BNSF |
| Mike | Gonzales | Director - Wheat | BNSF |
| Hugh | Parker | Sr. Dir Risk Mgmt | Ingredion |
| Mike | Keasling | VP Marketing | CAI Rail |
| Francisco | Belden | Comodities Director | RAGASA |
| Marilu | Ravelo | Director | Amerinter USA, LLC |
| Miguel | Davalos | Commercial Director | Attebury Grain |
| JJ | Sullivan | Dir M&S | Union Pacific RR |
| Brad | Thrasher | VP - Agriculture | Union Pacific |
| Mike | Brainerd | VP Dir Grain | UPRR |
| Beau | Hepler | General Manager | Ray-Carroll County Grain Growers |
| Bill | Arnold | Regional Manager | Louis Dreyfus |
| Alan | Koenig | Chief Supply Chain Officer | Grain Craft |
| Shane | Berrett | Director - Transportation | Gavilon |
| Tiffany | Bickham | Market Intelligence Analyst | Trinity Rail |
| Dan | Anderson | Manager, Market Intelligence | Trinity Rail |
| Warren | Sonaty | Director Sales Business Mgmt | CarMath |
| Gary | Kearby | VP Sales | Wells Fargo Rail |
| Kevin | Bahnline | Dir. Rail Marketing | Residco |
| Anthony | Fletcher | Manager of Transportation | CGB Enterprises |
| David | Fuchs | V-Pres | Wheeler Brothers Grain |
| Ross | Trentadue | Merchant | ZEN-NOH Grain |
| Adam | Sparger | Economist | USDA |
| Troy | Rigel | Senior Grain Merchandiser | Chisholm Trail Terminal |
| Jeff | Griffin | VP Rail Leasing | Stonebriar Commercial Finance |
| Barbara | Haertling | ~~BNSF A~~ General Director Ag | BNSF Railway |
| Robert | Hogan | VP - Sales & Marketing | PNC Rail |
| Joe | Fiereck | Log. Mgr. | Riverland AG |
| Robert | Petersen | President | TEGMA |
| Erica | Venancio | Secretary/Treasurer | TEGMA |
| Jose | Artigas | ATLLC Dir. | ATLLC |
| | | | |
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Cargill™

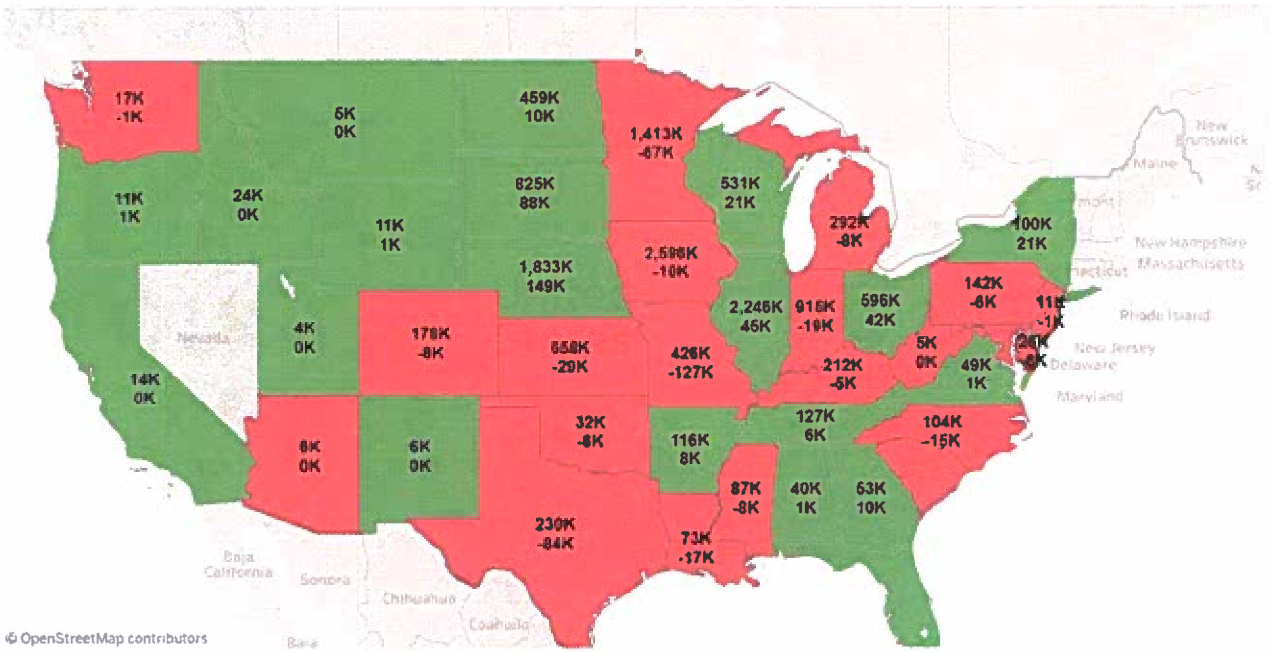
# National Grain Car Council

September 13, 2018



Cargill® Helping the world thrive

# US Corn Production 2018 vs 2017




© OpenStreetMap contributors

Data = 2018 over difference from 2017



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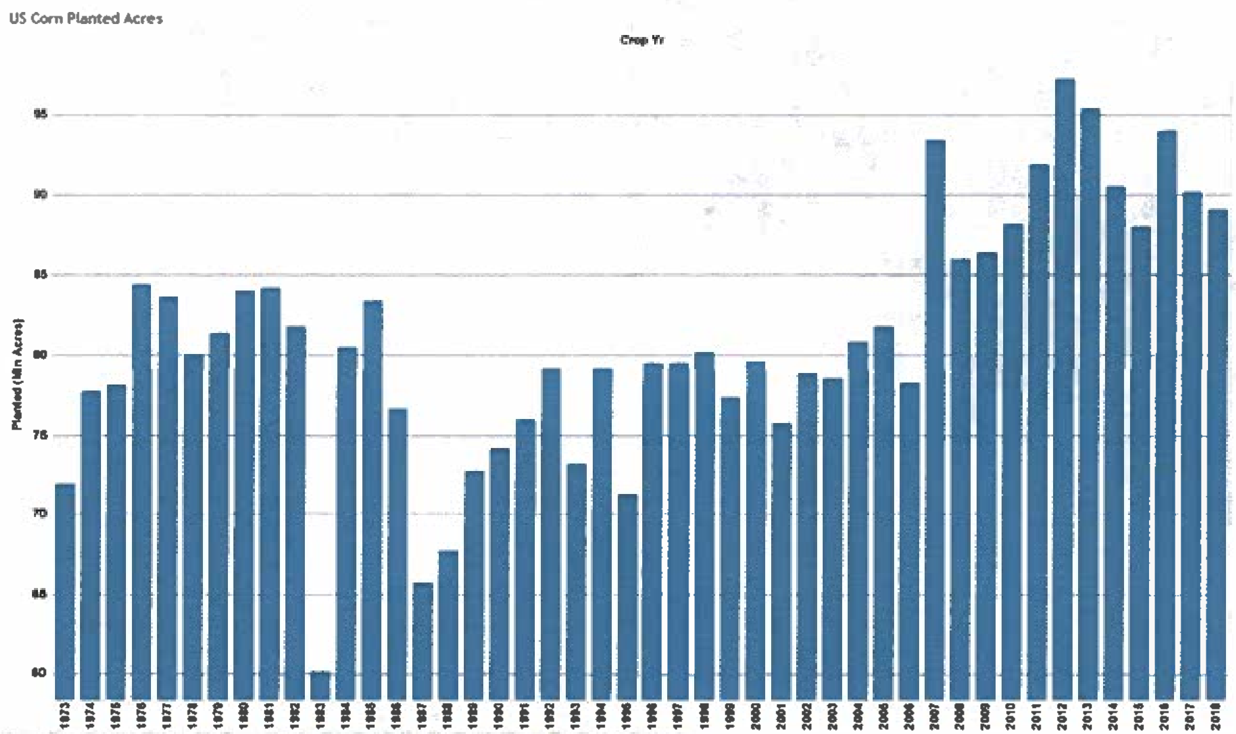
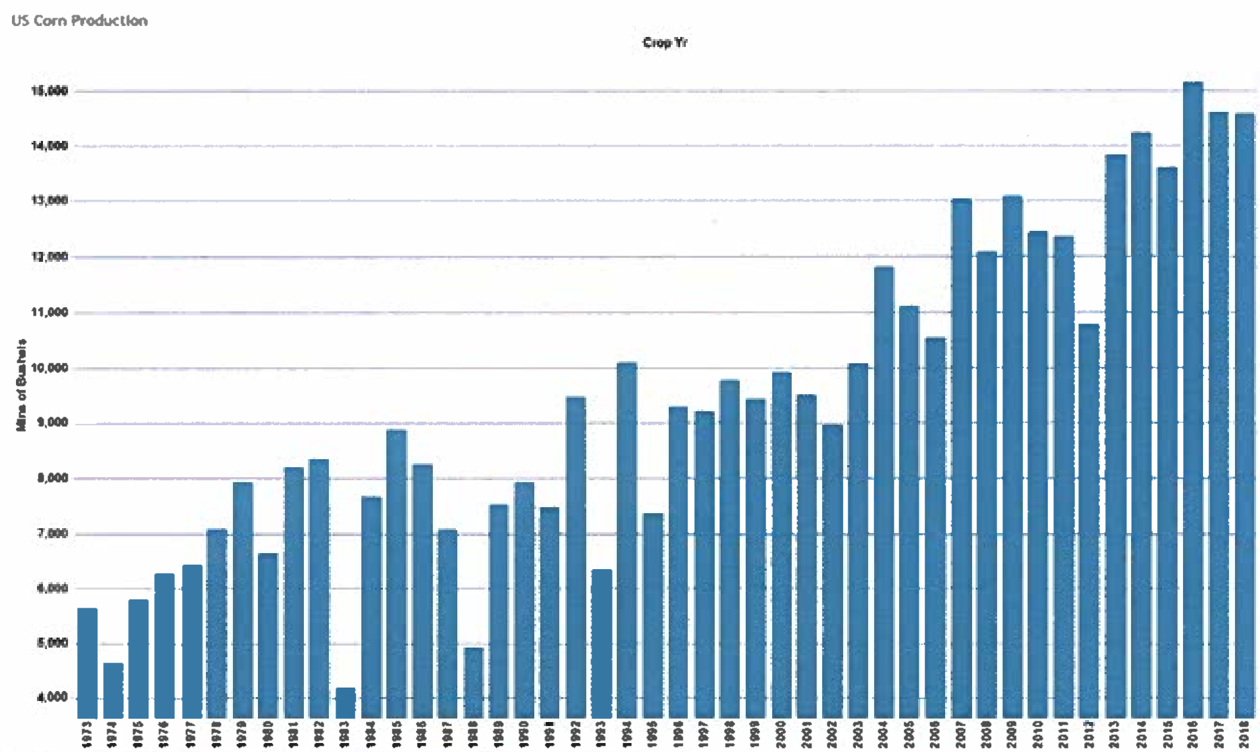
# US Corn Planted Acres



