

# Summer Climate and Grain Market Outlook Webinar



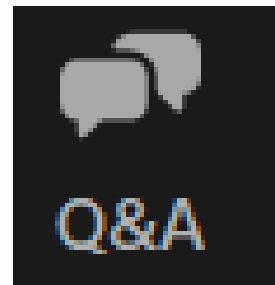
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AND ENVIRONMENTAL SCIENCES

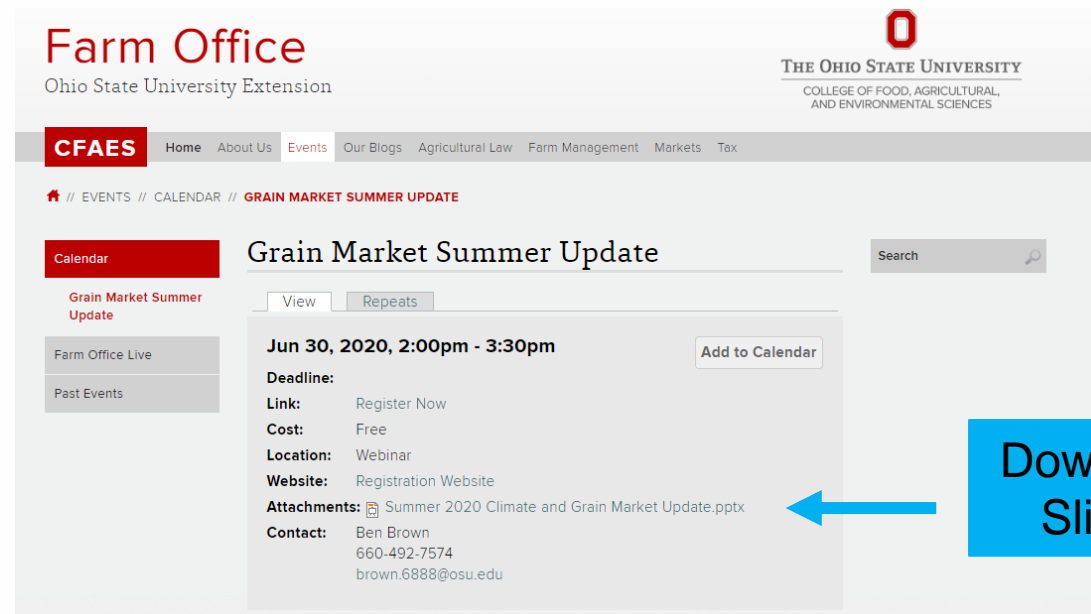
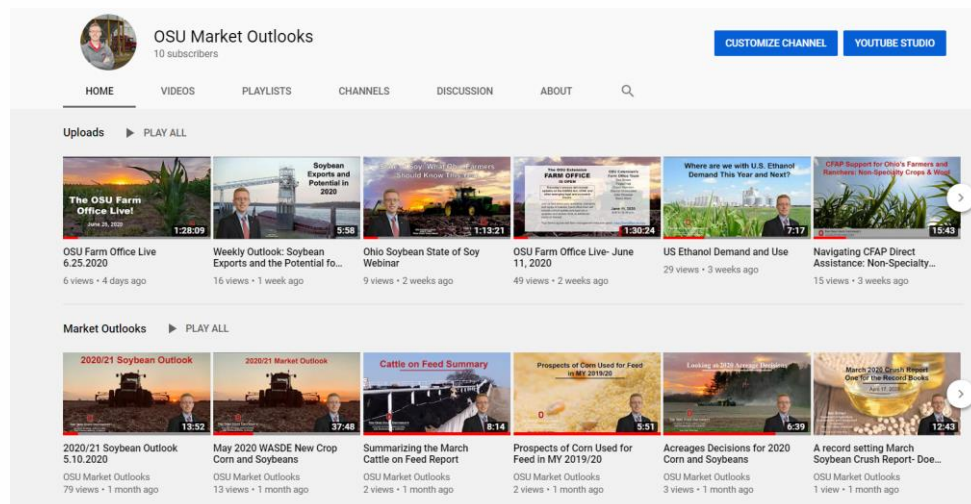


# Introductory Items

- ❖ Recognition to Scott Irwin and Todd Hubbs for format of today's webinar.
- ❖ Submit question by clicking on the Q&A button at the bottom of your screen. Alternatively, you can email them to [brown.6888@osu.edu](mailto:brown.6888@osu.edu).
- ❖ Slides for this webinar are available at [farmoffice.osu.edu](http://farmoffice.osu.edu)



Feel free to type in questions at the bottom of your screen anytime.



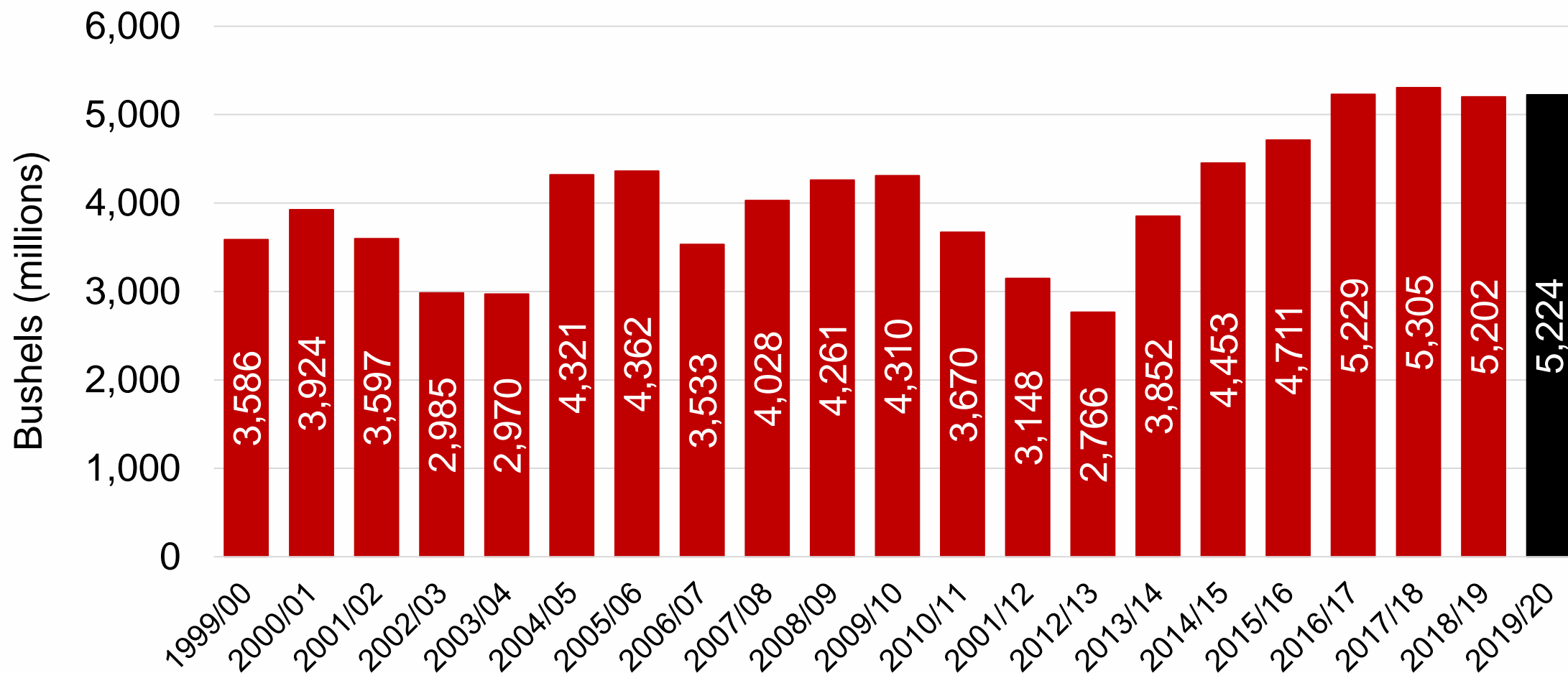
Download Slides

- ❖ Webinar will be archived at [farmoffice.osu.edu](http://farmoffice.osu.edu). Click on past events under the events tab at the top and then "Summer Climate and Grain Market Outlook". And on YouTube at OSU Market Outlooks.

