

Overview of the Ag Economy

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Invited Presentation
Federal Reserve Bank of Chicago, Des Moines Office
September 10, 2020

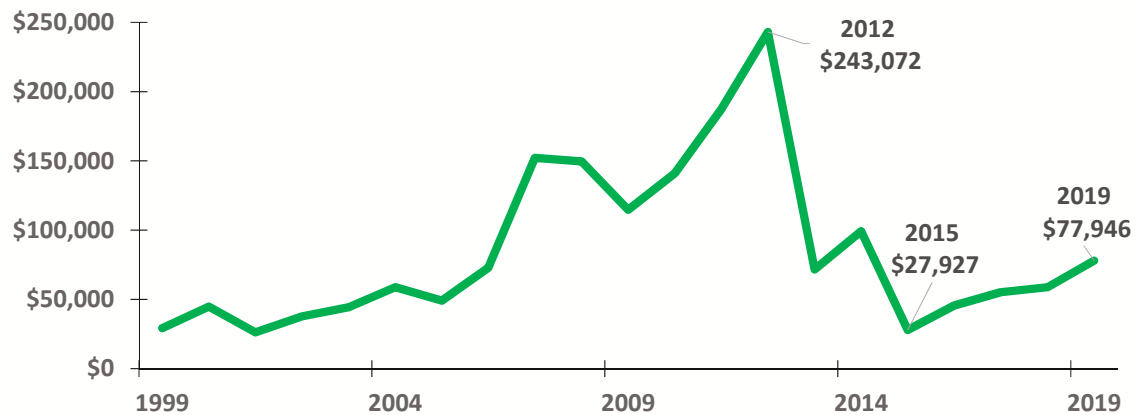
Overview

- Farm Financial Indicators
- Farmland Trends
- Projections for 2020
- Iowa Mediation Service
- Crops and Livestock Outlook

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Average Net Farm Income increased in 2019...

Mid-size Iowa farms with Gross Revenue > \$100,000
(accrual, not adjusted for inflation)

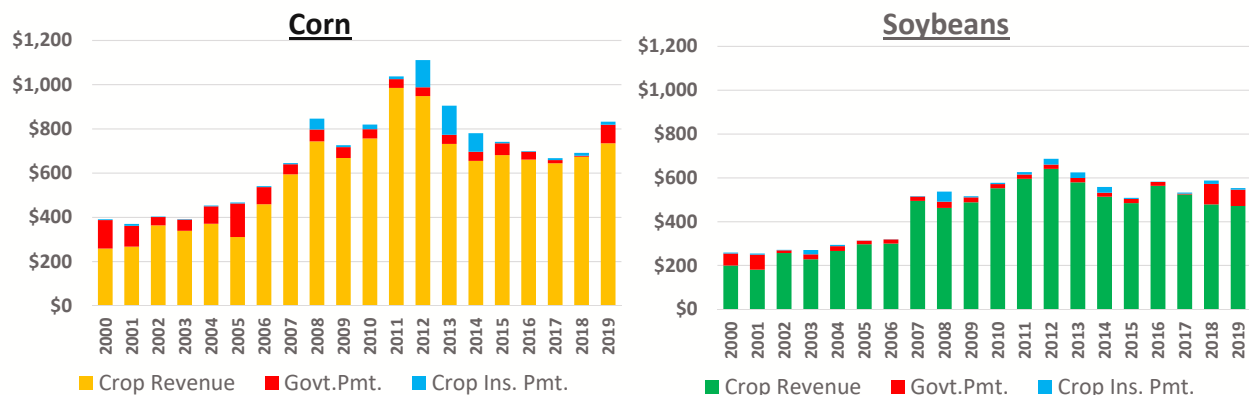


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Source: Iowa Farm Costs and Returns.
Ag Decision Maker File C1-10. Various years.
Based on data from Iowa Farm Business Association

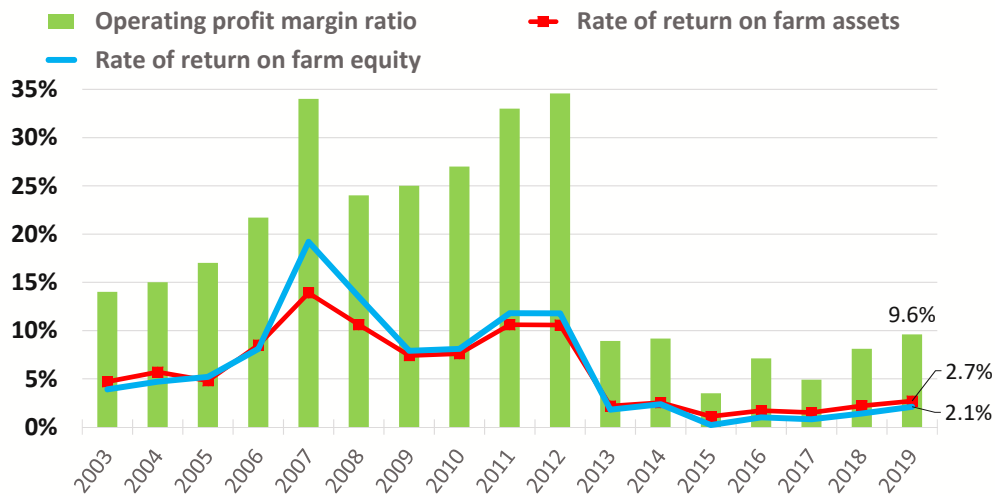
...as Average Gross Revenue per Acre increased for Corn & declined for Soy



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2019 Govt. Pmt. : tranches 1-3 MFP + CFAP 50% yield+ 2018/19 ARC-CO
Crop revenue=Oct-Dec price received by Iowa farmers X Yield

...but Farm Profitability remained subdued

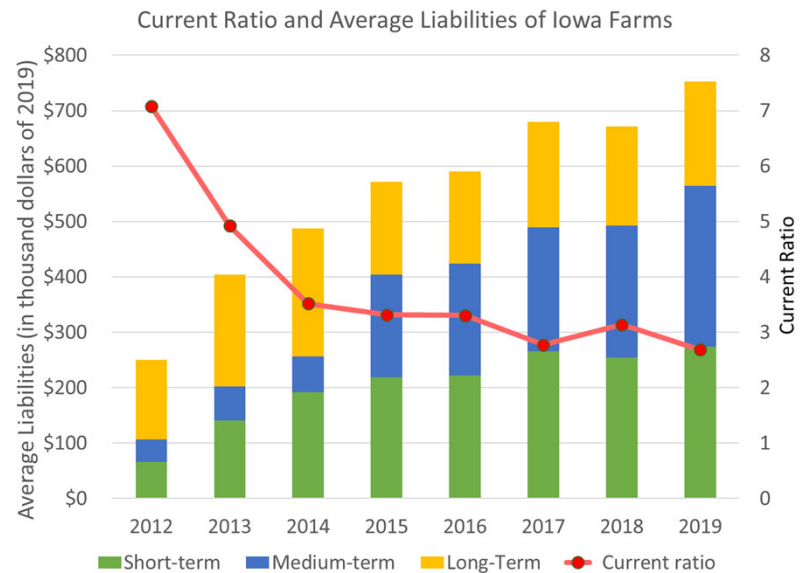


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Source: Iowa Farm Costs and Returns.
Ag Decision Maker File C1-10. Various years.
OPMR = (Accrual Net Farm Income + Interest -
Unpaid labor) / Gross revenue

**Farm debt
increased,
and
liquidity
declined...**



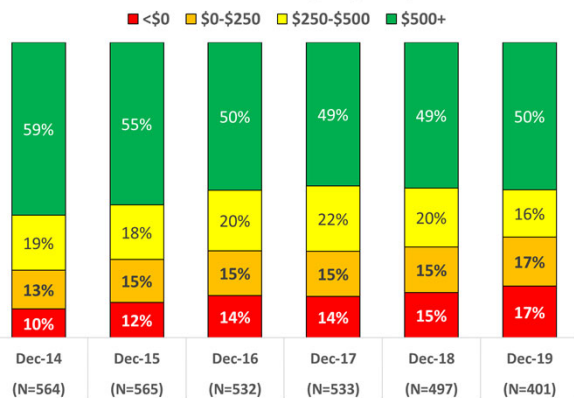
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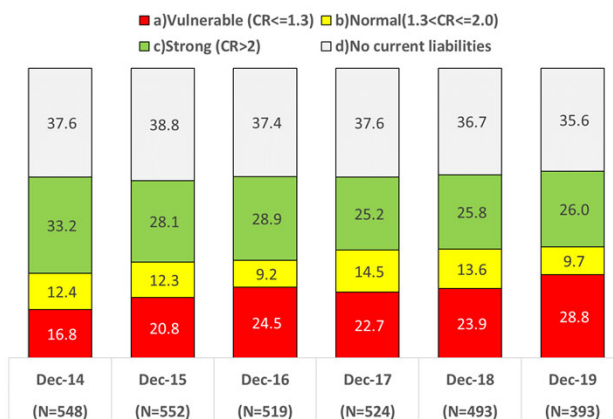
Source: Iowa Farm Costs and Returns.
Ag Decision Maker File C1-10. Various years.
Based on data from Iowa Farm Business Association

1 in 3 Iowa Farms had Weak Liquidity in December 2019

Distribution of Working Capital per Acre



Percent of Farms by CR Status

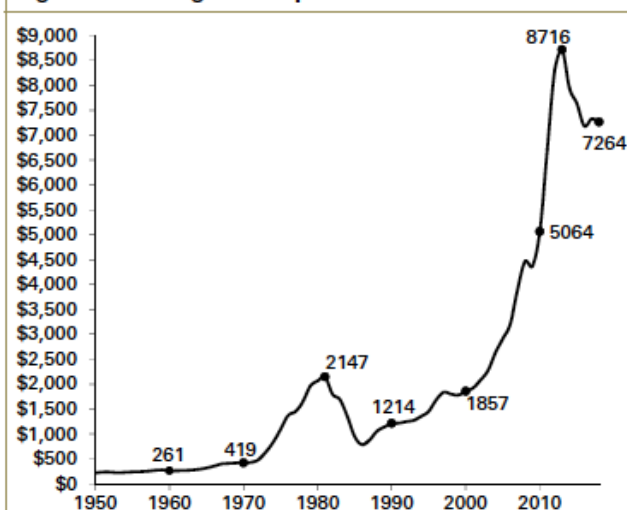


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Source: Plastina, A. "Mixed liquidity results for Iowa farms in 2019." AgDM Newsletter, June 2020.