# US Corn Production



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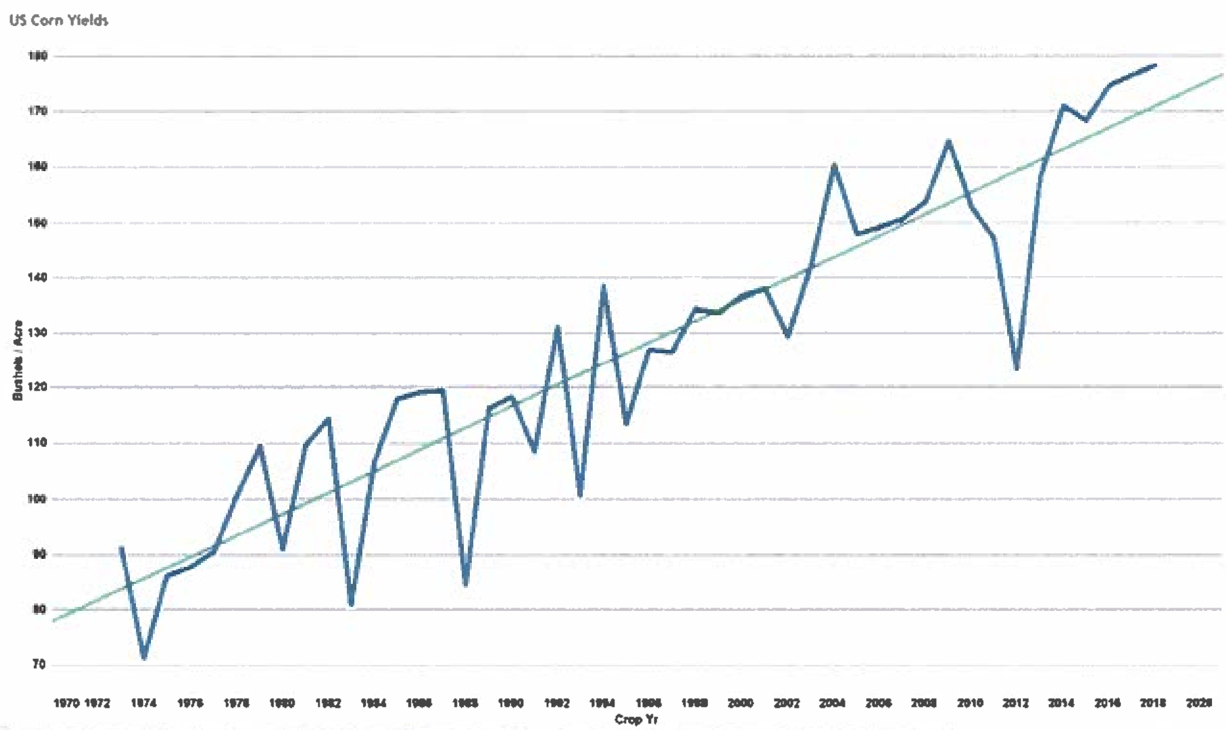
# US Corn Yields

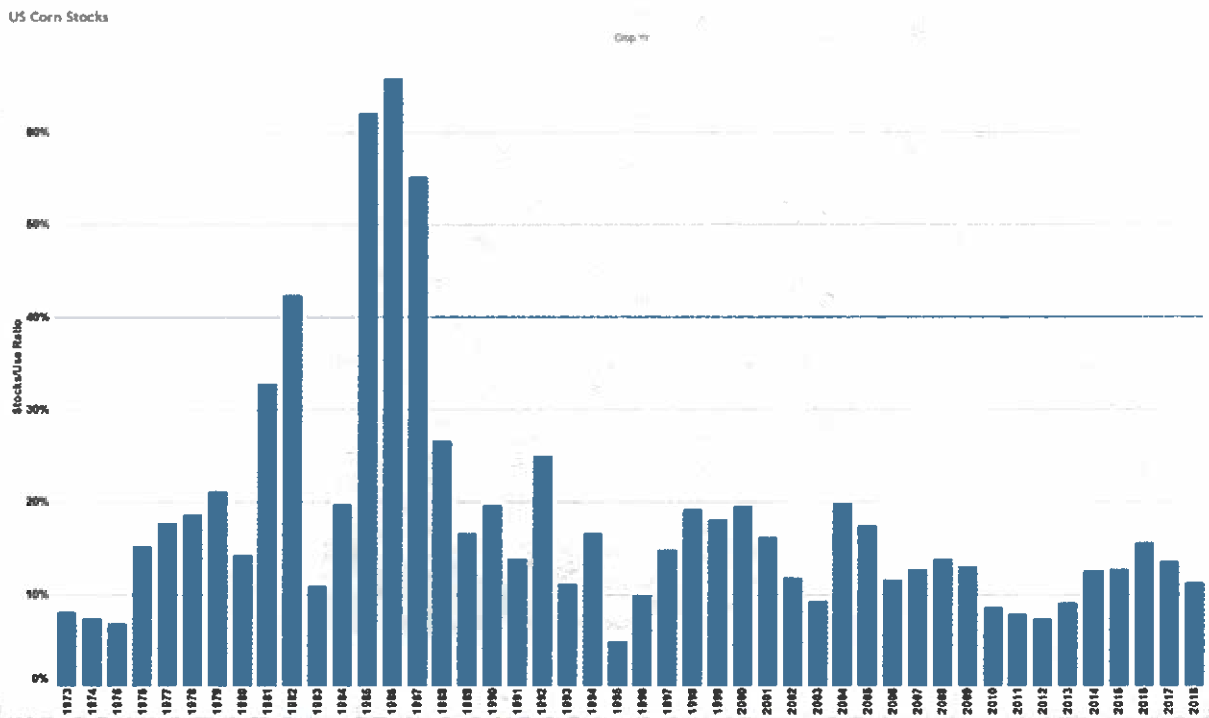


# US Corn Supply & Demand

US Corn Situation

| | 2016 | 2017 | 2018 |
|---|---|---|---|
| Planted (Mln Acres) | 94.0 | 90.2 | 89.1 |
| Harvested | 86.7 | 82.7 | 81.8 |
| Bushels / Acre | 174.7 | 176.6 | 178.3 |
| Carry-In(Mln Bu) | 1,737 | 2,293 | 2,027 |
| Production | 15,148 | 14,604 | 14,586 |
| Imports | 57 | 40 | 50 |
| Total Supply | 16,942 | 16,937 | 16,663 |
| Feed / Residual | 5,472 | 5,450 | 5,525 |
| Food/Industrial | 6,884 | 7,060 | 7,105 |
| Exports | 2,293 | 2,400 | 2,350 |
| Total Use | 14,649 | 14,910 | 14,980 |
| Carry-out | 2,293 | 2,027 | 1,684 |