# Grain Stocks Report: **Corn Stocks**

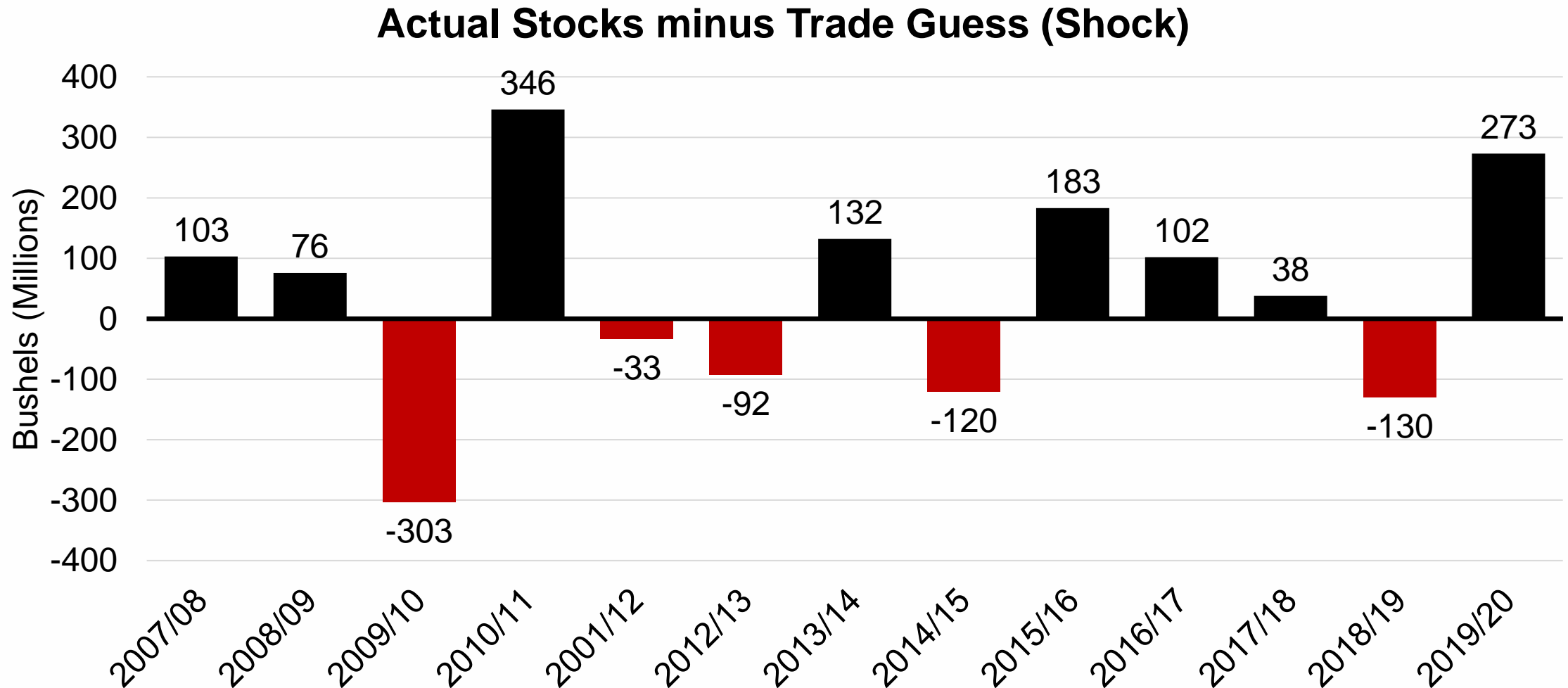
## June 1st Corn Stocks

Average Trade Guess:  
4,951 million bushels



Source: USDA NASS- 6/30/2020; Reuters

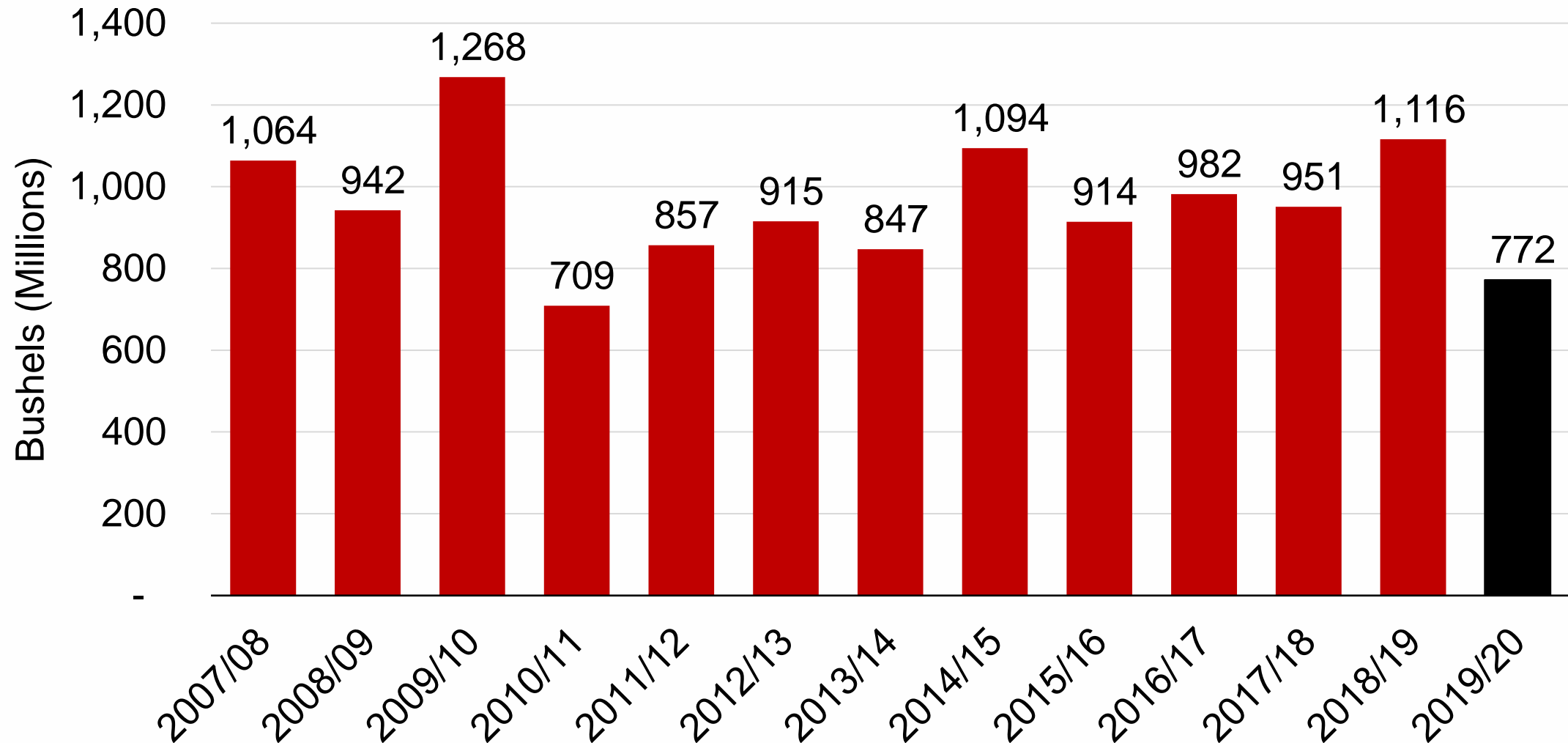
# Ending Stocks Report: Trade Estimate Surprise- Corn



Source: USDA NASS- 6/30/2020; Reuters

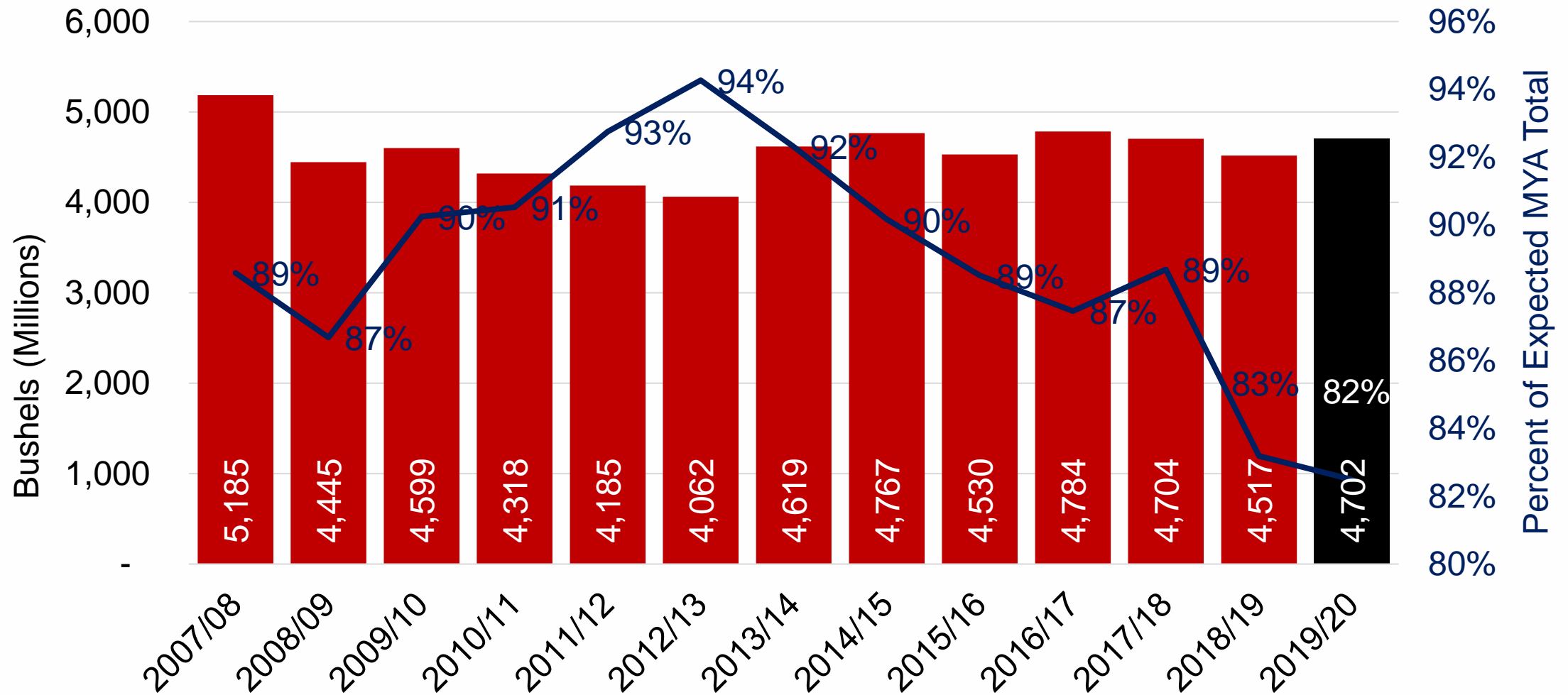
# Ending Stocks Report: **Feed Use in 3<sup>rd</sup> Quarter**