Iowa farmland values support the solvency of owner-operators

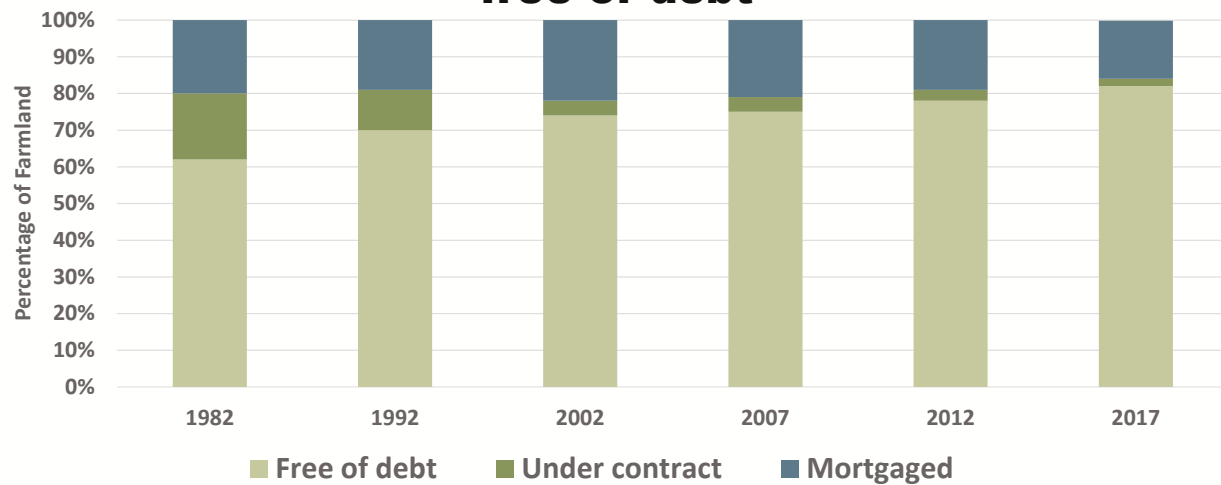
Figure 1. Average value per acre of Iowa farmland



Source: Iowa State University Land Value Survey

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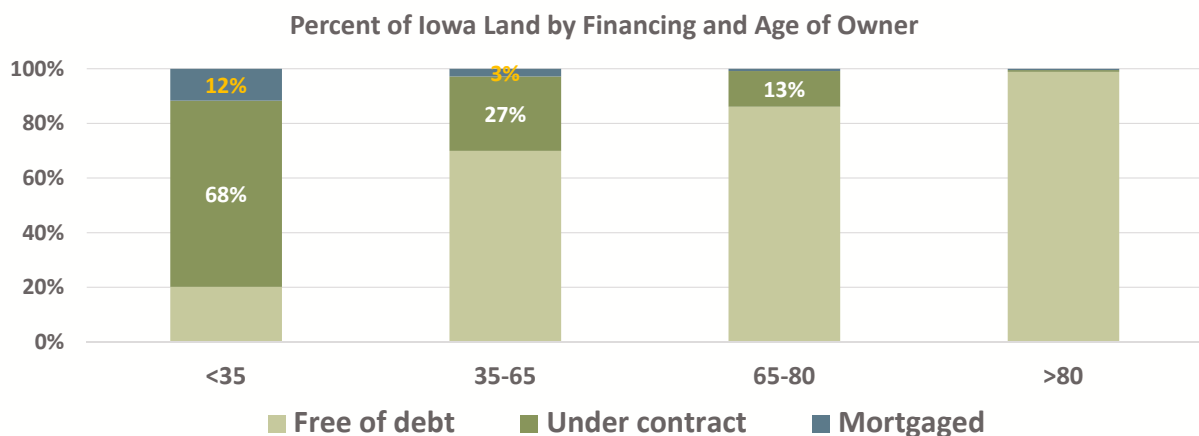
...particularly since most Iowa Farmland is owned free of debt



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Source: 2017 Iowa Farmland Ownership and Tenure Survey.
<https://store.extension.iastate.edu/product/6492>

...but younger owners have more land under contract and mortgaged



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Source: 2017 Iowa Farmland Ownership and Tenure Survey.
<https://store.extension.iastate.edu/product/6492>

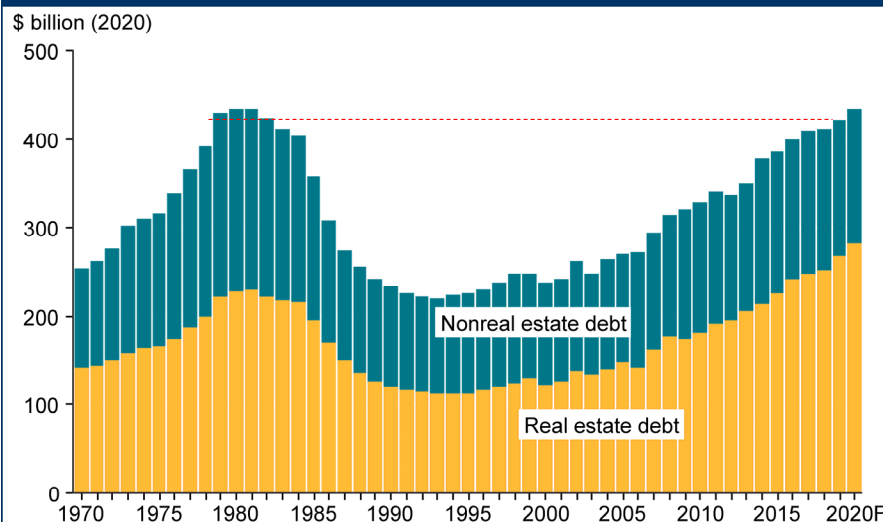
Also, only 37% of Iowa Farmland is Owner-Operated and 53% is Leased

	Percent	Acres
Owner Controlled:	47%	13,851,567
Owner operated	37%	10,819,245
Custom farmed	2%	583,485
Gov't programs and other uses	8%	2,448,837
Leased:	53%	16,771,192
Cash rent (fixed)	35%	11,502,256
Cash rent (flexible)	9%	2,354,117
Crop share	9%	2,875,316
Other types of leases	<1%	39,503
Total:	100%	30,622,759

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Source: 2017 Iowa Farmland Ownership and Tenure Survey.
<https://store.extension.iastate.edu/product/6492>

Farm sector debt, inflation adjusted, 1970–2020F

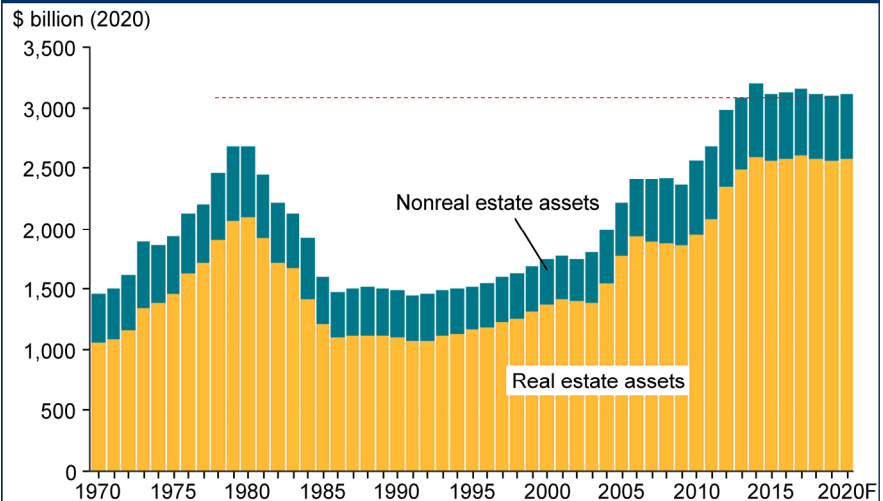


Note: F = forecast. Values are adjusted for inflation using the chain-type GDP deflator, 2020=100.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.
Data as of September 2, 2020.

Farm debt increased at the national level too, reaching 1980's levels...

But Farm Assets are much higher than in the 1980's... due mostly to land values

Farm sector assets, inflation adjusted, 1970–2020F



Note: F = forecast. Values are adjusted for inflation using the chain-type GDP deflator, 2020=100.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.
Data as of September 2, 2020.