# US Corn Ending Stocks as % of Demand



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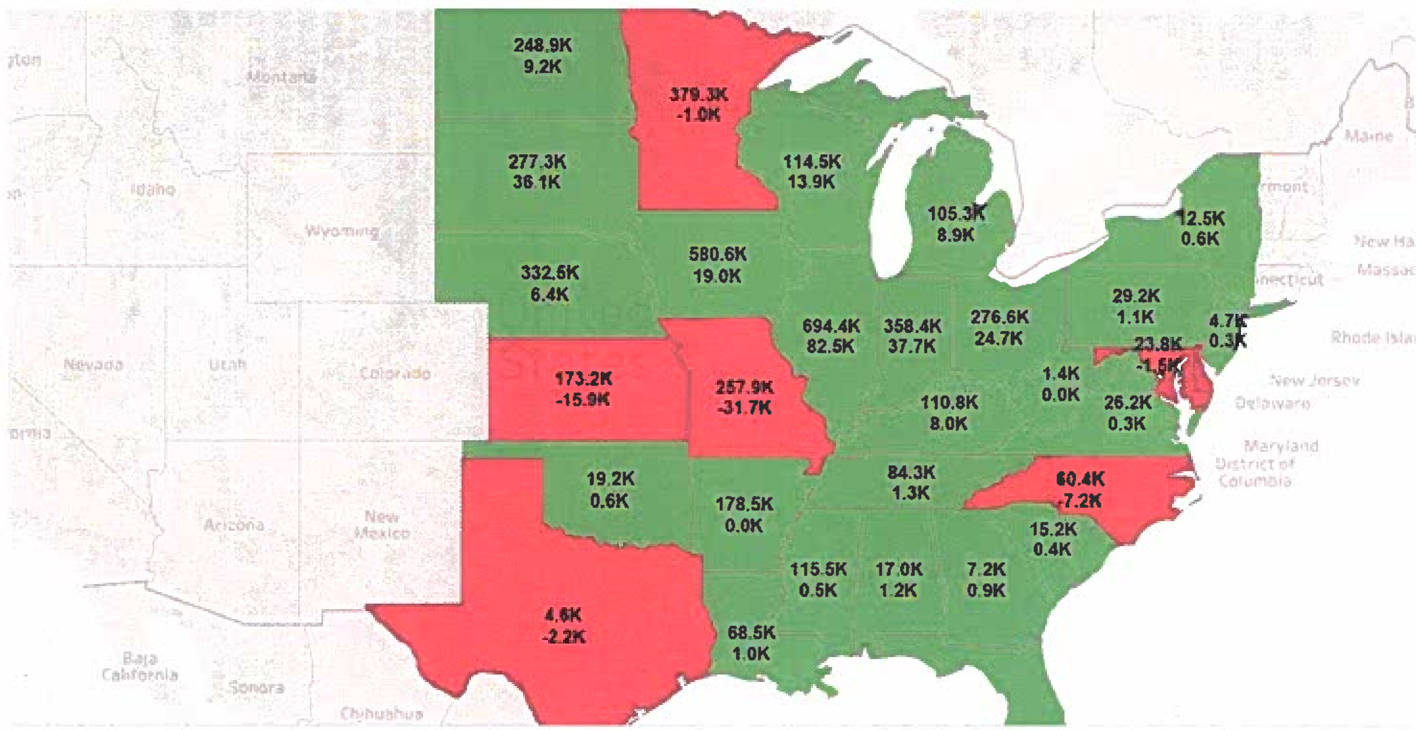
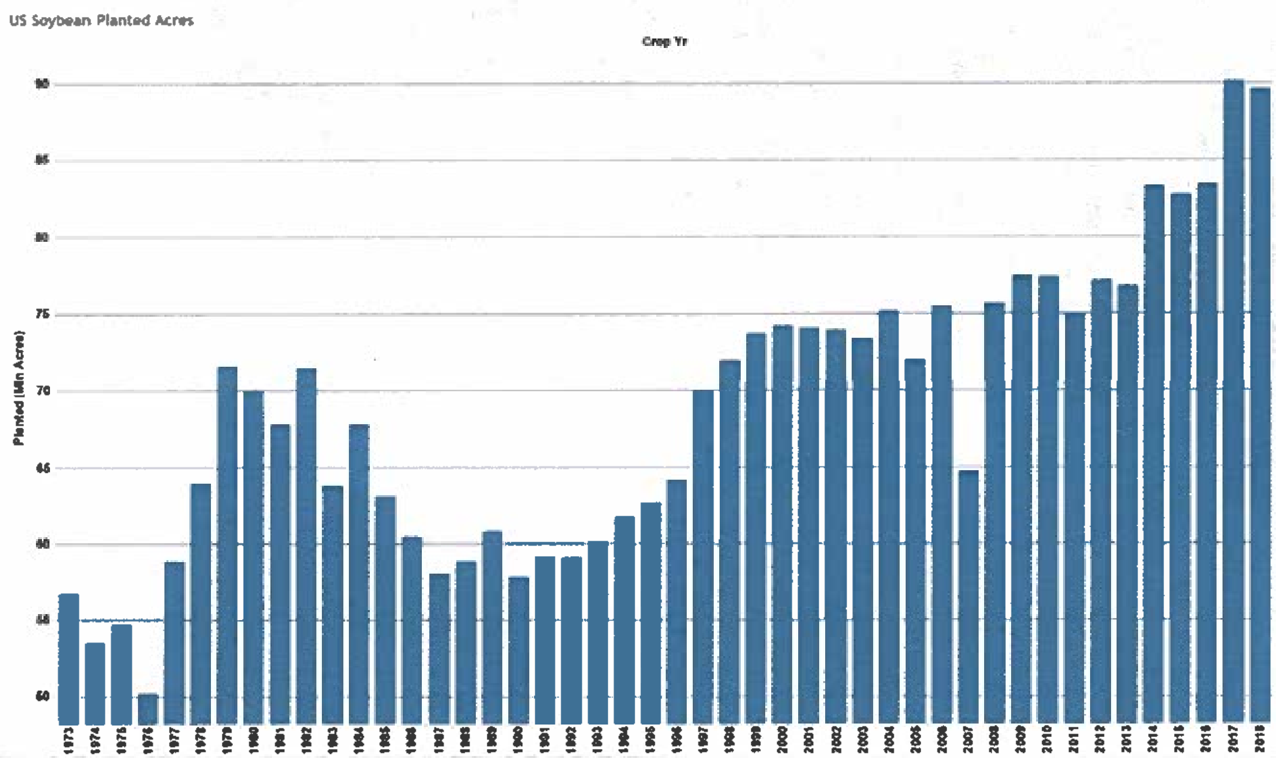
# US Soybean Production 2018 vs 2017