## Implied Third Quarter Corn Feed and Residual Use



# Ending Stocks Report: Feed and Residual 3 Quarters

Total after 3 Quarters and Percent of MYA Total



# Ending Stocks Report: Possibilities for Feed Use in 4th

Estimates Percent of Feed Use in through three Quarter	Implied Value of Total Feed Use for Marketing Year 2019/20	Need in 4 <sup>th</sup> Quarter Feed and Residual Use to meet USDA Estimate
USDA- June WASDE	5,700	
Average Experienced between 09/10-13/14 92%	5,113	587
Average experienced between 14/15- 17/18 89%	5,301	399
Last year 83%	5,665	35

Corn Balance Sheet	USDA-June	6/30/2020
	2019-20	2019-20
Planted Acres	89.7	89.7
Harvested Acres	81.3	81.3
Yield	167.4	167.4
Beginning Stocks	2,221	2,221
Production	13,617	13,617
Imports	45	45
Total Supply	15,883 (-45)	15,883
Feed Use and Res.	5,700	5,675 (-50)
Food, Seed, Ind.	6,305 (-50)	6,220
Ethanol	4,900 (-50)	4,825 (-75)
Total Domestic	12,005 (-50)	11,895
Exports	1,775	1,765 (-10)
Total Use	13,780 (-50)	13,660
Ending Stocks	2,103 (+5)	2,223
Stocks to Use	15.2%	16.3%
Farm Cash Price	\$3.60	\$3.60