Midwest land values are stable, but start trending lower

Percent change in dollar value of "good" farmland

	April 1, 2020 to July 1, 2020	July 1, 2019 to July 1, 2020
Illinois	+1	0
Indiana	-1	+4
Iowa	-1	0
Michigan	*	*
Wisconsin	+3	+1
Seventh District	0	+1

*Insufficient response.

AgLetter: August 2020

By David Oppedahl

FEDERAL RESERVE BANK of CHICAGO



Top: April 1, 2020 to July 1, 2020

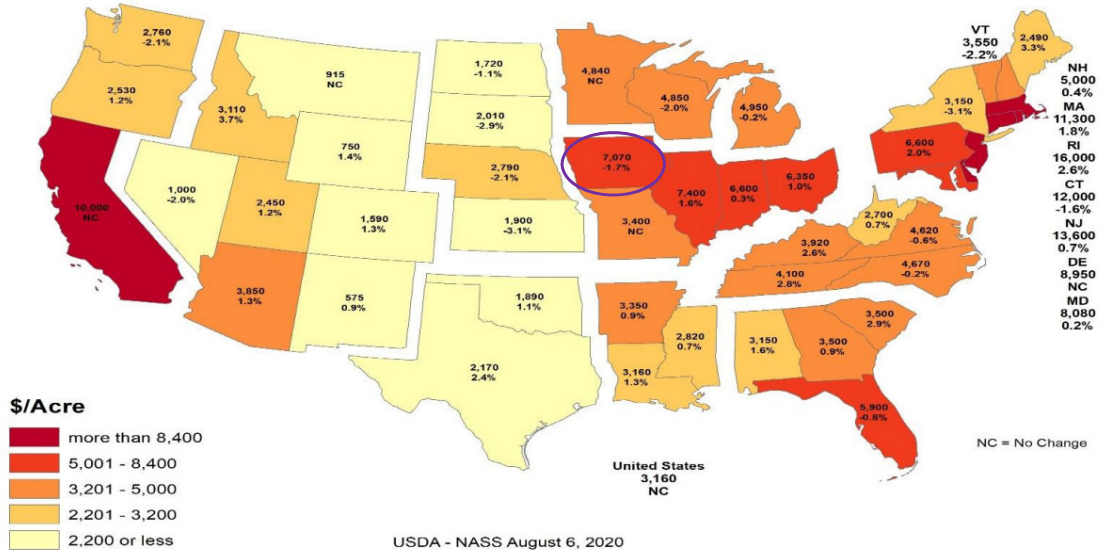
Bottom: July 1, 2020 to July 1, 2020

<https://www.chicagofed.org/publications/agletter/2020-2024/august-2020>

USDA @ Aug 2020: IA drops -1.7% since June 2019

2020 Farm Real Estate Value by State

Dollars per Acre and Percent Change from 2019



Some additional estimates from Aug 20 (Farm Credit & Kansas City Fed)

Land Value Trends for 1st Half of 2020

Iowa, Wyoming: +0.3%

Nebraska: -0.4%

South Dakota: -2.0%

(pasture loss + residual flooding impacts)

Land Sales Move from Auction to Private or Brokered Sales in Q2

Nebraska: -21%; Wyoming: -35%

Iowa: -8%; S. Dakota: -31%

Iowa Tillable Farmland Auction Summary: \$/Soil Quality Index (CSR2)

	2019 Q1-2	2020 Q1-2
\$/CSR2	\$111	\$108
Tillable acres sold	25,180	20,282
# auctions	325	224

Source: Jim Rothermich, Iowa Appraisal and Research

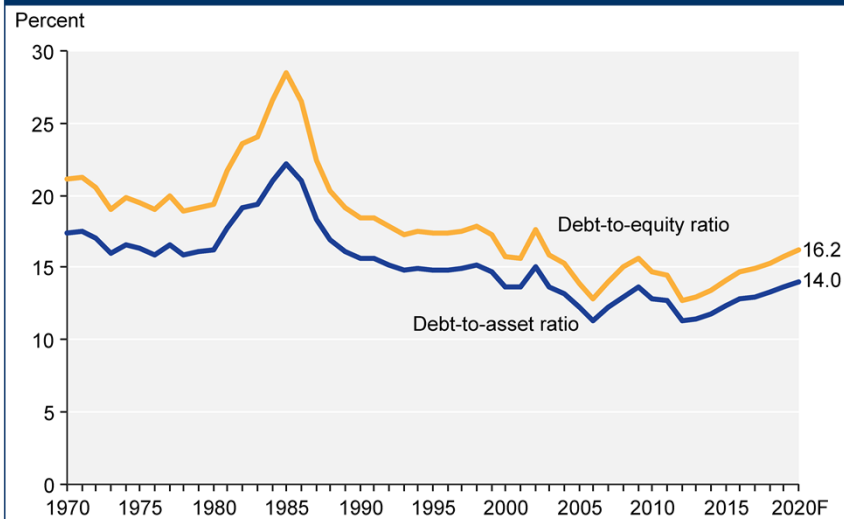
<https://www.iowaappraisal.com/iowa-land-auction-results/>



<https://www.morningagclips.com/2020-farmland-values-are-stable/>

Slide prepared by Dr. Wendong Zhang, ISUEO

Farm sector solvency ratios, 1970–2020F



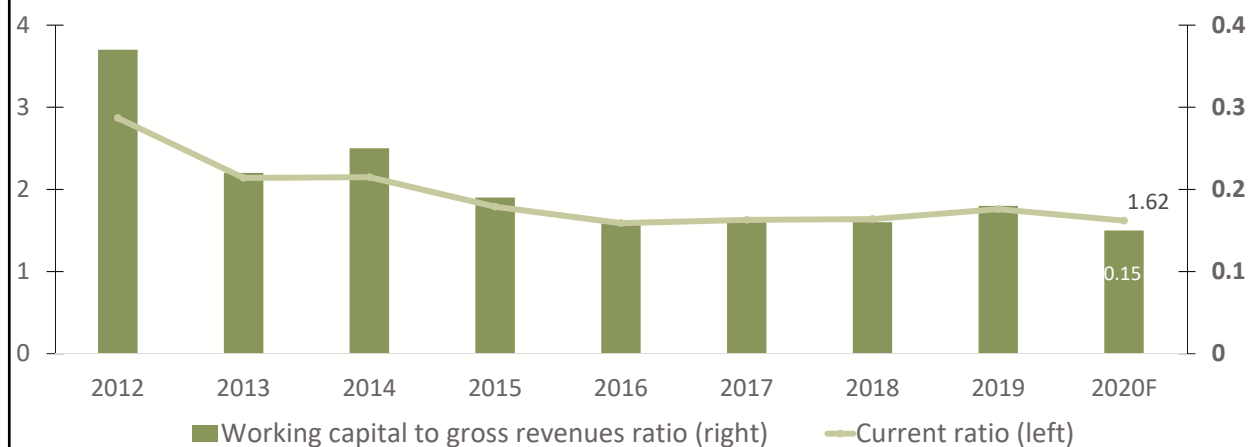
Note: F = forecast.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.

Data as of September 2, 2020.

Farm sector solvency ratios are projected to deteriorate in 2020...

...as do liquidity indicators...

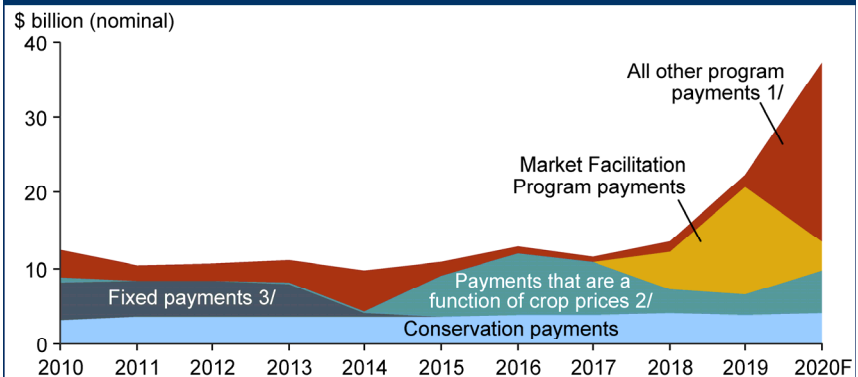


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Source: USDA/ERS Farm Income and Wealth Statistics.
Data as of September 2, 2020

...despite massive injections of funds from ad-hoc government programs...

Government farm program payments to farm producers, 2010–20F



Note: F = forecast.

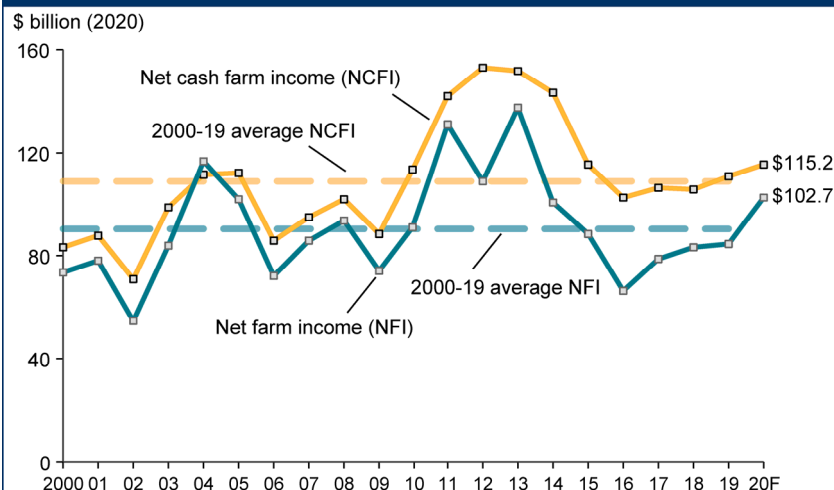
1/ All other payments includes supplemental and ad hoc disaster assistance which in 2020 includes payments from the Coronavirus Food Assistance Program and Paycheck Protection Program loans. It also includes tobacco transition, Cotton Ginning Cost Share, and dairy payments.