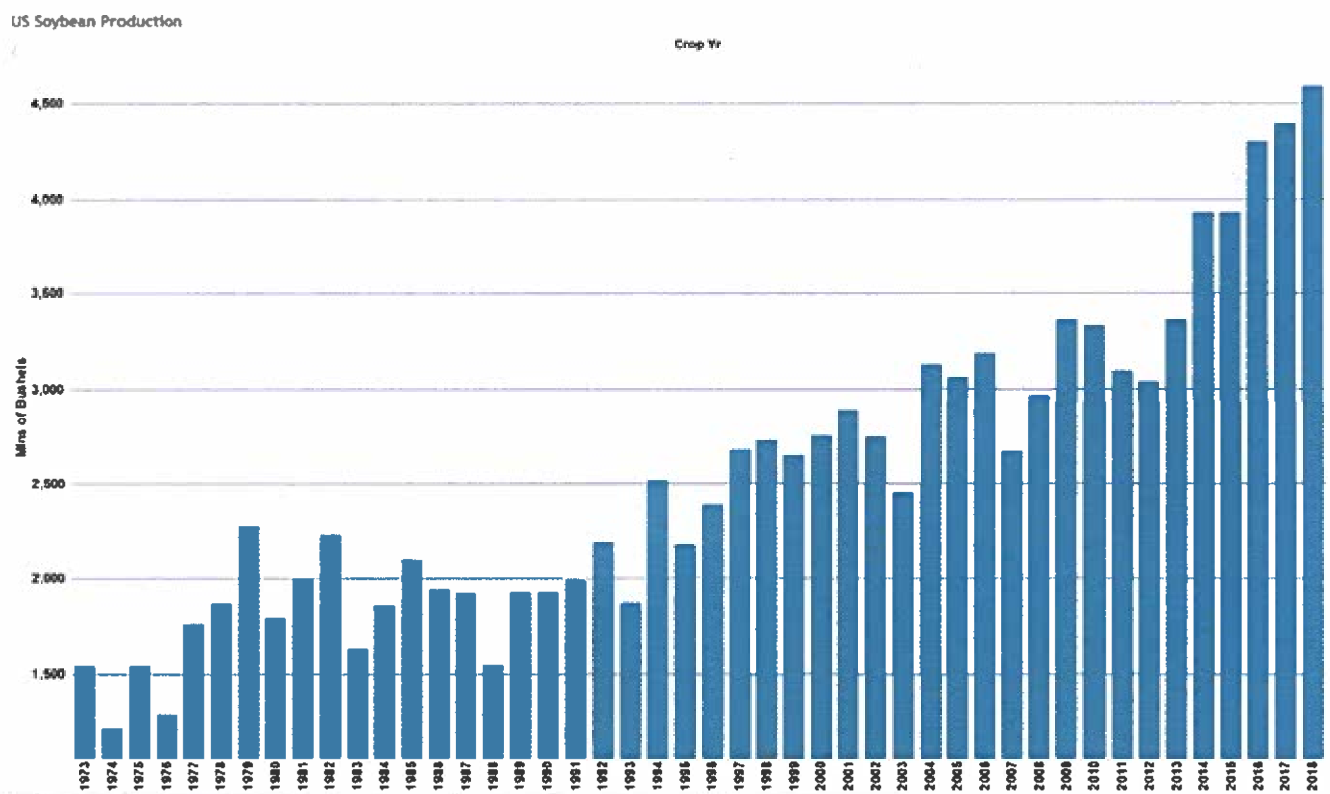



Data = 2018 over difference from 2017

# US Soybean Planted Acres



# US Bean Production



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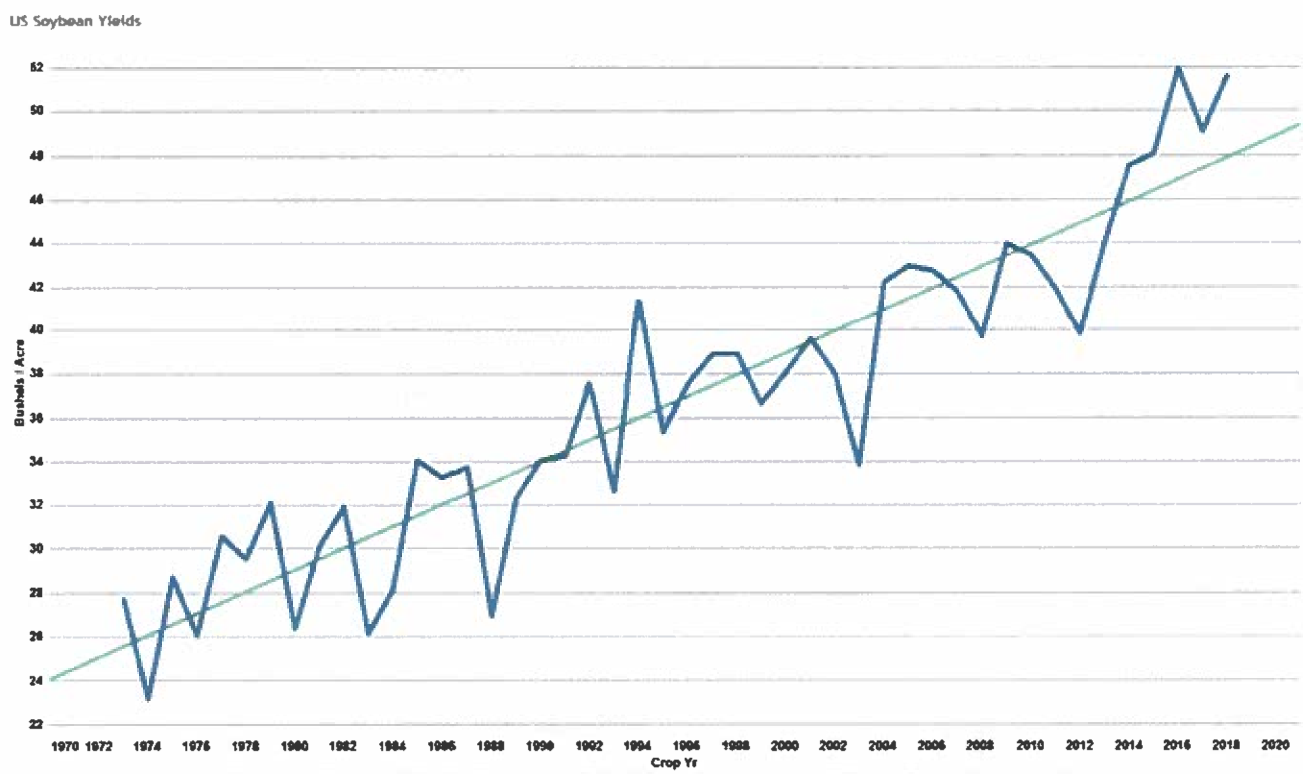
# US Bean Yields



# US Soybean Supply & Demand

US Soybean Situation

| | 2016 | 2017 | 2018 |
|---|---|---|---|
| Planted (Mln Acres) | 83.4 | 90.1 | 89.6 |
| Harvested | 82.7 | 89.5 | 88.9 |
| Bushels / Acre | 51.9 | 49.1 | 51.6 |
| Carry-In(Mln Bu) | 197 | 302 | 430 |
| Production | 4,296 | 4,392 | 4,586 |
| Imports | 22 | 22 | 25 |
| Total Supply | 4,515 | 4,716 | 5,041 |
| Crush | 1,901 | 2,040 | 2,060 |
| Exports | 2,174 | 2,110 | 2,060 |
| Seed Res | 139 | 136 | 136 |
| Total Use | 4,214 | 4,286 | 4,256 |
| Carry-out | 302 | 430 | 785 |



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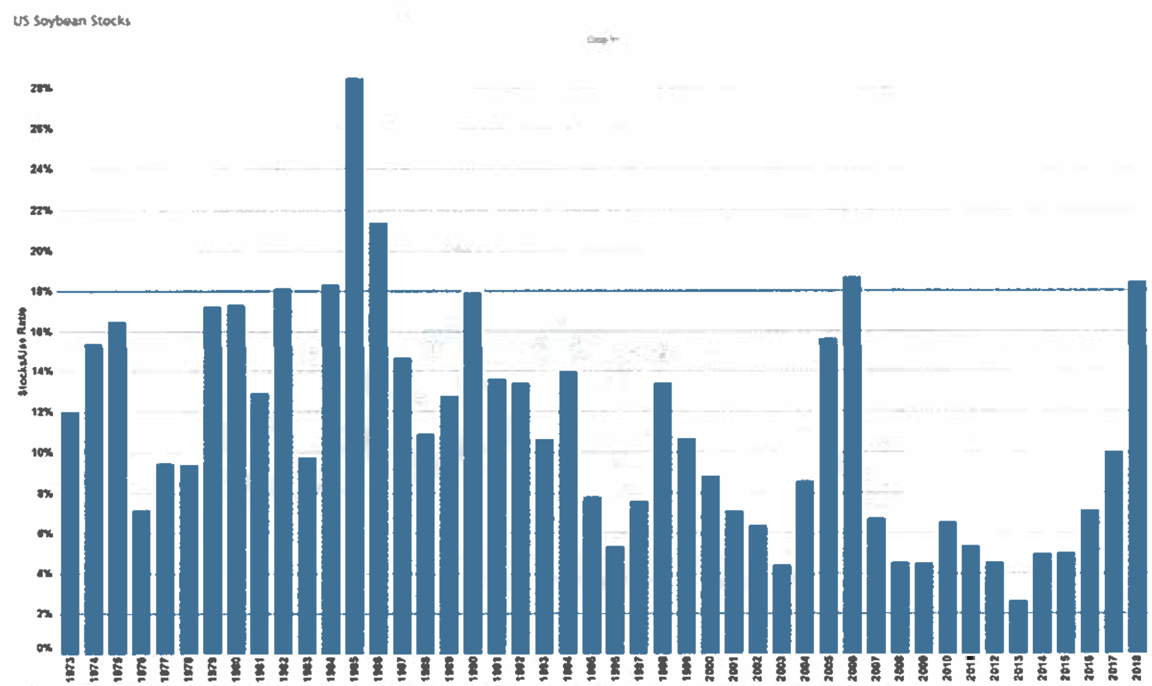
# Soybean Ending Stocks as % of Demand