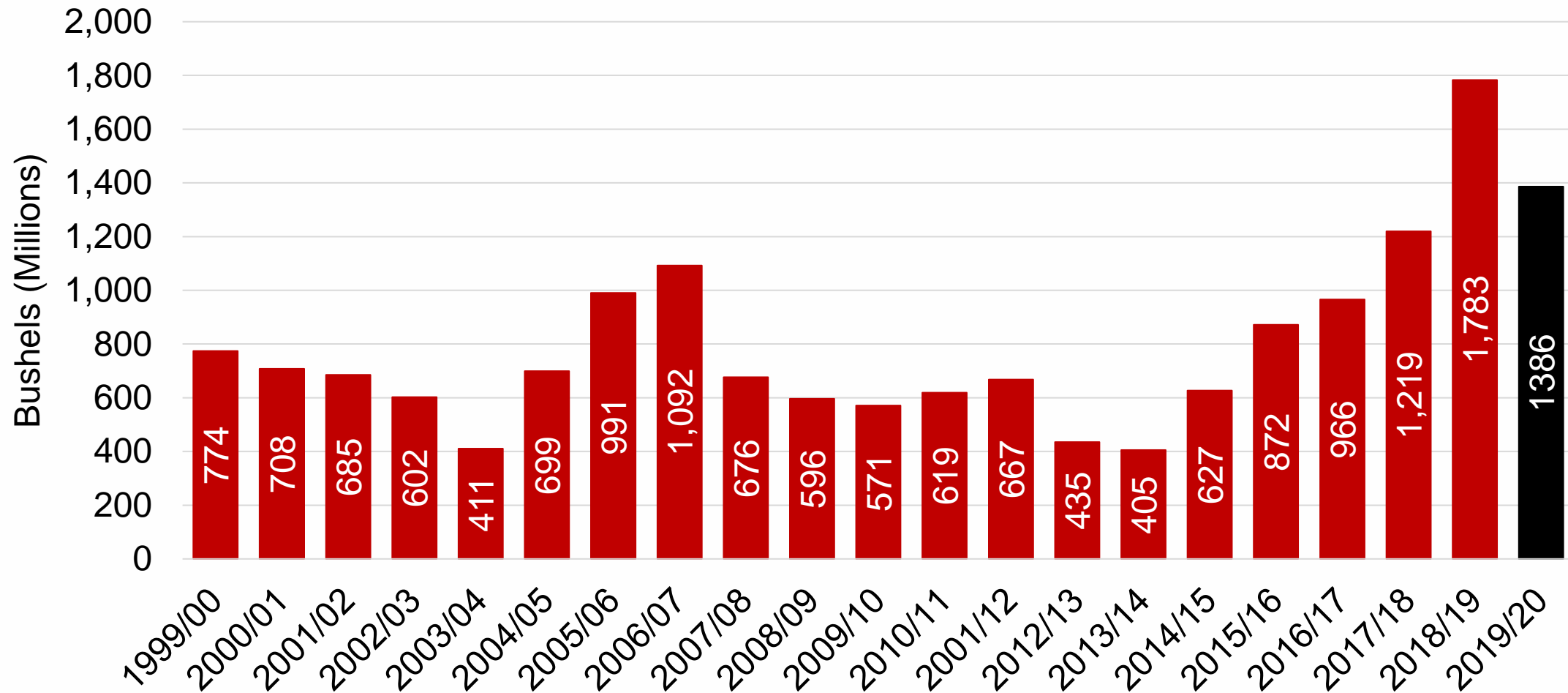
New Crop Later



# Ending Stocks Report: Soybean Stocks

Average Trade Guess:  
1,392 million bushels

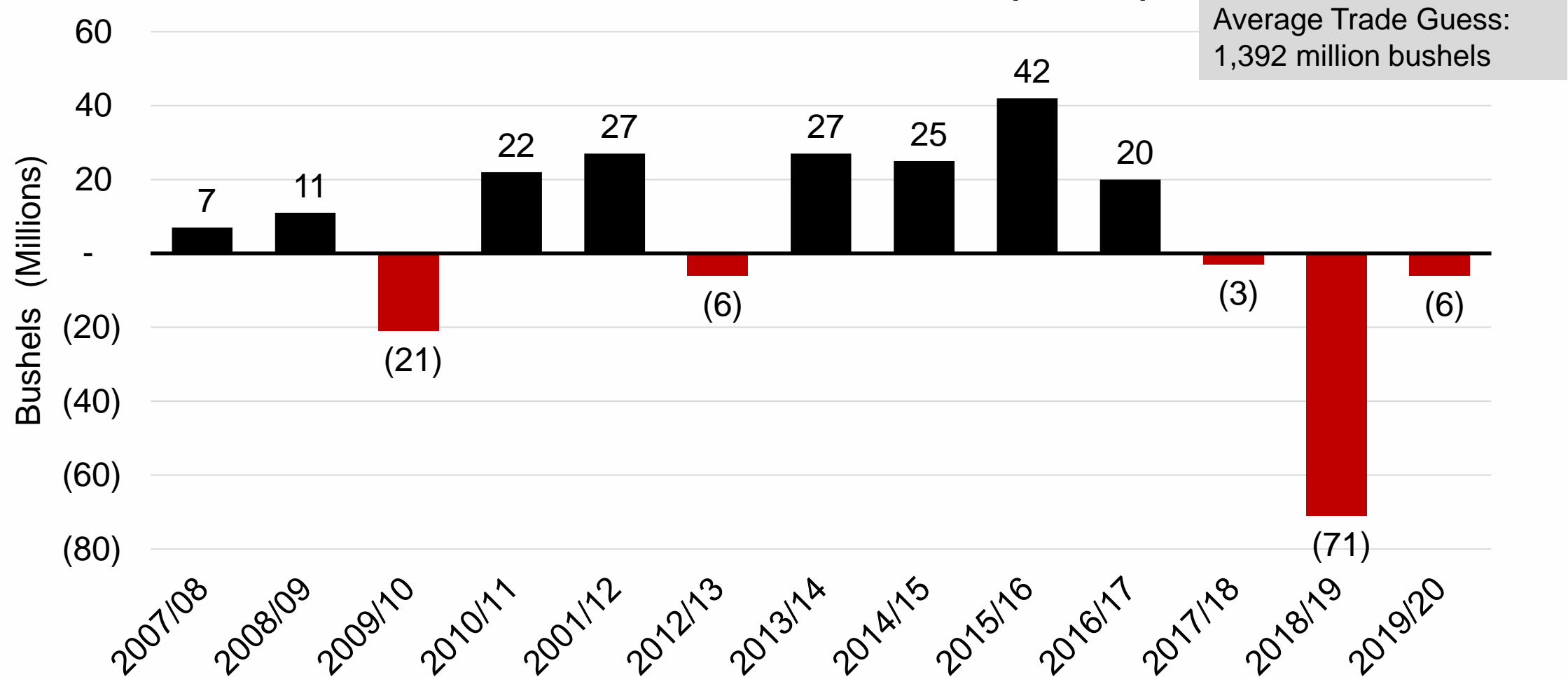
## June 1st Soybean Stocks



Source: USDA NASS- 6/30/2020; Reuters

# Ending Stocks Report: Trade Surprise- Soybeans

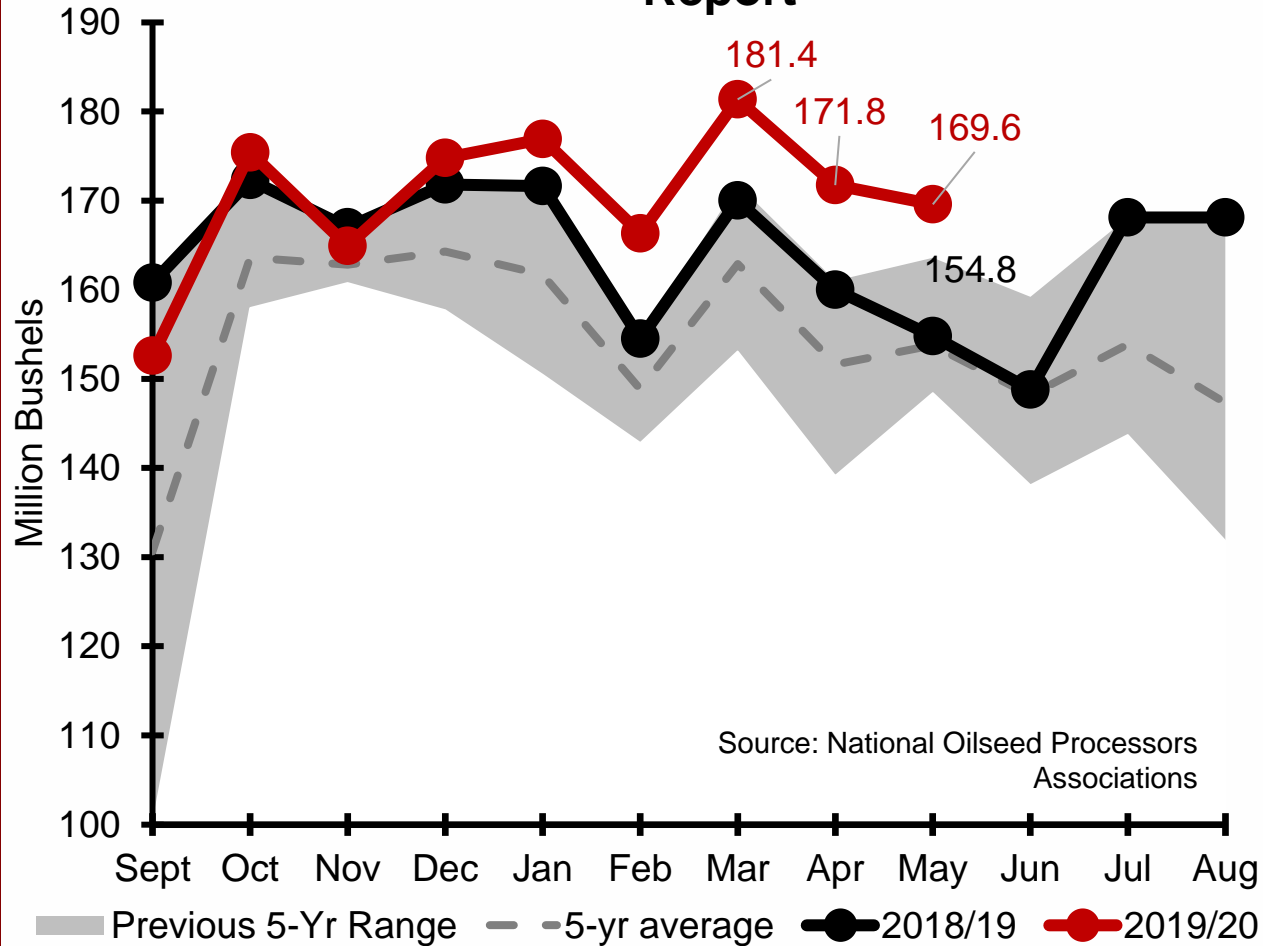
Actual Stocks minus Trade Guess (Shock)