2/ Includes Price Loss Coverage (PLC), Agriculture Risk Coverage (ARC), counter-cyclical payments (CCP), Average Crop Revenue Election (ACRE) payments, loan deficiency payments (excluding grazeout payments), marketing loan gains, and certificate exchange gains. CCP and ACRE were not continued in the 2014 Farm Bill. PLC and ARC payments began in 2015.

3/ Includes direct fixed payments portion of Direct and Counter-Cyclical Program (DCP) and Cotton Transition Assistance Program (CTAP) payments (in 2014/15).

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.
Data as of September 2, 2020.

Net farm income and net cash farm income, 2000–20F



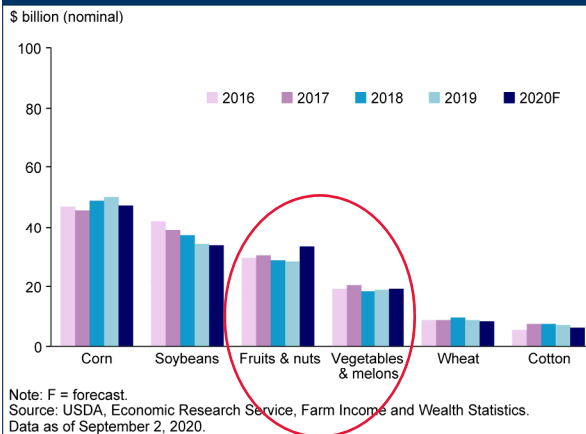
Note: F = forecast. Values are adjusted for inflation using the chain-type GDP deflator, 2020=100.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.
Data as of September 2, 2020.

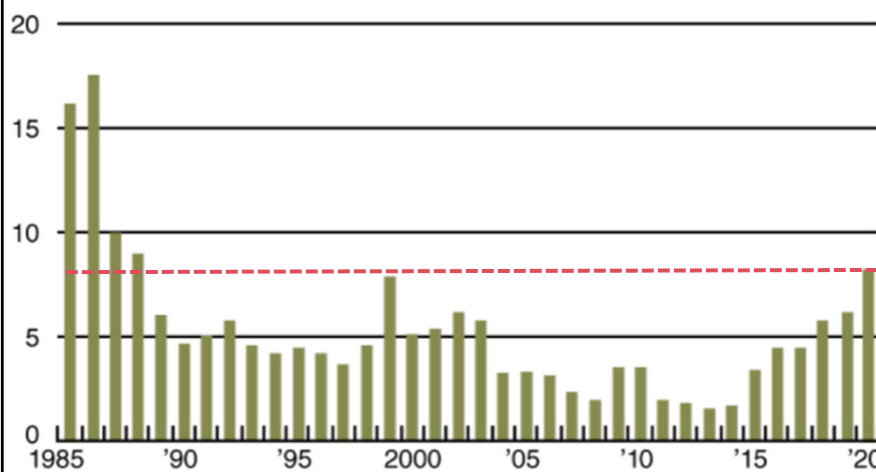
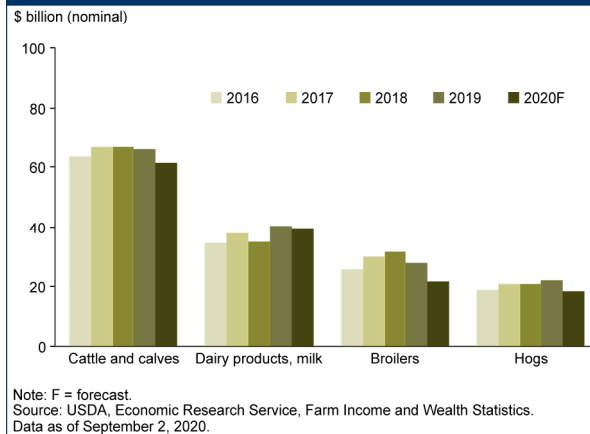
...that are expected to push net farm income higher in 2020.

In fact, the only ag productions expected to generate higher cash receipts are not strong in Iowa...

U.S. cash receipts for selected crops, 2016–20F



U.S. cash receipts for selected animals/products, 2016–20F



...and the Chicago Fed reports higher share of Farm Loans with “major” or “severe” repayment problems... not seen since 80’s

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Sources: Oppedahl, D. *AgLetter*. Chicago Fed. Aug. 2020;

...so you might be using Iowa Mediation Service more often...

- Farmer-creditor, farm nuisance, and care and feeding contracts disputes require **mandatory** rural mediation under the Iowa Code 654.
- Timing of Mediation:
 - The requesting party makes a formal application to Iowa Mediation Service.
 - Upon receipt of the request, a **42-day period starts**: 21 days during which the responding party has a chance to decide on mediation; and if mediation is desired, a further 21 days for Iowa Mediation Service to schedule a session.
 - Also upon receipt of the request, IMS sends a certified mail to farmer of Notice of Default and Right to Cure, and a **45-day period starts** until the expiration of the Cure Period.
- Outcome of Mediation:
 - A trained mediator helps each side hear the other clearly and helps all parties consider their options in a thoughtful manner. The parties control the outcome.
 - In cases where the parties cannot come to an agreement, a release is given by IMS.
 - If the parties do find a workable solution, the mediator creates an agreement for all parties to sign. Once signed, this agreement is legally binding on all participants.

<http://www.iowamediationservice.com/>

Back to the outlook for corn, soybeans, hogs and beef...

(using Dr. Chad Hart's slides)

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U.S. Corn Supply and Use

		2016	2017	2018	2019	2020
Area Planted	(mil. acres)	94.0	90.2	88.9	89.7	92.0
Yield	(bu./acre)	174.6	176.6	176.4	167.4	181.8
Production	(mil. bu.)	15,148	14,609	14,340	13,617	15,278
Beg. Stocks	(mil. bu.)	1,737	2,293	2,140	2,221	2,228
Imports	(mil. bu.)	57	36	28	45	25
Total Supply	(mil. bu.)	16,942	16,939	16,509	15,883	17,531
Feed & Residual	(mil. bu.)	5,470	5,304	5,432	5,600	5,925
Ethanol	(mil. bu.)	5,432	5,605	5,376	4,850	5,200
Food, Seed, & Other	(mil. bu.)	1,453	1,451	1,425	1,410	1,425
Exports	(mil. bu.)	2,294	2,438	2,065	1,795	2,225
Total Use	(mil. bu.)	14,649	14,799	14,288	13,655	14,775
Ending Stocks	(mil. bu.)	2,293	2,140	2,221	2,228	2,756
Season-Average Price	(\$/bu.)	3.36	3.36	3.61	3.60	3.10

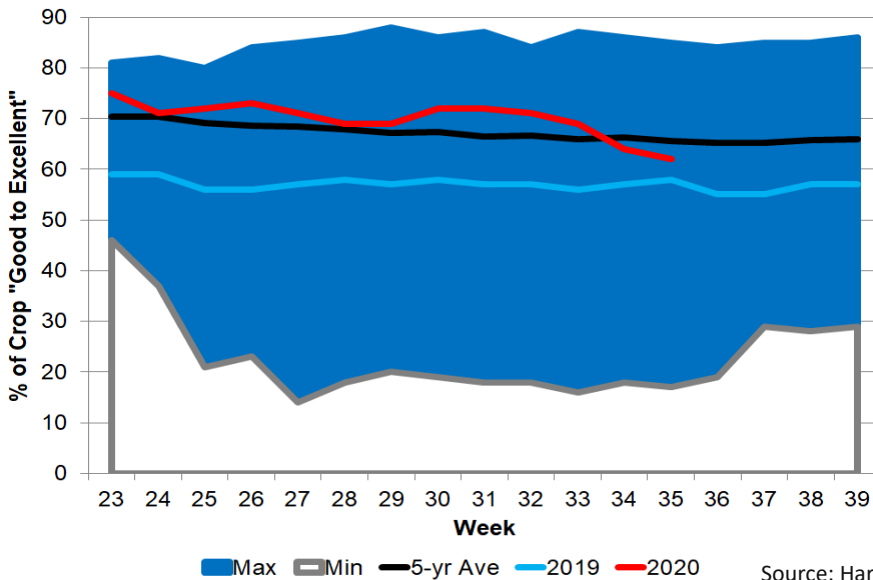
Source: USDA-WAOB

U.S. Soybean Supply and Use

		2016	2017	2018	2019	2020
Area Planted	(mil. acres)	83.4	90.2	89.2	76.1	83.8
Yield	(bu./acre)	52.0	49.3	50.6	47.4	53.3
Production	(mil. bu.)	4,296	4,412	4,428	3,552	4,425
Beg. Stocks	(mil. bu.)	197	302	438	909	615
Imports	(mil. bu.)	22	22	14	15	15
Total Supply	(mil. bu.)	4,515	4,735	4,880	4,476	5,055
Crush	(mil. bu.)	1,901	2,055	2,092	2,160	2,180
Seed & Residual	(mil. bu.)	146	113	131	52	140
Exports	(mil. bu.)	2,166	2,129	1,748	1,650	2,125
Total Use	(mil. bu.)	4,214	4,297	3,971	3,862	4,445
Ending Stocks	(mil. bu.)	302	438	909	615	610
Season-Average Price	(\$/bu.)	9.47	9.33	8.48	8.55	8.35