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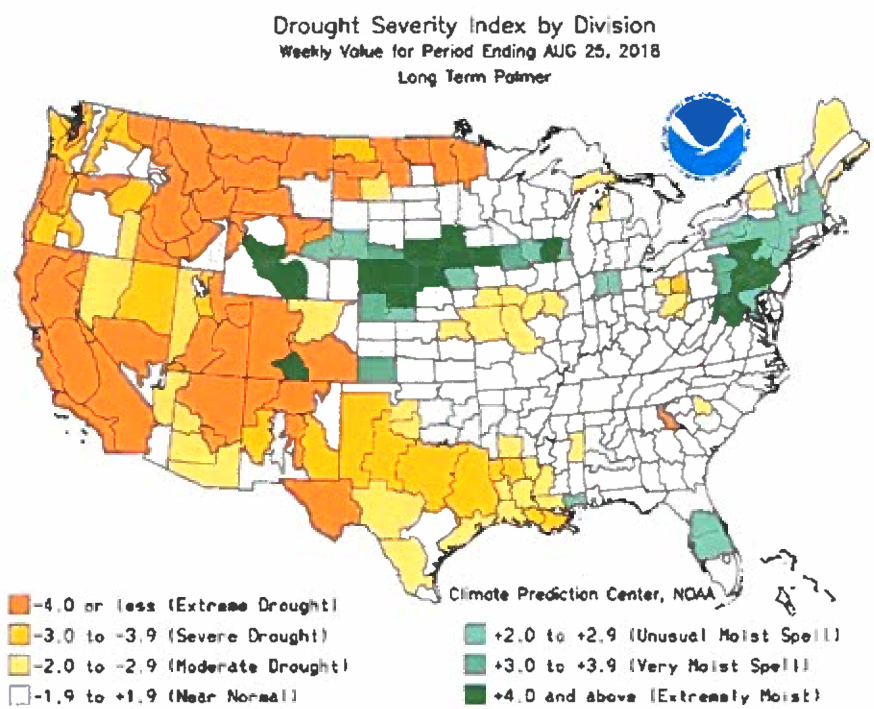
# US Drought Severity Index



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# National Grain Car Council

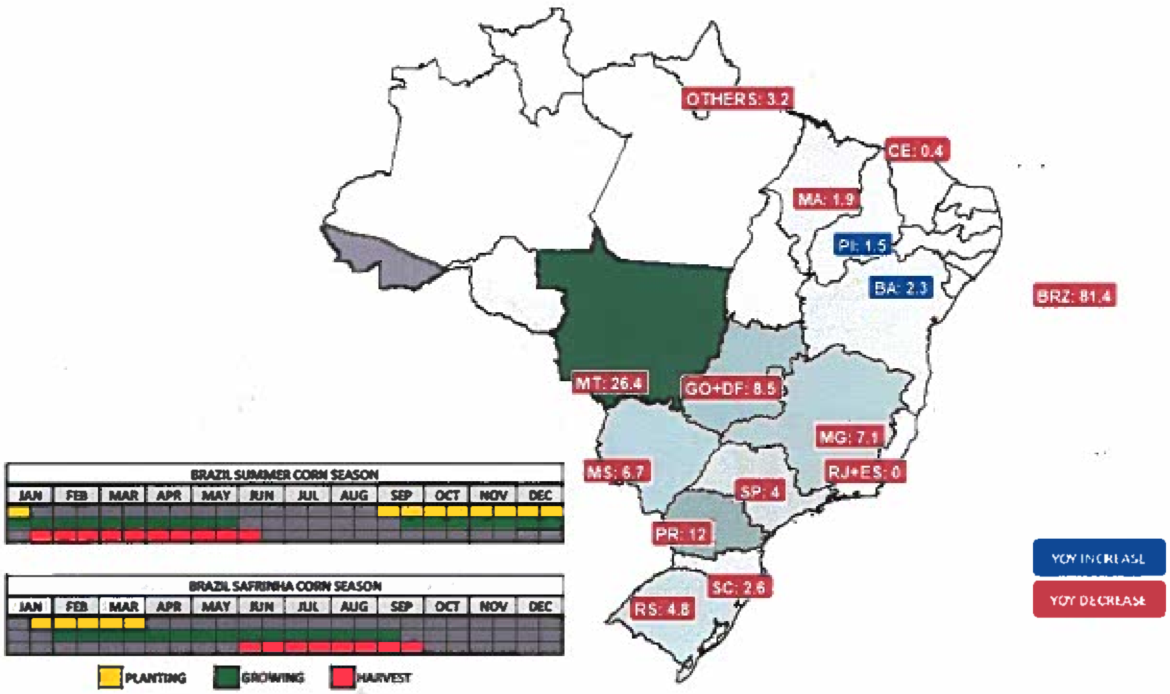
ZGC

CGB CONSOLIDATED GRAIN AND BARGE CO.