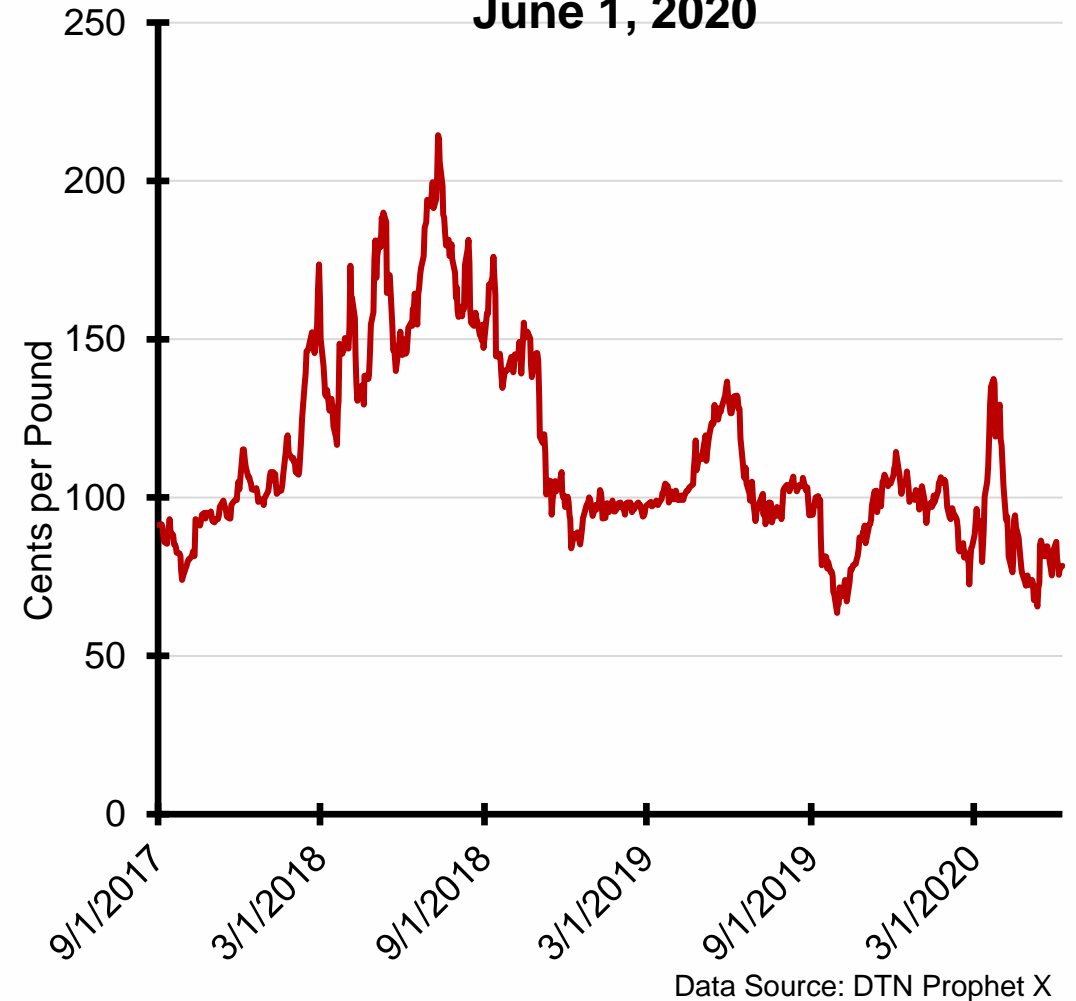
Source: USDA NASS- 6/30/2020; Reuters

# Market Outlook: Domestic Soybean Crush

## NOPA Soybean Monthly Crush - June Report

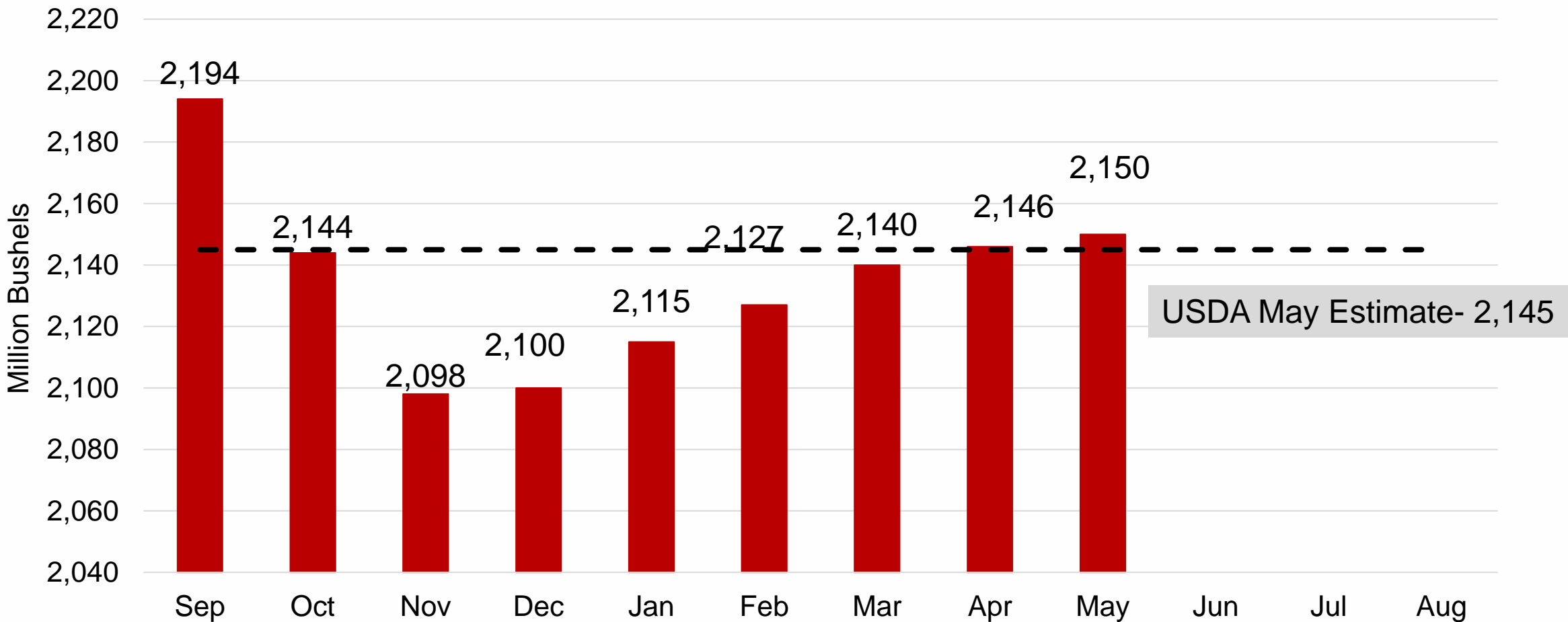


## Daily Soybean Crush Margin thru June 1, 2020



# Market Outlook: Domestic Soybean Crush

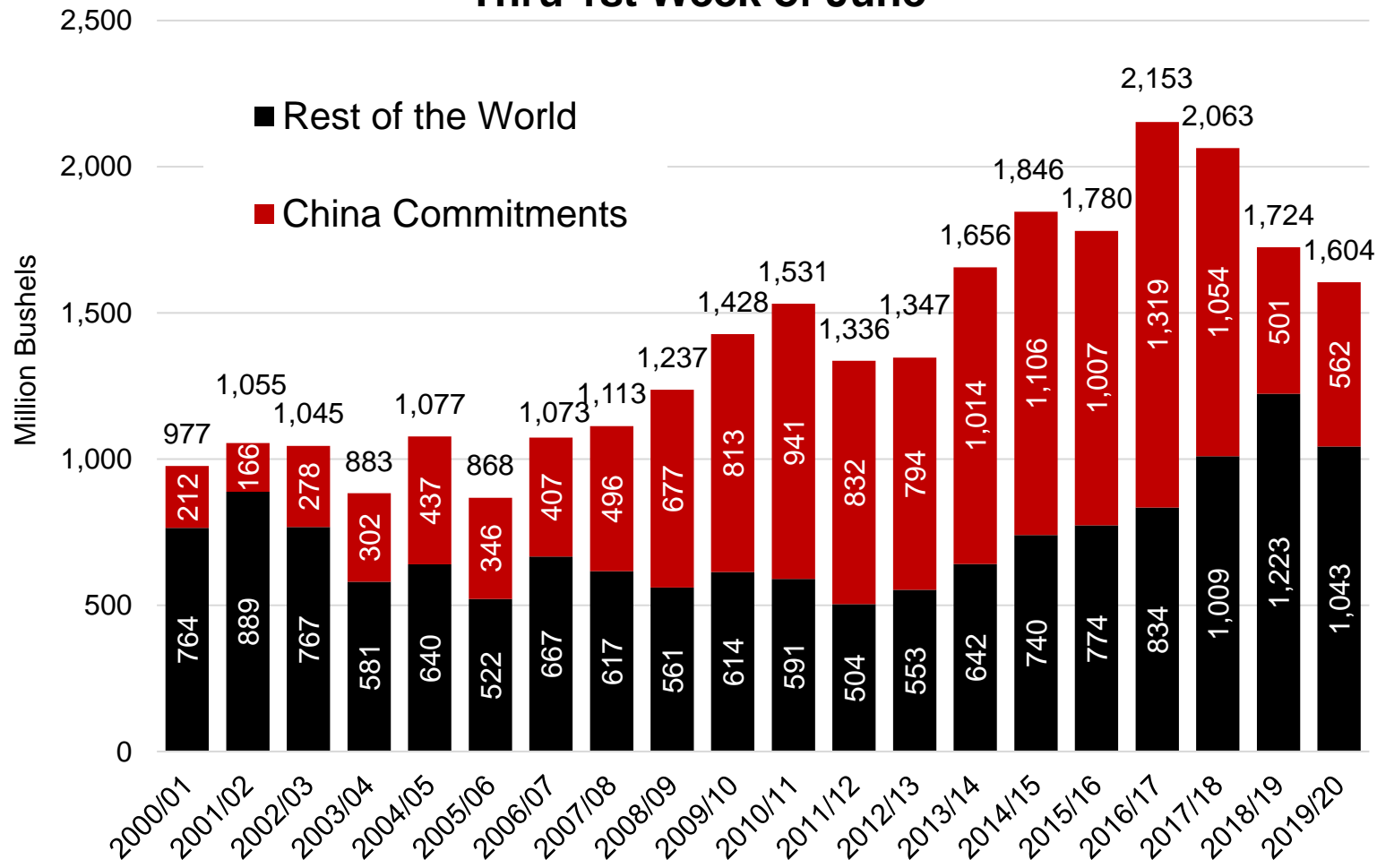
Implied 2019/20 Marketing Year Soybean Crush- by Month