Source: USDA-WAOB

U.S. Corn Conditions

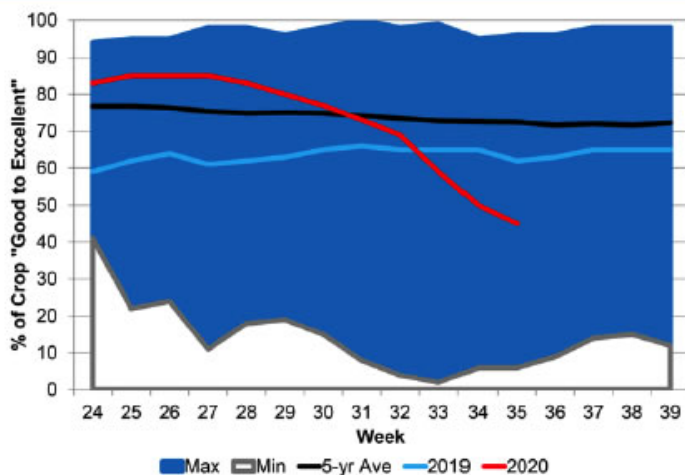


National production would fall from a projected 15.278 billion bushels to 14.858 billion bushels. 2nd largest crop on the books. prices would fall, just not as steeply as currently forecast.

Source: USDA-NASS

Source: Hart, C. Starting to frame up the damage. AgDM Newsletter. Sep 2020.

Figure 2. Iowa corn conditions (Source: USDA-NASS)



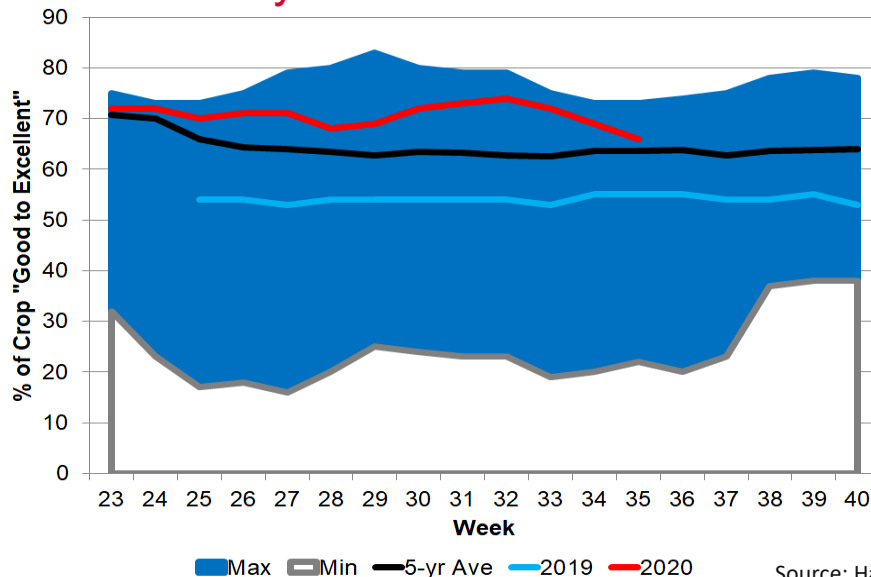
Roughly half of this production decline would come out of Iowa. Yields decline 16 bushels per acre in Iowa, resulting in 217 million bushels of lost production.

Looking back at history, two years had similar drops in crop ratings, 1989 and 2003.

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Source: Hart, C. Starting to frame up the damage. AgDM Newsletter. Sep 2020.

U.S. Soybean Conditions

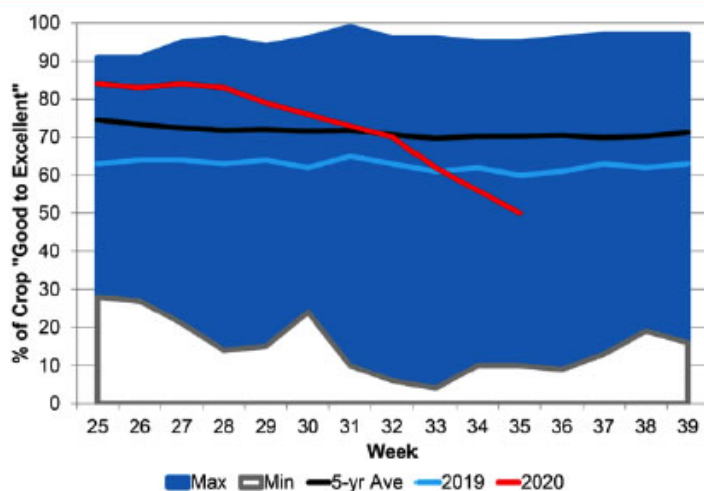


Source: USDA-NASS

The national crop remains slightly above trendline crop: 50.5 vs. 49.8 bushels per acre. Given USDA's projected harvested area, the yield drop translates to an 83 million bushel decline in soybean production. No major change in prices

Source: Hart, C. Starting to frame up the damage. AgDM Newsletter. Sep 2020.

Figure 4. Iowa soybean conditions (Source: USDA-NASS)



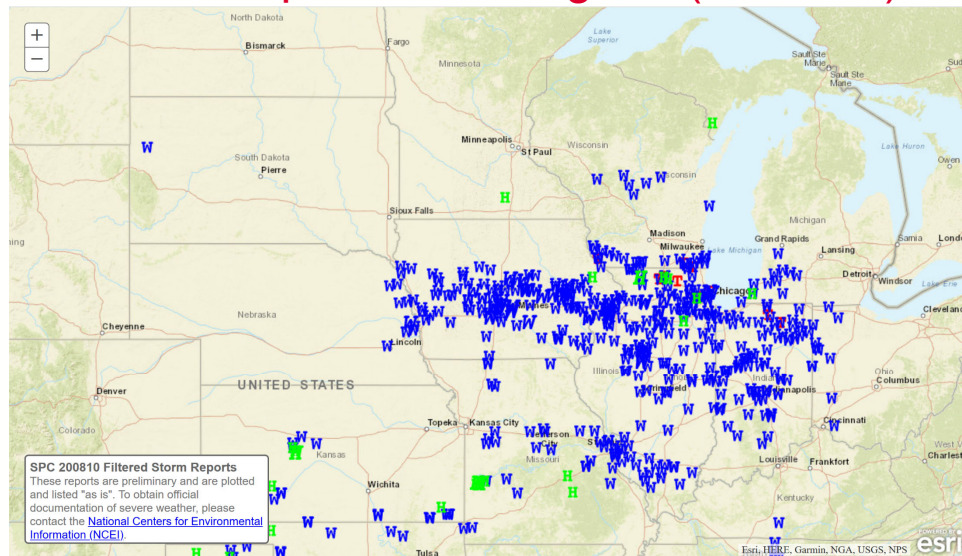
Almost half of this production decline would come out of Iowa.

Yields projected to decline by 4 bushels per acre in Iowa and given earlier harvested area estimates, that translates to 37 million bushels of lost production. Looking back at history, it is those same two years that had similar drops in crop ratings, 1989 and 2003.

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Source: Hart, C. Starting to frame up the damage. AgDM Newsletter. Sep 2020.

Storm Reports from Aug. 10 (Derecho)



Source: NOAA

World Corn Production

Country or Region	2019/2020 estimate	2020/2021 forecast	Change from July 10	Change from 2019/2020
----- Million Tons -----				
World	1,112.4	1,171.0	7.8	58.6
United States	345.9	388.1	7.1	42.2
Foreign	766.5	782.9	0.8	16.4
Argentina	50.0	50.0	--	--
Brazil	101.0	107.0	--	6.0
Mexico	25.0	28.0	--	3.0
Canada	13.4	14.3	-0.3	0.9
European Union	66.7	67.8	-0.5	1.1
Serbia	7.7	7.2	0.2	-0.5
FSU-12	55.8	60.4	0.4	4.7
Ukraine	35.9	39.5	0.5	3.6
Russia	14.3	15.3	--	1.0
South Africa	16.3	14.0	--	-2.3
China	260.8	260.0	--	-0.8
India	28.9	27.5	--	-1.4

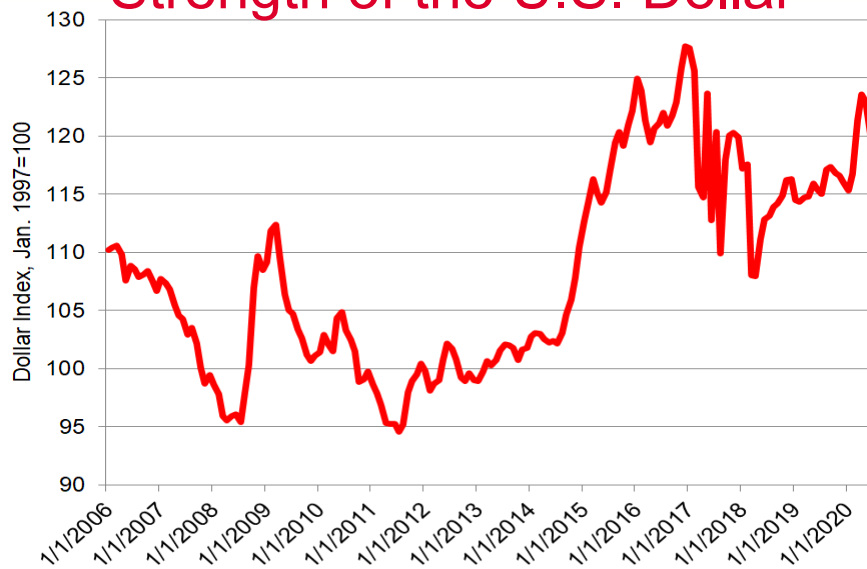
Source: USDA-WAOB

World Soybean Production

Country or Region	2019/2020 estimate	2020/2021 forecast	Change from July 10	Change from 2019/2020
----- Million Tons -----				
World	337.3	370.4	7.9	33.1
United States	96.7	120.4	7.9	23.7
Foreign	240.6	250.0	**	9.4
Argentina	49.7	53.5	--	3.8
Brazil	126.0	131.0	--	5.0
Paraguay	9.9	10.2	--	0.4
Canada	6.0	5.8	--	-0.2
India	9.3	10.8	0.2	1.5
China	18.1	17.5	--	-0.6