Charlie Threlkeld
9/13/2018

# 2018-19 Corn crop estimate unchanged at 81.4 mln mt.

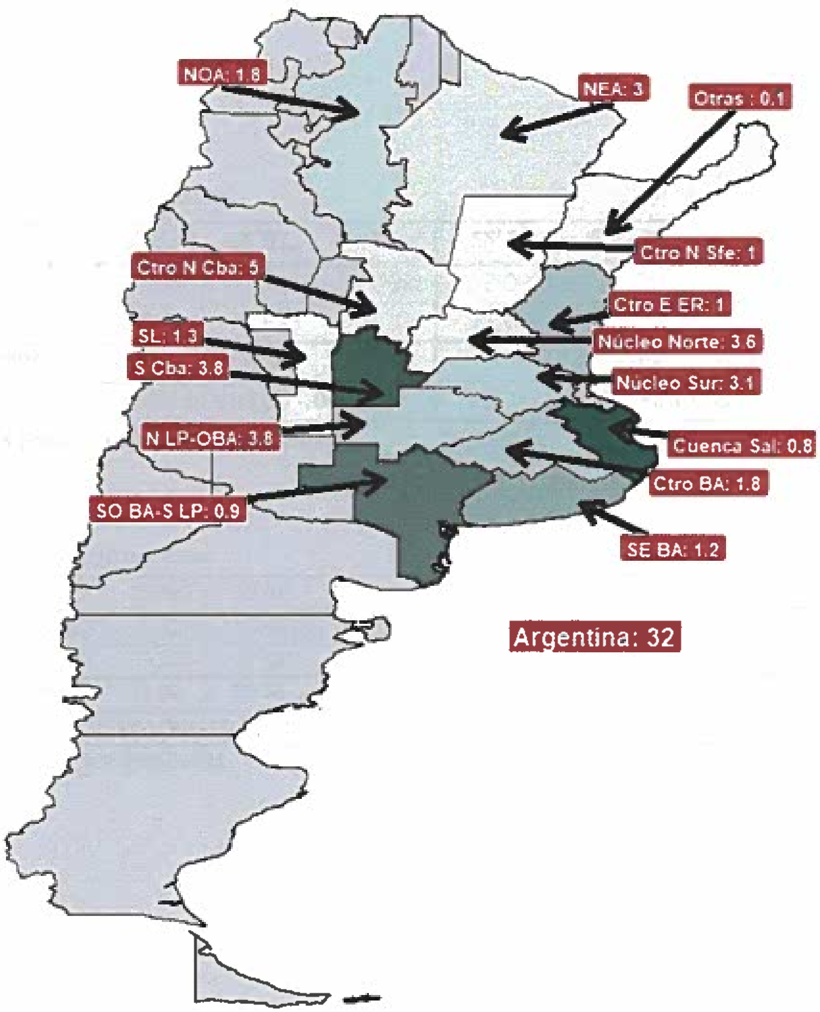
BRAZIL CORN PRODUCTION: 18/19

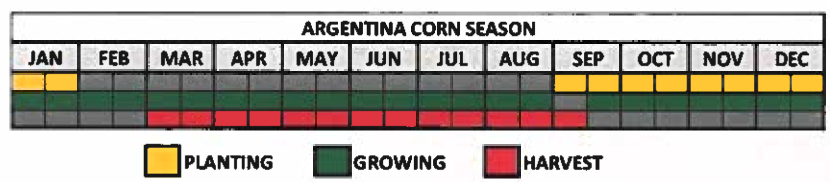



2018-19 BRAZILIAN CORN CROP ESTIMATE

| STATE | Harvesting (% of area) | | | | |
|---|---|---|---|---|---|
| REGION | HIST | L year | Prev Wk | This Wk | VAR |
| PR | 99% | 99% | 97% | 99% | -0.0% |
| - 1st | 100% | 100% | 100% | 100% | 0.0% |
| - 2nd | 98% | 99% | 97% | 99% | 0.0% |
| RS | 100% | 100% | 100% | 100% | 0.0% |
| SC | 100% | 100% | 100% | 100% | 0.0% |
| S | 99% | 99% | 98% | 99% | -0.0% |
| MG | 99% | 100% | 100% | 100% | 0.0% |
| - 1st | 100% | 100% | 100% | 100% | 0.0% |
| - 2nd | 96% | 100% | 100% | 100% | 0.0% |
| SP | 99% | 100% | 100% | 100% | 0.0% |
| - 1st | 100% | 100% | 100% | 100% | 0.0% |
| - 2nd | 97% | 100% | 100% | 100% | 0.0% |
| RJ+ES | 100% | 100% | 100% | 100% | 0.0% |
| SE | 99% | 100% | 100% | 100% | 0.0% |
| MT | 100% | 100% | 100% | 100% | 0.0% |
| - 1st | 100% | 100% | 100% | 100% | 0.0% |
| - 2nd | 100% | 100% | 100% | 100% | 0.0% |
| MS | 99% | 100% | 98% | 100% | 0.0% |
| - 1st | 100% | 100% | 100% | 100% | 0.0% |
| - 2nd | 99% | 100% | 98% | 100% | 0.0% |
| GO+DF | 100% | 100% | 100% | 100% | 0.0% |
| - 1st | 100% | 100% | 100% | 100% | 0.0% |
| - 2nd | 100% | 100% | 100% | 100% | 0.0% |
| CW | 100% | 100% | 100% | 100% | 0.0% |
| N/NE | 94% | 95% | 88% | 95% | 0.4% |
| - 1st | 100% | 100% | 100% | 100% | 0.0% |
| - 2nd | 97% | 98% | 96% | 98% | 0.1% |
| BRZ | 98% | 99% | 97% | 99% | 0.0% |

# 2018-19 Corn crop estimate: unchanged at 32 mln mt. Harvesting is over.



# 2018-19 SAM Corn crop estimate: unchanged at 113.4 mln mt, huge reduction from initial estimate.

2018-19 SAM CORN CROP FORECAST UPDATE: 14-Sep

| STATE | AREA PLANTED ('000 ha) | | | | AREA HARVESTED ('000 ha) | | | | YIELD (kg/ha) | | | | CROP ('000 mt) | | | | VAR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| REGION | 16-17 | 17-18 | 18-19 | VAR | 16-17 | 17-18 | 18-19 | VAR | 16-17 | 17-18 | 18-19 | VAR | 16-17 | 17-18 | 18-19 | VAR | K tons |
| Brazil | 15,923 | 17,592 | 16,637 | -5.4% | 15,923 | 17,592 | 16,637 | -5.4% | 4,178 | 5,562 | 4,890 | -12.1% | 66,531 | 97,843 | 81,355 | -16.9% | -16,488 |
| Argentina | 3,850 | 5,100 | 5,400 | 5.9% | 3,710 | 4,866 | 5,150 | 5.8% | 8,122 | 8,015 | 6,214 | -22.5% | 30,135 | 39,000 | 32,000 | -17.9% | -7,000 |
| Total/Avg | 19,773 | 22,692 | 22,037 | -2.9% | 19,633 | 22,458 | 21,786 | -3.0% | 4,924 | 6,093 | 5,203 | -14.6% | 96,666 | 136,843 | 113,355 | -17.2% | -23,488 |

Source: Conab, ACA, ZGC research

2018-19 SAM CORN CROP FORECAST UPDATE: 14-Sep

| STATE | AREA PLANTED ('000 ha) | | | AREA HARVESTED ('000 ha) | | | YIELD (kg/ha) | | | CROP ('000 mt) | | | VAR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| REGION | Initial | Current | VAR | Initial | Current | VAR | Initial | Current | VAR | Initial | Current | VAR | K tons |
| Brazil | 17,039 | 16,637 | -2.4% | 17,039 | 16,637 | -2.4% | 5,282 | 4,890 | -7.4% | 90,000 | 81,355 | -9.6% | -8,645 |
| Argentina | 5,330 | 5,400 | 1.3% | 5,063 | 5,150 | 1.7% | 8,098 | 6,214 | -23.3% | 41,000 | 32,000 | -22.0% | -9,000 |
| Total/Avg | 22,369 | 22,037 | -1.5% | 22,102 | 21,786 | -1.4% | 5,927 | 5,203 | -12.2% | 131,000 | 113,355 | -13.5% | -17,645 |