Author Calculation using NOPA and USDA- NASS Data

# Soybean Demand: Exports Globally and to China

U.S Soybean Commitments September  
Thru 1st Week of June



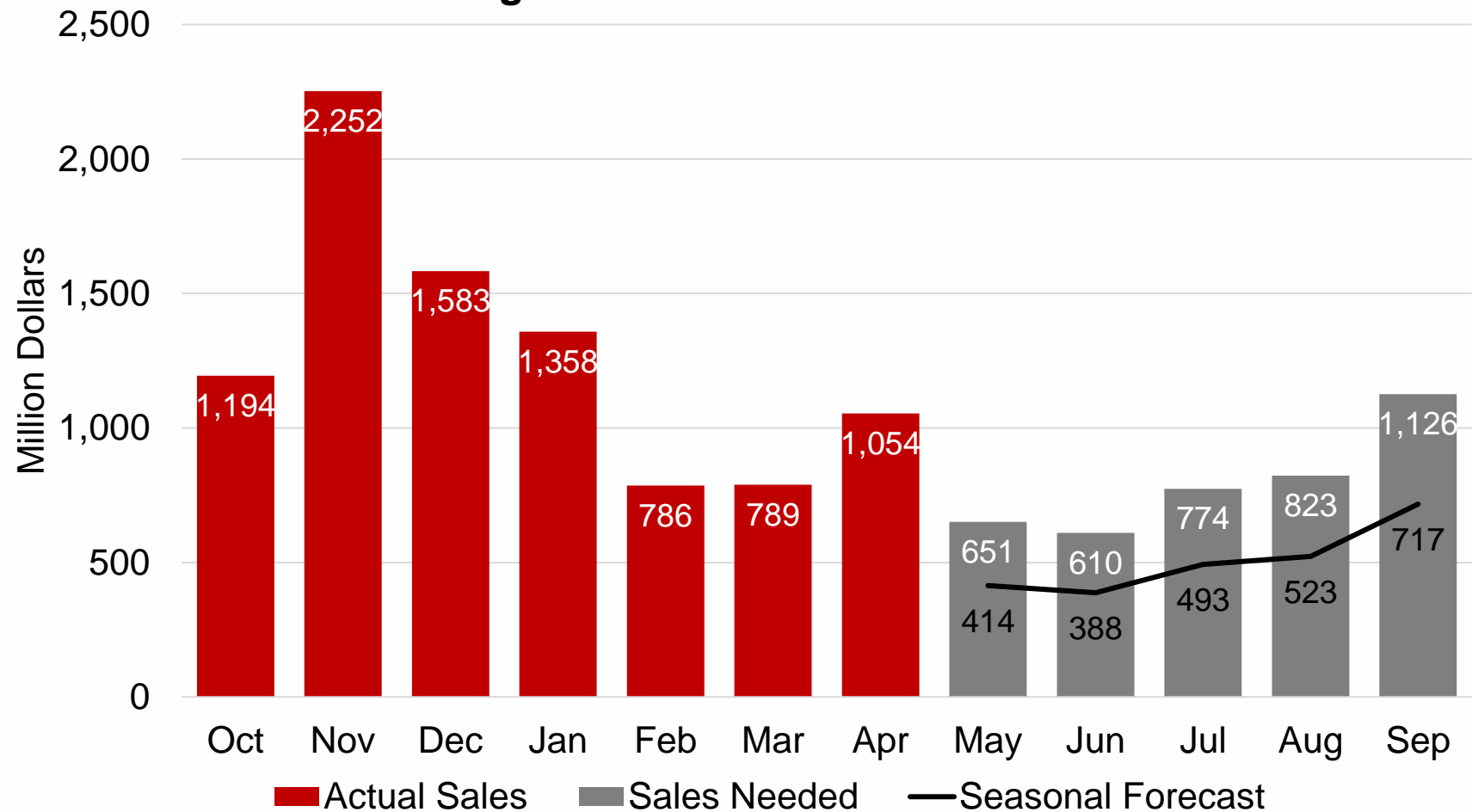
Source: USDA- Foreign Ag Service

- ❖ Total export commitments through the 1<sup>st</sup> week of June sat at 1,604 million bushels- **down 7%** from this same week last year.
- ❖ US exports have improved lately but remain short of seasonal pace needed by roughly **83 mil. bushel.**
  - ❖ Export commitments sit right in line with USDA at 1,650 mil. bu.
- ❖ Outstanding sales for current year are 289 million bushels.
  - ❖ **China holds 97 million- 37%** of those commitments.
- ❖ Recent buying for 2020/21 marketing year has supported soybean price.
  - ❖ Most sales for Oct-Dec delivery to provide protection.



# Market Outlook: Impact of Phase 1 Deal

US Ag Sales to China- Fiscal Year



Data Source: USDA FSA

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## Key Reminders

- ❖ USDA lowered 2020 Fiscal Year exports to China to \$13 billion as result of COVID.
- ❖ Phase 1 is on a calendar year not fiscal year.
- ❖ Phase 1 for 2020 is 12.5 billion more than 2017 baseline of \$19.5 billion.

Soy Balance Sheet	USDA-June 2019-20	6/30/20 2019-20
Planted Acres	76.1	76.1
Harvested Acres	75.0	75.0
Yield	47.4	47.4
Beginning Stocks	909	909
Production	3,552	3,552
Imports	15	15
Total Supply	4,476 (-5)	4,476
Crushing	2,140 (+15)	2,140
Seed	97	97
Residual	4	5
Total Domestic	2,241 (+15)	2,242
Exports	1,650 (-25)	1,635 (-15)
Total Use	3,891 (-10)	3,877
Ending Stocks	585 (+5)	599
Stocks to Use	15.0%	15.5%
Farm Cash Price	\$8.50	\$8.55



# Summer Climate Outlook

June 30, 2020

Aaron B. Wilson

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State Climate Office of Ohio (SCOO)

OSU Extension – College of Food, Agricultural,  
and Environmental Sciences

Byrd Polar and Climate Research Center

Photo Credit: Wayne  
Dellinger - OSU Extension

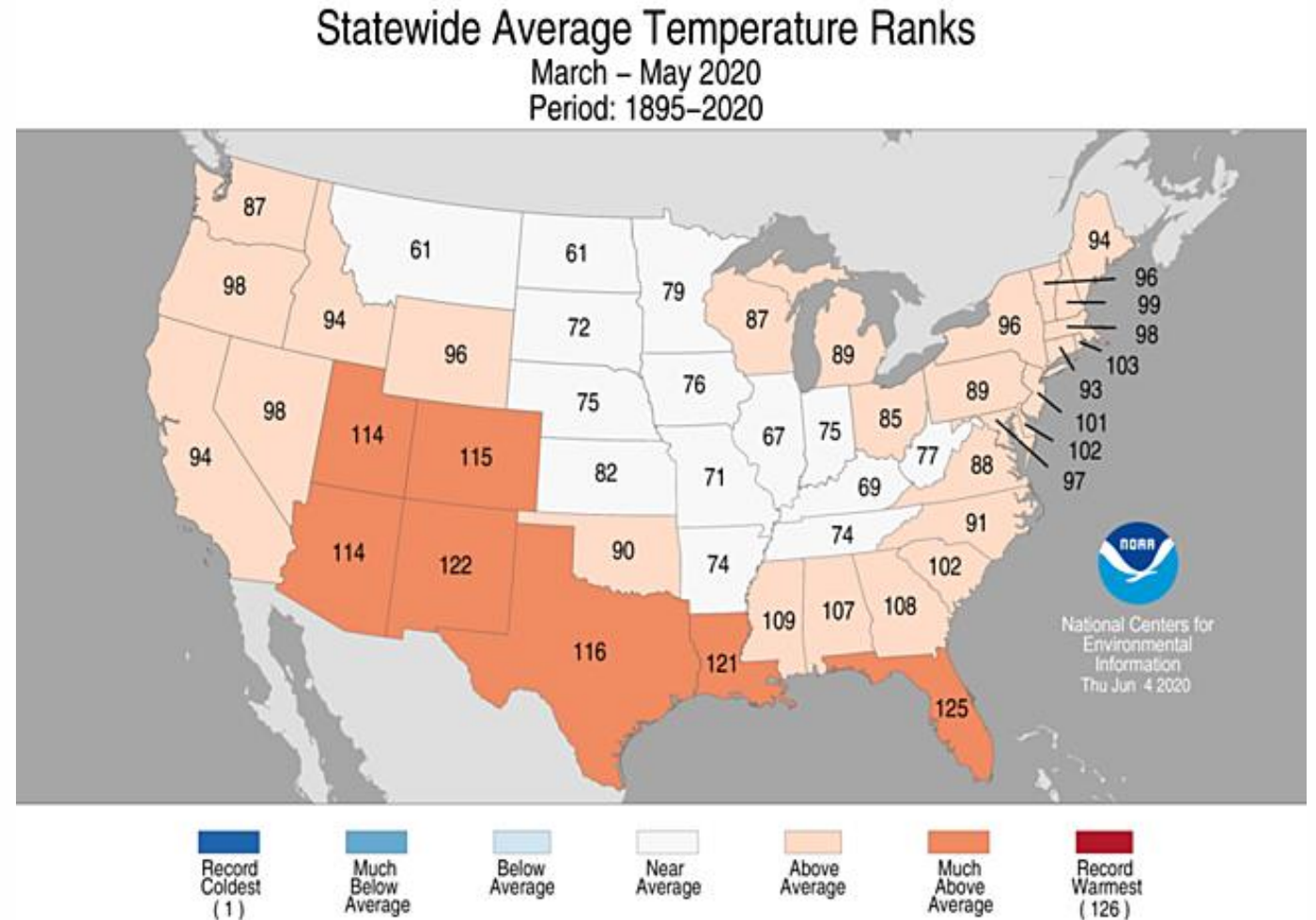


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## MARCH – MAY TEMPERATURE RECAP