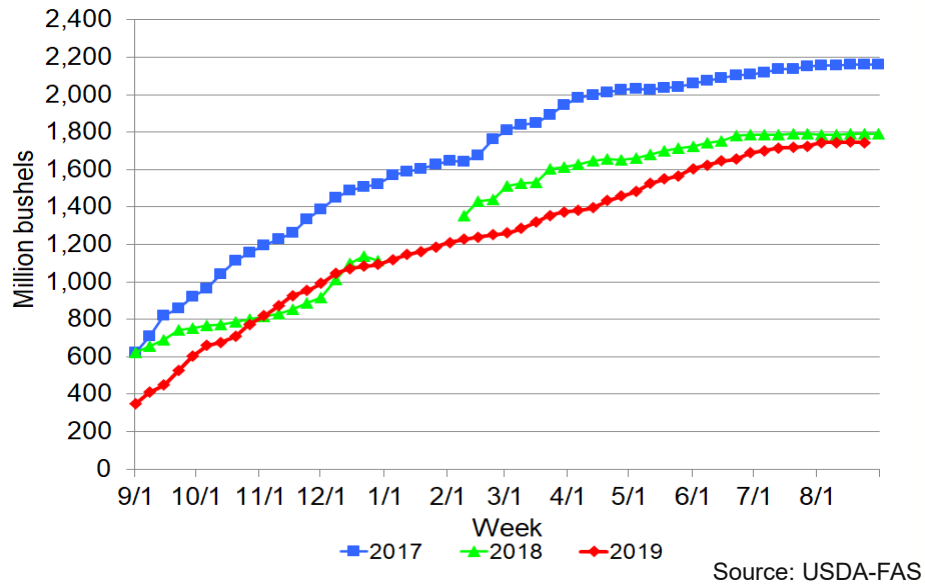
Source: USDA-WAOB

Strength of the U.S. Dollar

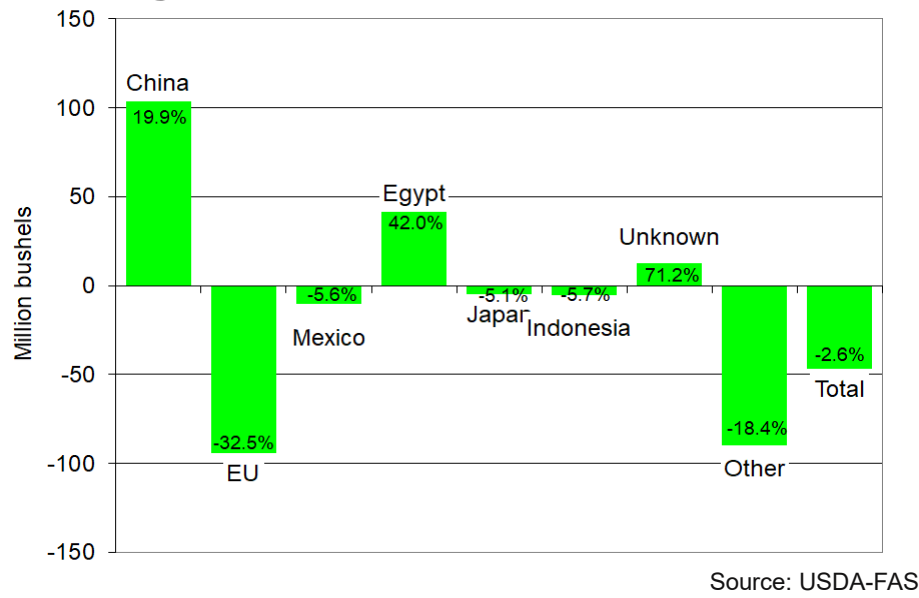


Source: Federal Reserve

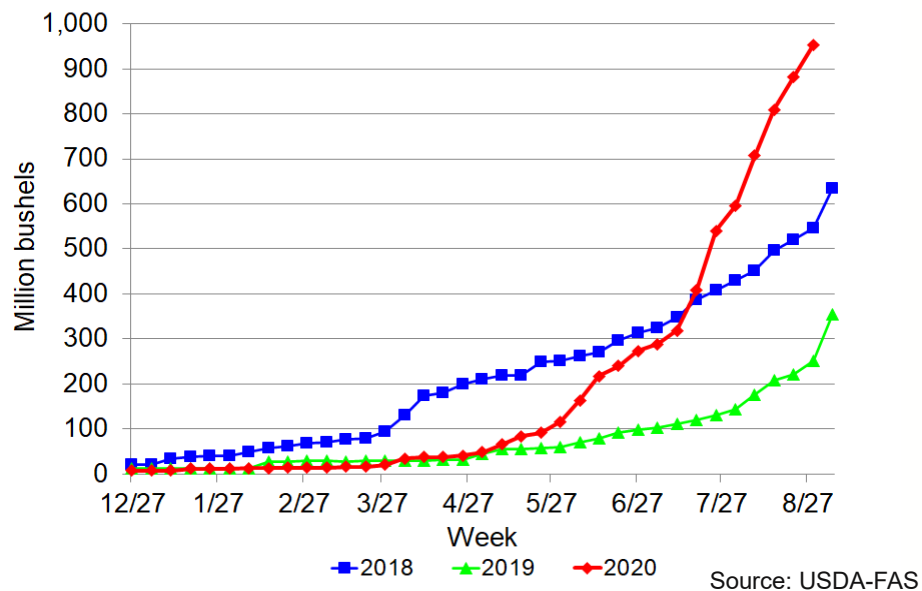
Soybean Export Sales



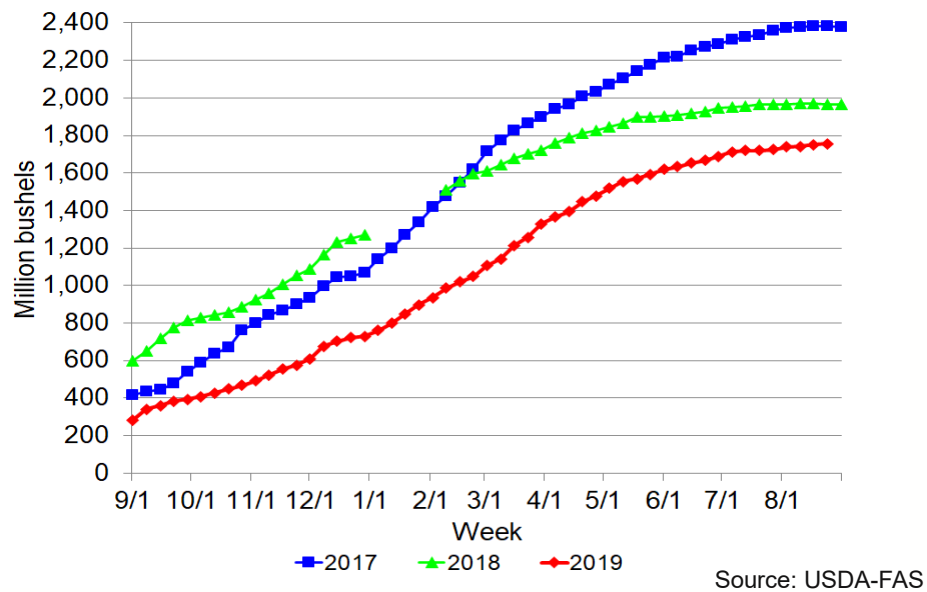
Soybean Export Shifts



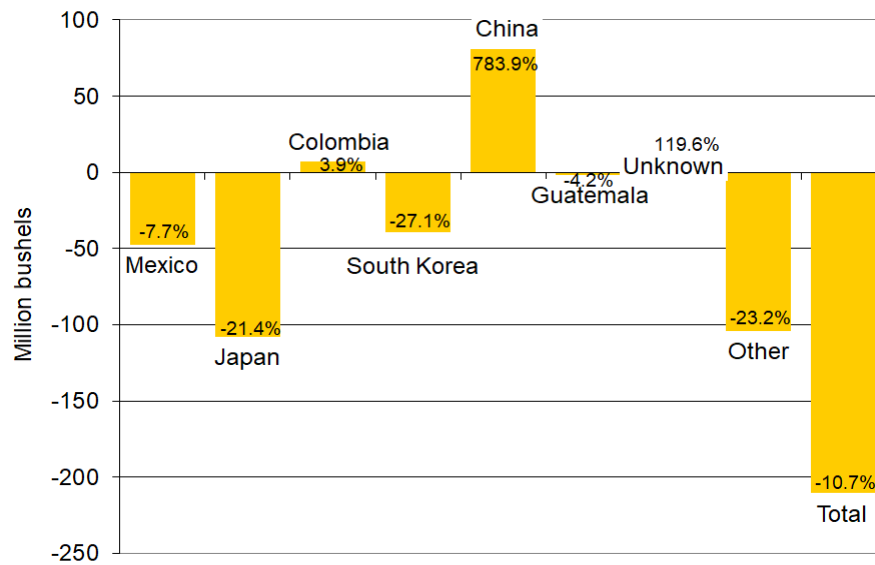
Advance Soybean Sales



Corn Export Sales

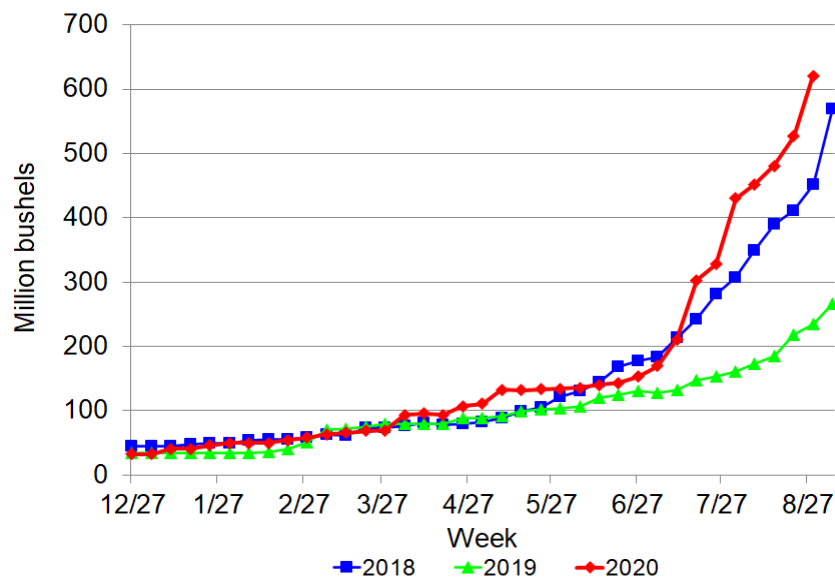


Corn Export Shifts



Source: USDA-FAS

Advance Corn Sales



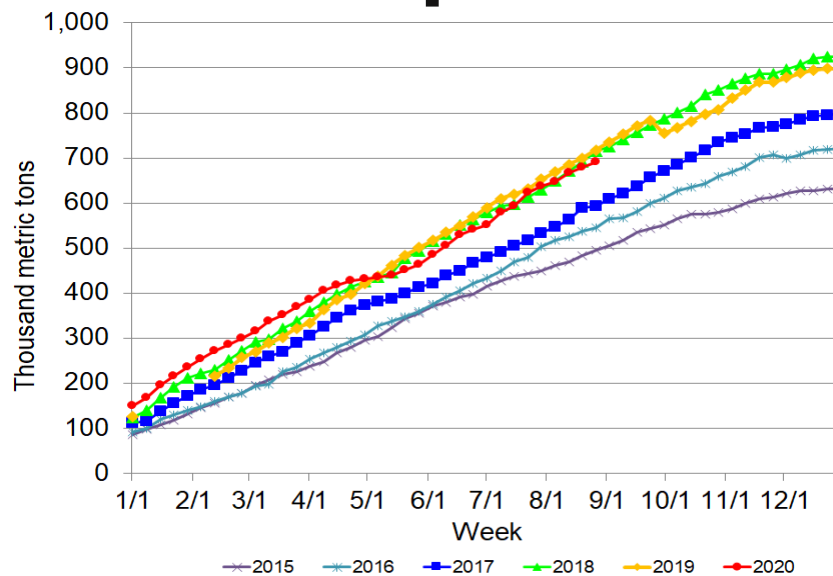
Source: USDA-FAS

U.S. Meat Production & Prices

Item	2020		2021		
	Estimate	Change from July 10	Forecast	Change from July 10	Change from 2020
Production ----- <i>Billion Pounds</i> -----					
Beef	27.03	0.09	27.62	-0.10	0.59
Pork	28.36	-0.18	28.57	--	0.21
Broilers	44.67	0.03	45.28	0.10	0.61
Turkey	5.69	0.01	5.77	--	0.08
Total Meat	106.49	-0.06	107.99	--	1.50
Prices ----- <i>Dollars per cwt</i> -----					
Steers	107.28	0.50	109.75	0.25	2.47
Hogs	38.12	-0.75	44.25	--	6.13
----- <i>Cents per pound</i> -----					
Broilers	70.4	0.4	81.3	--	10.9
Turkey	105.5	0.3	105.0	--	-0.5