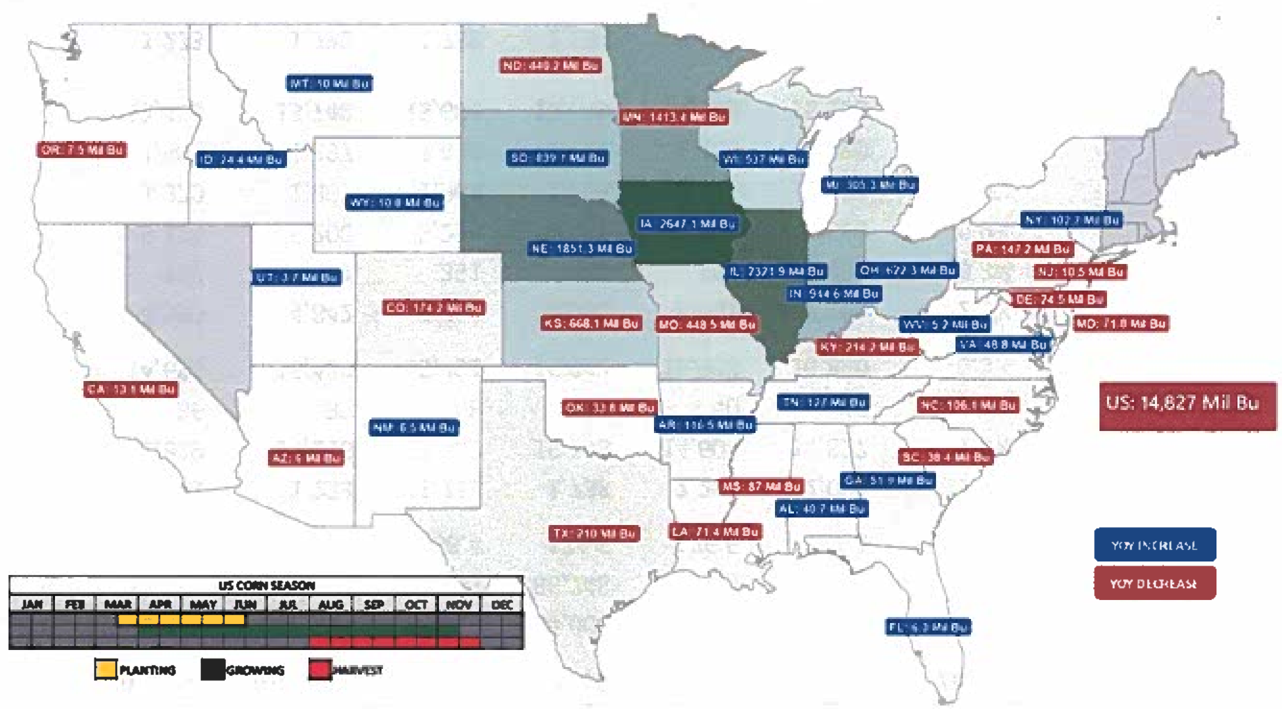
Source: ACA/ZGC research

# 18/19 Corn Crop: following USDA at 14,827 million bushels. Yield record at 181.3 bushels/acre.

**2018-19 US CORN CROP ESTIMATE**

| STATE | Harvesting (% of area) | | | | |
|---|---|---|---|---|---|
| REGION | HIST | Last year | Prev Week | This Week | VAR |
| MN | 0% | 0% | 0% | 0% | 0.0% |
| SD | 2% | 0% | 0% | 0% | 0.0% |
| WI | 0% | 0% | 0% | 0% | 0.0% |
| ND | 1% | 0% | 0% | 0% | 0.0% |
| MI | 1% | 3% | 0% | 3% | 0.0% |
| **NORTH** | **1%** | **0%** | **0%** | **0%** | **0.0%** |
| IA | 2% | 1% | 0% | 1% | 0.0% |
| IL | 8% | 5% | 4% | 7% | 2.0% |
| IN | 6% | 5% | 2% | 4% | -1.0% |
| MO | 22% | 21% | 12% | 22% | 1.0% |
| **CENTRAL** | **6%** | **5%** | **3%** | **6%** | **1.0%** |
| MS | 90% | 91% | 74% | 91% | 0.0% |
| AR | 85% | 78% | 51% | 72% | -6.0% |
| LA | 98% | 99% | 98% | 99% | 0.0% |
| **SOUTH** | **90%** | **89%** | **71%** | **85%** | **-4.0%** |
| KY | 33% | 29% | 24% | 36% | 7.0% |
| TN | 45% | 46% | 23% | 37% | -9.0% |
| Other SE | 85% | 88% | 77% | 91% | 3.0% |
| **SOUTHEAST** | **52%** | **51%** | **40%** | **54%** | **3.0%** |
| OH | 2% | 1% | 0% | 1% | 0.0% |
| PA | 9% | 4% | 1% | 2% | -2.0% |
| NC | 72% | 68% | 43% | 59% | -9.0% |
| Other E | 19% | 16% | 7% | 11% | -5.0% |
| **EAST** | **16%** | **14%** | **7%** | **11%** | **-3.0%** |
| NE | 3% | 2% | 1% | 2% | 0.0% |
| KS | 21% | 19% | 9% | 12% | -7.0% |
| TX | 64% | 67% | 63% | 73% | 6.0% |
| CO | 1% | 2% | 0% | 2% | 0.0% |
| Other W | 20% | 16% | 7% | 15% | -1.0% |
| **WEST** | **15%** | **15%** | **10%** | **13%** | **-2.0%** |
| **US** | **11%** | **10%** | **7%** | **10%** | **0.0%** |

## US CORN PRODUCTION: 18/19



# Despite by yield, corn carry-out projected to reduce.

US CORN S&D - SEPTEMBER-AUGUST USDA (million bushels)

| INPUTS | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | VAR |
|---|---|---|---|---|---|---|---|
| Planted area (k acres) | 95,365 | 90,597 | 88,019 | 94,004 | 90,167 | 89,128 | -1.2% |
| Harvested area (k acres) | 87,451 | 83,136 | 80,753 | 86,748 | 82,703 | 81,770 | -1.1% |
| Yield (bushel/acre) | 158.1 | 171.0 | 168.4 | 174.6 | 176.6 | 181.3 | 2.7% |
| Beginning Stocks | **821** | **1,233** | **1,732** | **1,738** | **2,294** | **2,003** | -12.7% |
| Production | 13,829 | 14,216 | 13,602 | 15,148 | 14,604 | 14,827 | 1.5% |
| Imports | 36 | 32 | 68 | 57 | 40 | 50 | 25.0% |
| **Total Supply** | **14,686** | **15,480** | **15,402** | **16,943** | **16,938** | **16,880** | **-0.3%** |
| Feed | 4,590 | 4,842 | 4,764 | 4,990 | 5,061 | 5,185 | 2.5% |
| Residual | 412 | 442 | 351 | 482 | 389 | 390 | 0.3% |
| Ethanol | 5,124 | 5,200 | 5,224 | 5,432 | 5,600 | 5,650 | 0.9% |
| Exports | 1,920 | 1,867 | 1,901 | 2,293 | 2,425 | 2,400 | -1.0% |
| Seed/losses | 1,407 | 1,397 | 1,424 | 1,451 | 1,460 | 1,480 | 1.4% |
| **Total Demand** | **13,453** | **13,748** | **13,664** | **14,649** | **14,935** | **15,105** | **1.1%** |
| **Ending Stoks** | **1,233** | **1,732** | **1,738** | **2,294** | **2,003** | **1,775** | **-11.4%** |
| **Stock (% of demand)** | **9.2%** | **12.6%** | **12.7%** | **15.7%** | **13.4%** | **11.8%** | **-1.7%** |

## US All Wheat Balance Sheet – US stocks projected down 15% YOY.

US ALL WHEAT S&D - JUNE-MAY (million bushels)

| INPUTS | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | VAR |
|---|---|---|---|---|---|---|
| Planted area (k acres) | 56,841 | 54,999 | 50,119 | 46,012 | 47,821 | 3.9% |
| Harvested area (k acres) | 46,385 | 47,318 | 43,850 | 37,586 | 39,600 | 5.4% |
| Yield (bu/acre) | 43.7 | 43.6 | 52.7 | 46.3 | 47.4 | 2.3% |
| Beginning Stocks | **591** | **756** | **977** | **1,182** | **1,100** | **-6.9%** |
| Production | 2,026 | 2,062 | 2,309 | 1,741 | 1,876 | 7.8% |
| Imports | 153 | 112 | 118 | 156 | 135 | -13.5% |
| **Total Supply** | **2,770** | **2,930** | **3,403** | **3,078** | **3,111** | **1.1%** |
| Feed & Residual | 113 | 150 | 157 | 136 | 142 | 4.4% |
| Food | 958 | 957 | 949 | 897 | 944 | 5.2% |
| Seed | 79 | 69 | 60 | 66 | 66 | 0.6% |
| Exports | 864 | 777 | 1,055 | 879 | 1,025 | 16.6% |
| **Total Demand** | **2,014** | **1,953** | **2,222** | **1,978** | **2,177** | **10.0%** |
| **Ending Stoks** | **756** | **977** | **1,182** | **1,100** | **934** | **-15.1%** |
| **Stock (% of demand)** | **37.5%** | **50.0%** | **53.2%** | **55.6%** | **42.9%** | **-12.7%** |

# World Wheat Balance – Major exporter stocks projected down 22% YOY.

BIG 7 MAJOR EXPORTERS WHEAT S&D (000 MT)

| INPUTS | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | VAR |
|---|---|---|---|---|---|---|
| Planted area (kha) | 106,581 | 106,564 | 107,237 | 105,741 | 105,823 | 0.1% |
| Harvested area (kha) | 102,350 | 103,455 | 104,700 | 102,331 | 102,496 | 0.2% |
| Yield (kg/ha) | 3,547 | 3,539 | 3,724 | 3,718 | 3,678 | -1.1% |
| Beginning Stocks | **52,316** | **61,803** | **60,942** | **68,527** | **67,883** | **-0.9%** |
| Production | 363,007 | 366,138 | 389,882 | 380,426 | 376,957 | -0.9% |
| Imports | 11,233 | 11,498 | 9,686 | 10,851 | 10,359 | -4.5% |
| **Total Supply** | **426,555** | **439,439** | **460,510** | **459,804** | **455,200** | **-1.0%** |
| Feed & Residual | 83,144 | 88,900 | 90,695 | 94,851 | 91,865 | -3.1% |
| Food | 140,342 | 141,089 | 141,064 | 140,538 | 141,181 | 0.5% |
| Seed | 2,162 | 1,865 | 1,638 | 1,796 | 1,807 | 0.6% |
| Exports | 139,105 | 146,643 | 158,586 | 154,735 | 167,402 | 8.2% |
| **Total Demand** | **364,753** | **378,497** | **391,983** | **391,920** | **402,255** | **2.6%** |
| **Ending Stoks** | **61,803** | **60,942** | **68,527** | **67,883** | **52,945** | **-22.0%** |
| **Stock (% of demand)** | **16.9%** | **16.1%** | **17.5%** | **17.3%** | **13.2%** | **-4.2%** |