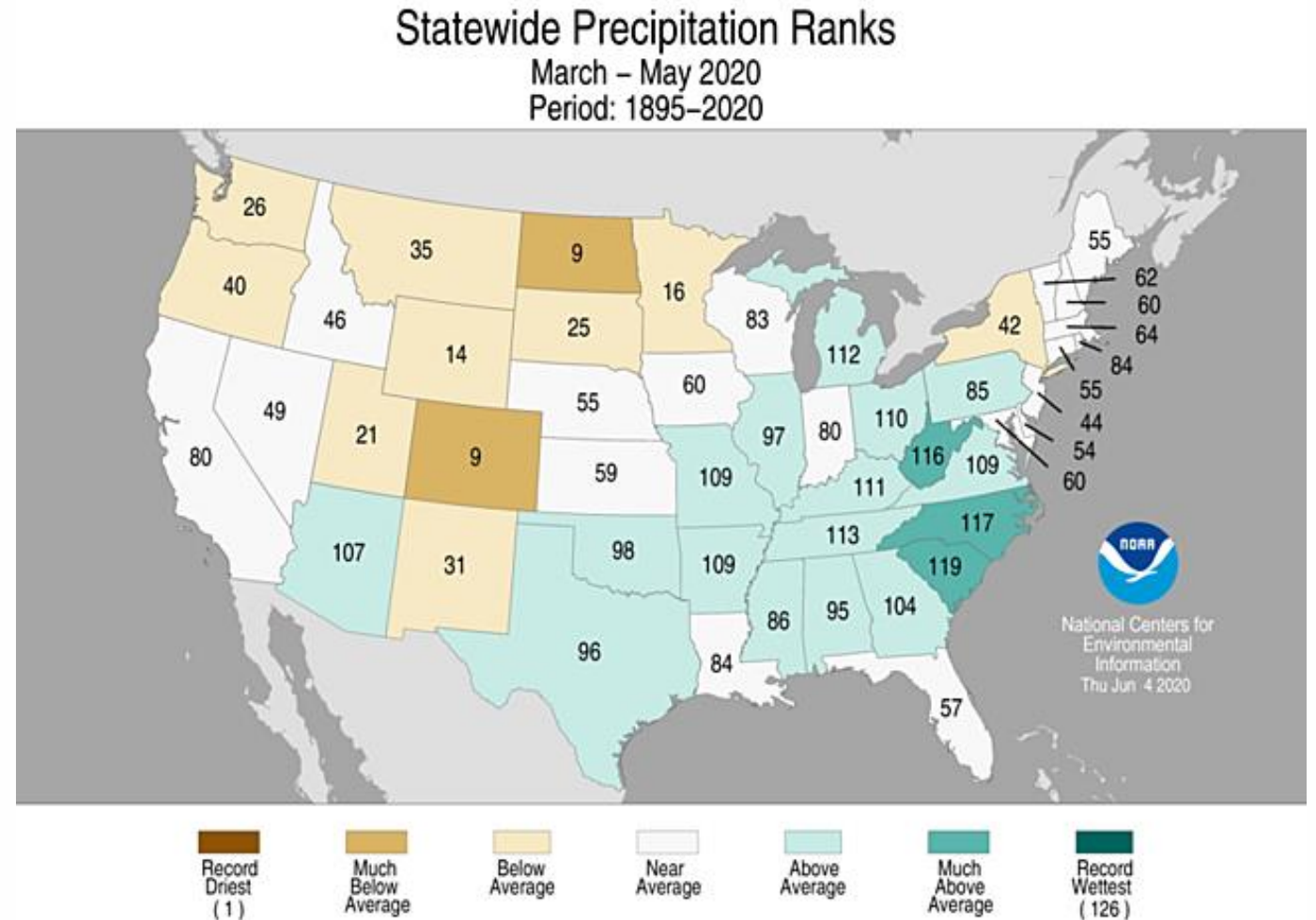
- Despite a chilly April and May, spring was near to above average
- Top ~40<sup>th</sup> warmest in the eastern Midwest (Wisconsin, Michigan, and Ohio)



Source: <http://www.ncdc.noaa.gov/temp-and-precip/us-maps/>

# MARCH – MAY PRECIPITATION RECAP

- Dry West / Wet East
- 9th driest for CO and ND;  
Below average across the  
Northern Great Plains
- Top 20 wettest for MI, OH,  
and MO; IN sticks out in the  
East



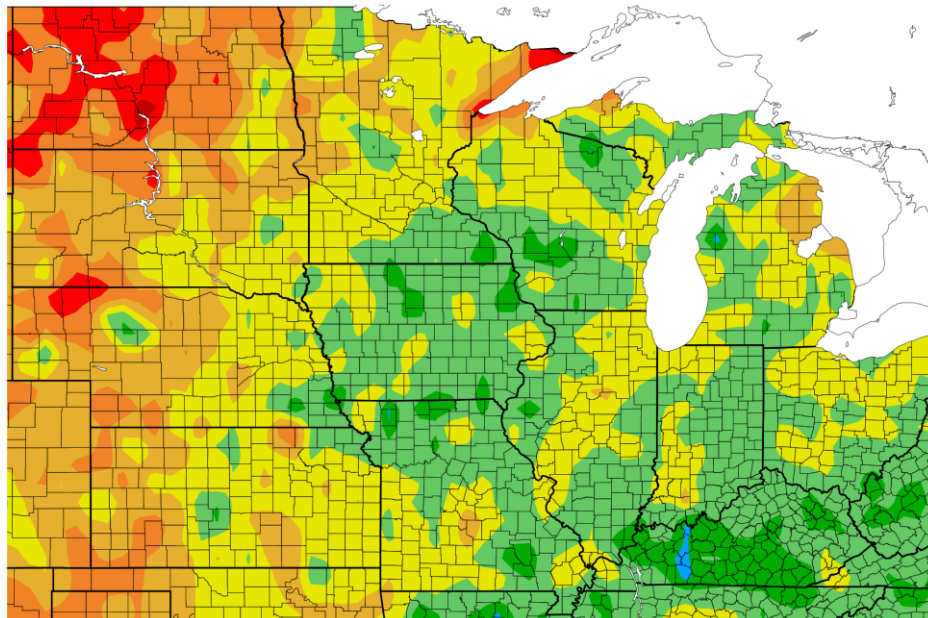
Source: <http://www.ncdc.noaa.gov/temp-and-precip/us-maps/>



# RECENT TEMPERTAURES

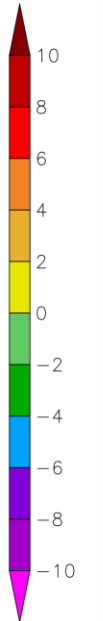
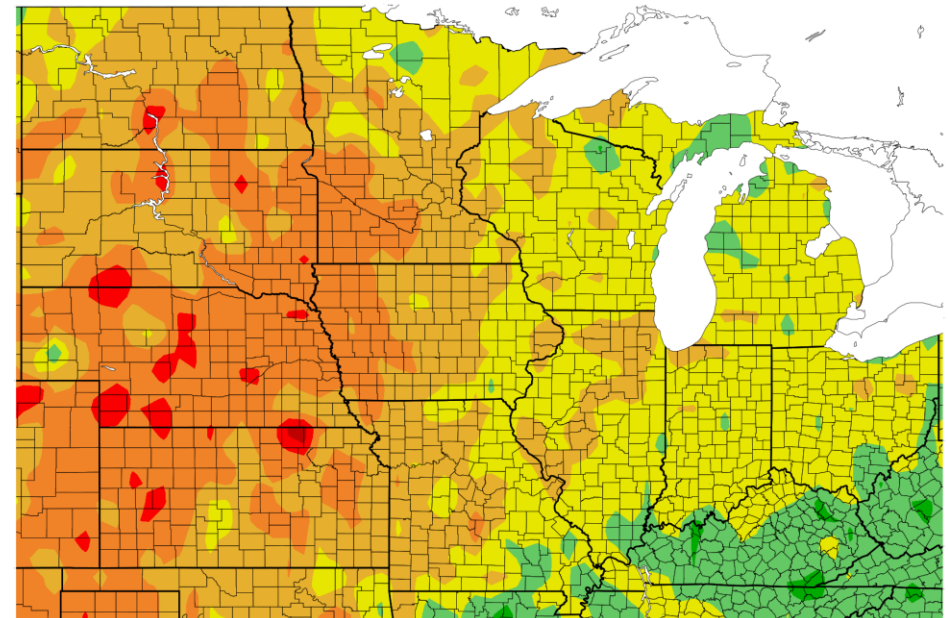
## 7-Day

Departure from Normal Temperature (F)  
6/23/2020 – 6/29/2020



## 30-Day

Departure from Normal Temperature (F)  
5/31/2020 – 6/29/2020



Generated 6/30/2020 at HPRCC using provisional data.

NOAA Regional Climate Center Generated 6/30/2020 at HPRCC using provisional data.