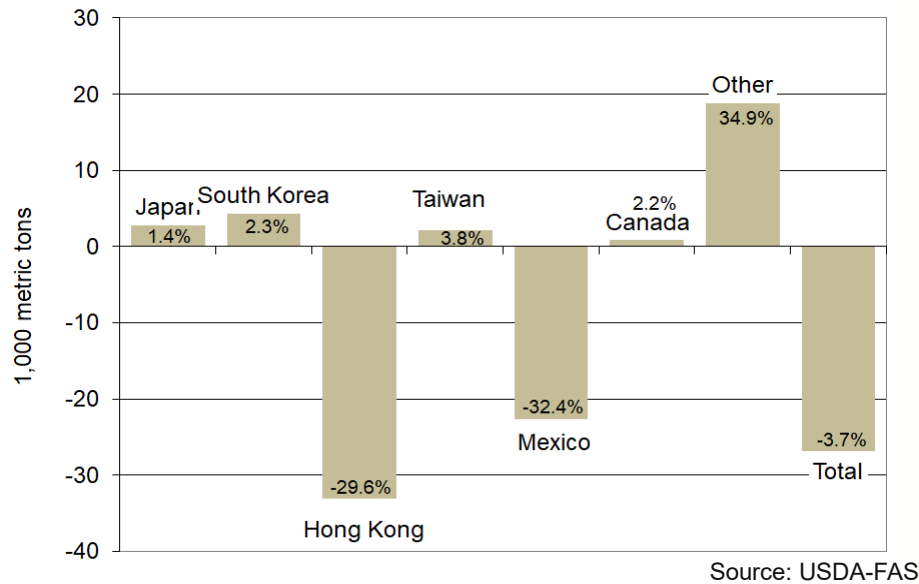
Source: USDA-WAOB

Beef Export Pace

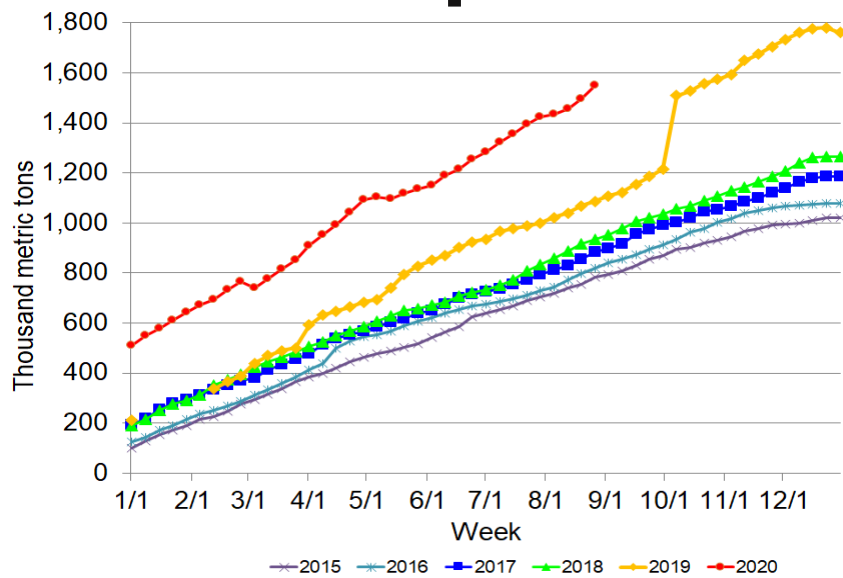


Source: USDA-FAS

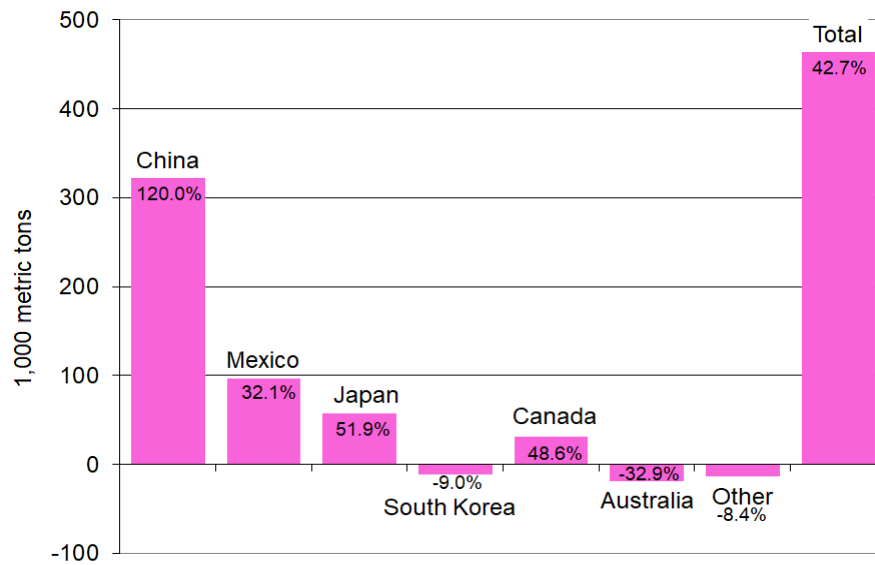
Beef Export Shifts



Pork Export Pace

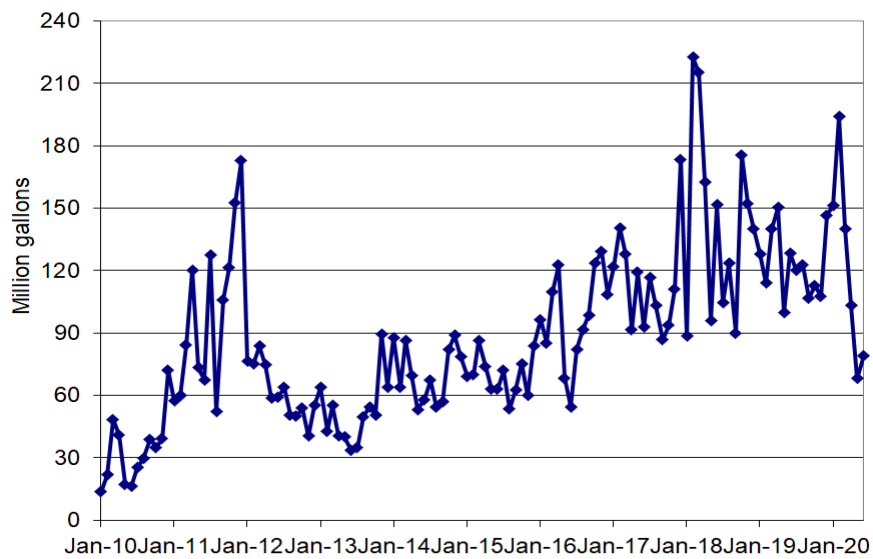


Pork Export Shifts



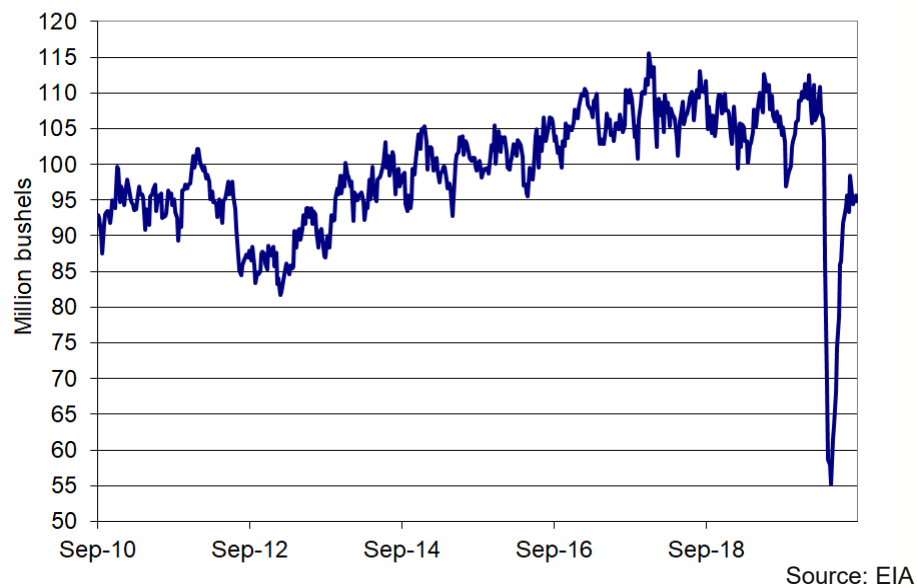
Source: USDA-FAS

Ethanol Exports

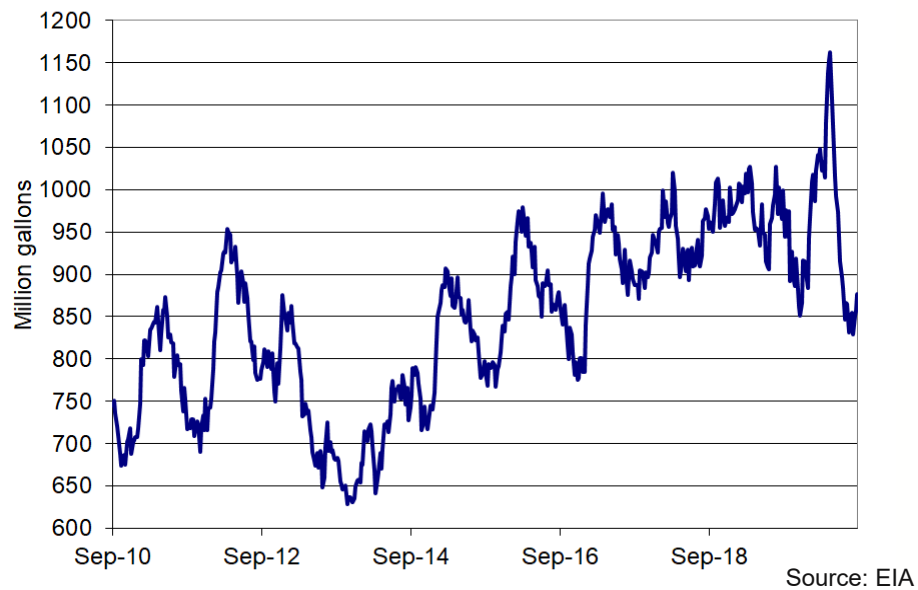


Source: EIA