# World Wheat Balance – Major importer stocks increasing nearly 6%. All stock increases in China

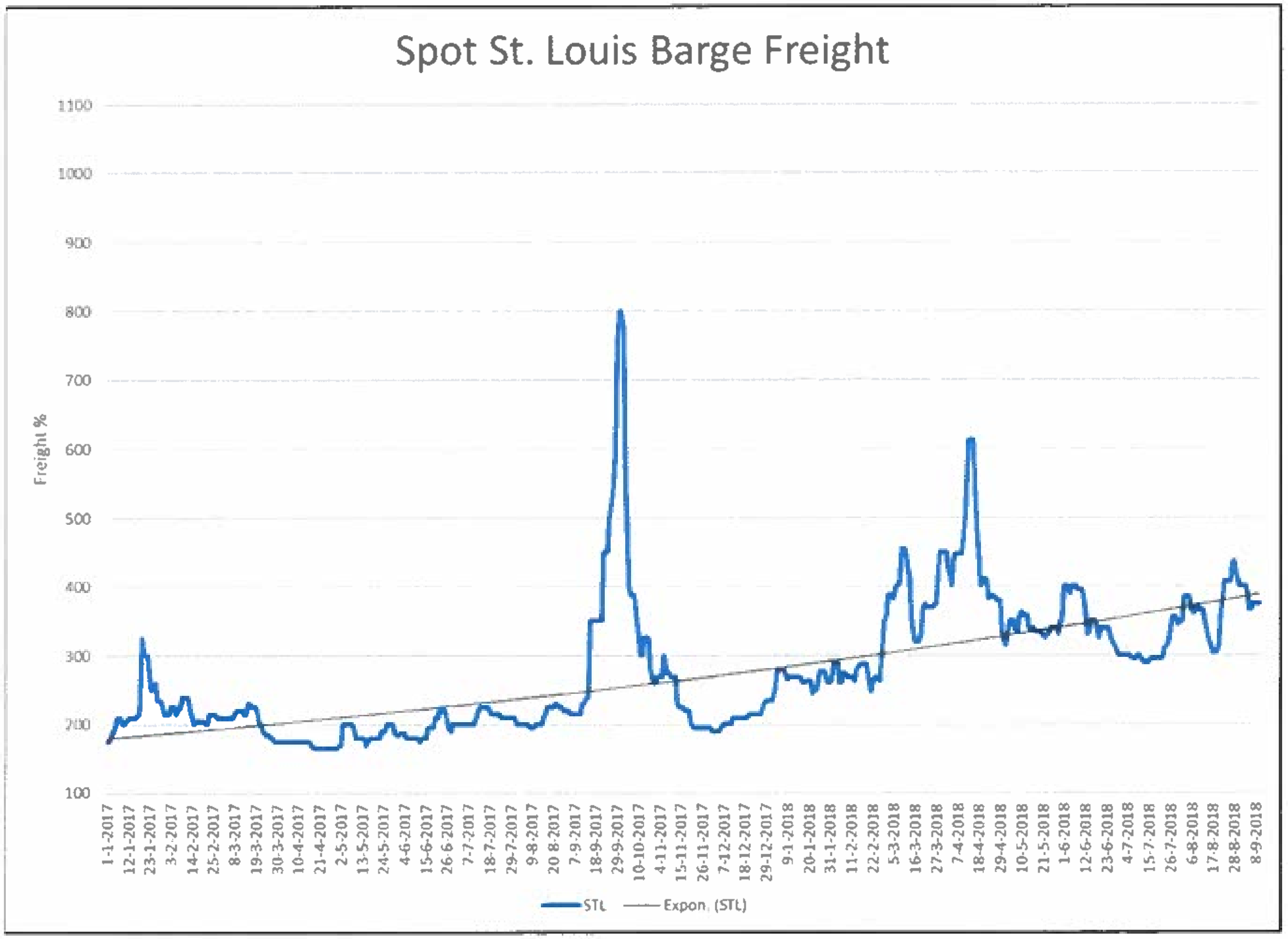
**BIG MAJOR 13 WHEAT IMPORTERS S&D (000 MT)**

| INPUTS | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | VAR |
|---|---|---|---|---|---|---|
| Planted area (kha) | 66,134 | 67,461 | 64,134 | 65,439 | 64,502 | -1.4% |
| Harvested area (kha) | 66,134 | 67,461 | 64,134 | 65,439 | 64,502 | -1.4% |
| Yield (kg/ha) | 3,747 | 3,656 | 3,752 | 3,906 | 3,985 | 2.0% |
| **Beginning Stocks** | **104,393** | **113,296** | **136,450** | **143,952** | **162,992** | **13.2%** |
| Production | 247,819 | 246,624 | 240,617 | 255,575 | 257,042 | 0.6% |
| Imports | 62,334 | 71,797 | 80,024 | 75,577 | 73,300 | -3.0% |
| **Total Supply** | **414,546** | **431,717** | **457,091** | **475,104** | **493,334** | **3.8%** |
| Feed & Residual | 29,805 | 27,554 | 34,620 | 31,417 | 33,990 | 8.2% |
| Food | 263,630 | 262,715 | 274,540 | 276,654 | 282,410 | 2.1% |
| Seed | - | - | - | - | - | 0.0% |
| Exports | 7,815 | 4,998 | 3,979 | 4,041 | 4,255 | 5.3% |
| **Total Demand** | **301,250** | **295,267** | **313,139** | **312,112** | **320,655** | **2.7%** |
| **Ending Stoks** | **113,296** | **136,450** | **143,952** | **162,992** | **172,679** | **5.9%** |
| **Stock (% of demand)** | **37.6%** | **46.2%** | **46.0%** | **52.2%** | **53.9%** | **1.6%** |

## Major Exporter/Importer Balance Sheet Excluding China. Ending stocks decreasing nearly 14% YOY.

GLOBAL WHEAT S&D (000 MT) - EXCLUDING CHINA

| INPUTS | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | VAR |
|---|---|---|---|---|---|---|
| Planted area (kha) | 148,646 | 149,885 | 147,184 | 147,190 | 146,425 | -0.5% |
| Harvested area (kha) | 144,415 | 146,776 | 144,647 | 143,780 | 143,098 | -0.5% |
| Yield (kg/ha) | 3,356 | 3,288 | 3,468 | 3,521 | 3,536 | 0.4% |
| **Beginning Stocks** | **91,435** | **98,994** | **100,350** | **101,430** | **104,056** | **2.6%** |
| Production | 484,618 | 482,572 | 501,654 | 506,231 | 505,999 | -0.0% |
| Imports | 71,641 | 79,819 | 85,300 | 82,428 | 79,159 | -4.0% |
| **Total Supply** | **647,693** | **661,385** | **687,304** | **690,089** | **689,215** | **-0.1%** |
| Feed & Residual | 96,949 | 105,954 | 108,815 | 112,768 | 108,855 | -3.5% |
| Food | 303,472 | 302,304 | 313,604 | 313,692 | 318,591 | 1.6% |
| Seed | 2,162 | 1,865 | 1,638 | 1,796 | 1,807 | 0.6% |
| Exports | 146,117 | 150,912 | 161,817 | 157,776 | 170,457 | 8.0% |
| **Total Demand** | **548,700** | **561,035** | **585,874** | **586,032** | **599,710** | **2.3%** |
| **Ending Stoks** | **98,994** | **100,350** | **101,430** | **104,056** | **89,505** | **-14.0%** |
| **Stock (% of demand)** | **18.0%** | **17.9%** | **17.3%** | **17.8%** | **14.9%** | **-2.8%** |


Spot St. Louis Barge Freight
Freight %
1100
1000
900
800
700
600
500
400
300
200
100
1-1-2017
12-1-2017
23-1-2017
3-2-2017
14-2-2017
25-2-2017
8-3-2017
19-3-2017
30-3-2017
10-4-2017
21-4-2017
2-5-2017
13-5-2017
24-5-2017
4-6-2017
15-6-2017
26-6-2017
7-7-2017
18-7-2017
29-7-2017
9-8-2017
20-8-2017
7-9-2017
18-9-2017
29-9-2017
10-10-2017
4-11-2017
15-11-2017
26-11-2017
7-12-2017
18-12-2017
29-12-2017
9-1-2018
20-1-2018
31-1-2018
11-2-2018
22-2-2018
5-3-2018
16-3-2018
27-3-2018
7-4-2018
18-4-2018
29-4-2018
10-5-2018
21-5-2018
1-6-2018
12-6-2018
23-6-2018
4-7-2018
15-7-2018
26-7-2018
6-8-2018
17-8-2018
28-8-2018
8-9-2018
STL
Expon. (STL)