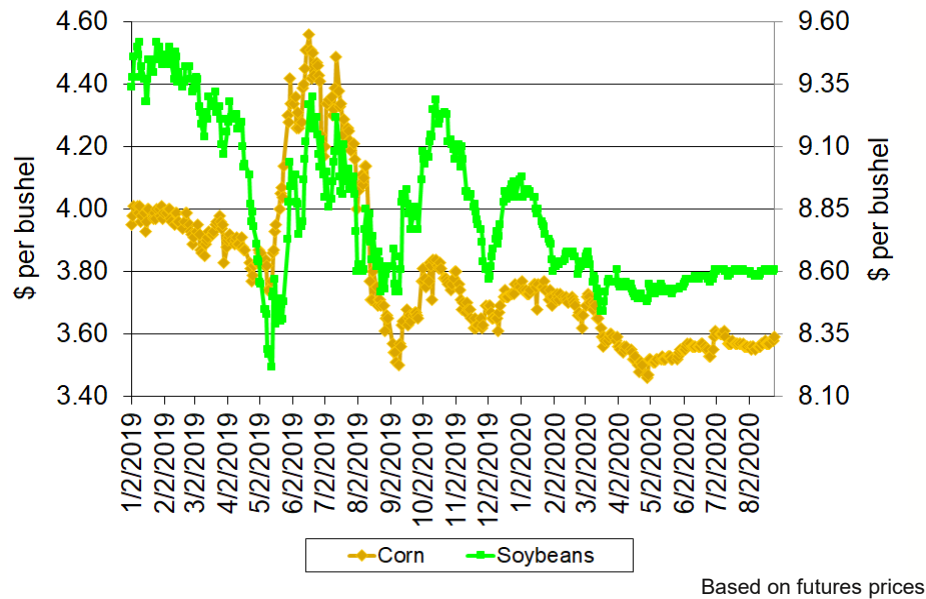
Corn Grind for Ethanol



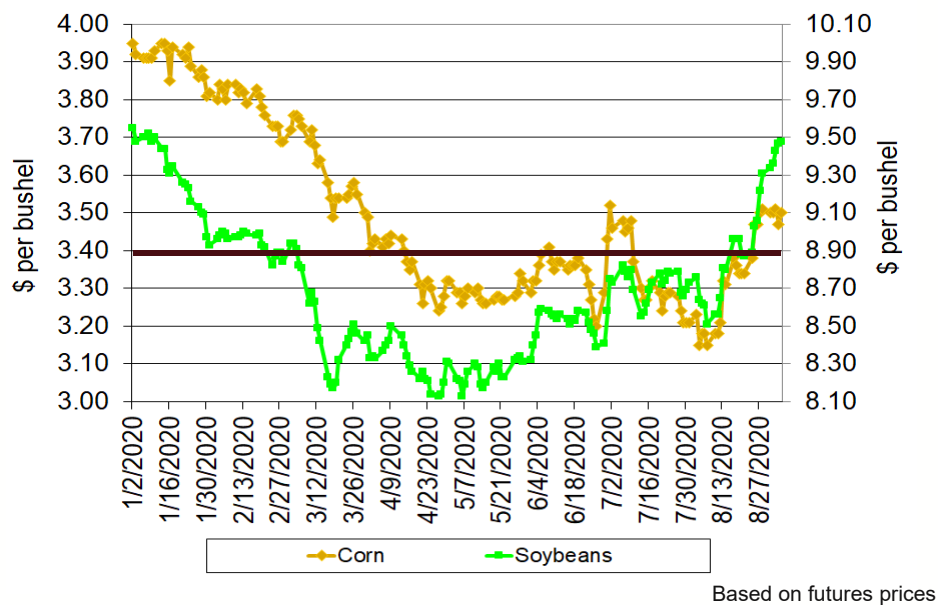
Ethanol Stocks



2019/20 Crop Price Projections



2020/21 Crop Price Projections



**Thank you for your time!
Questions? Comments?**

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**Please provide feedback at
<https://bit.ly/2FkVMBo>**

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