NOAA Regional Climate Centers

**CFAES**



**Drought.gov**  
U.S. Drought Portal

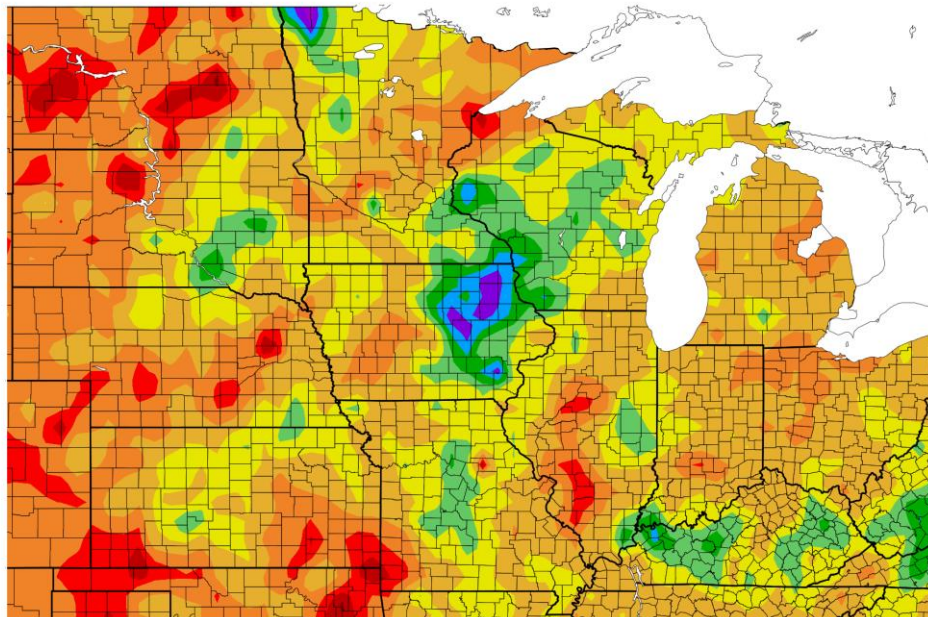
<https://hprcc.unl.edu/maps.php?map=ACISClimateMaps>

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# RECENT PRECIPITATION (30-Day)

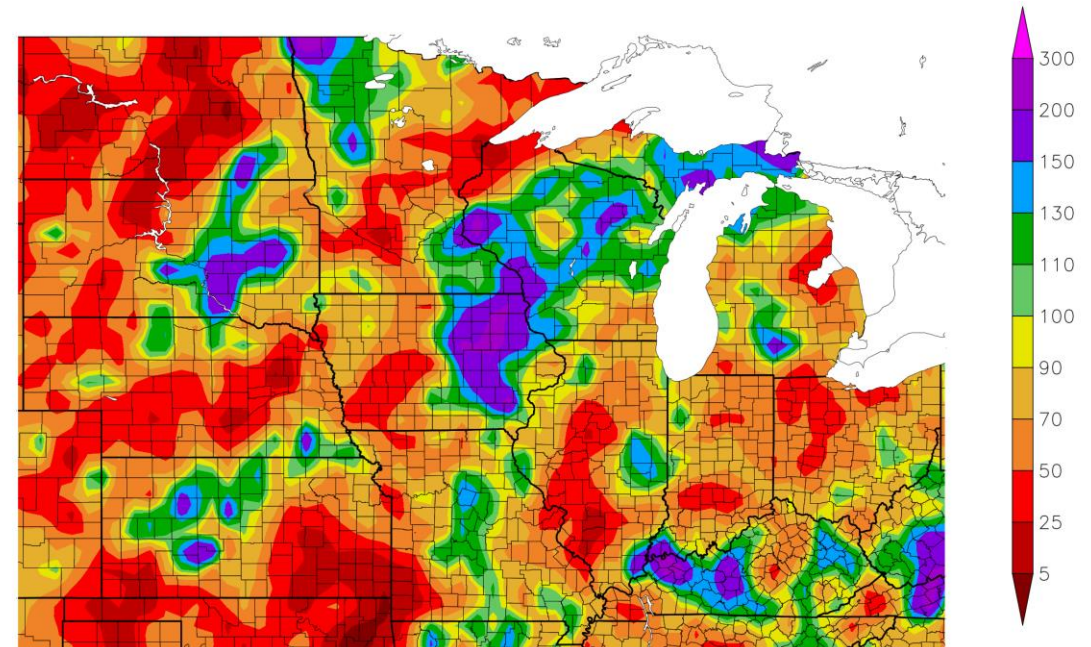
## Total

Precipitation (in)  
5/31/2020 – 6/29/2020



## Departure

Percent of Normal Precipitation (%)  
5/31/2020 – 6/29/2020



Generated 6/30/2020 at HPRCC using provisional data.

NOAA Regional Climate Centers enenerated 6/30/2020 at HPRCC using provisional data.

NOAA Regional Climate Centers

**CFAES**



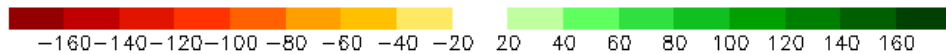
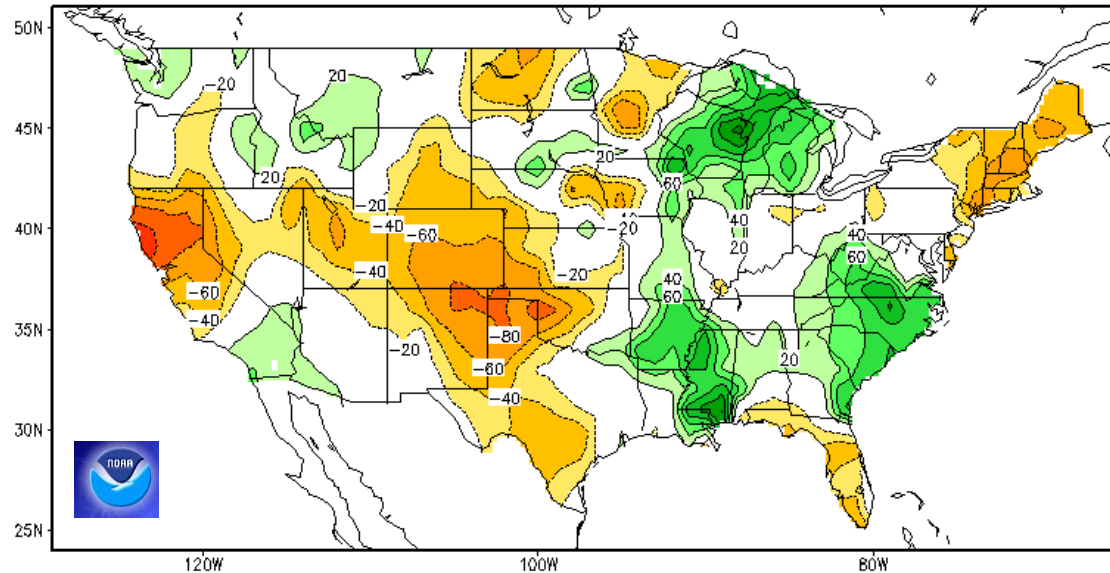
**Drought.gov**  
U.S. Drought Portal

<https://hprcc.unl.edu/maps.php?map=ACISClimateMaps>

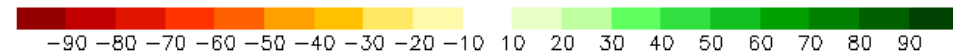
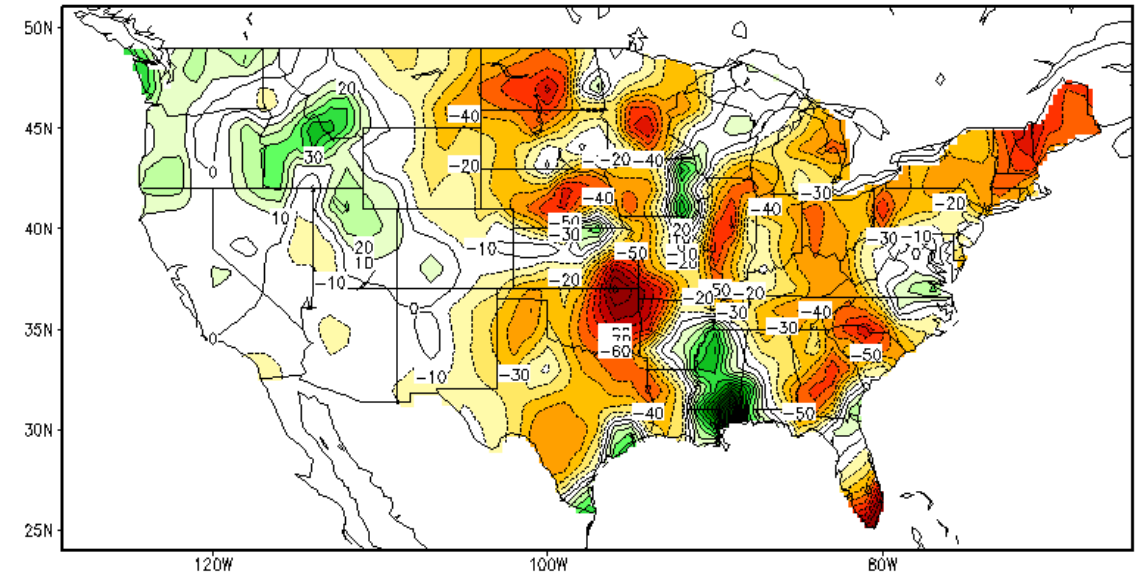
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# SOIL MOISTURE

Calculated Soil Moisture Anomaly (mm)  
JUN 29, 2020



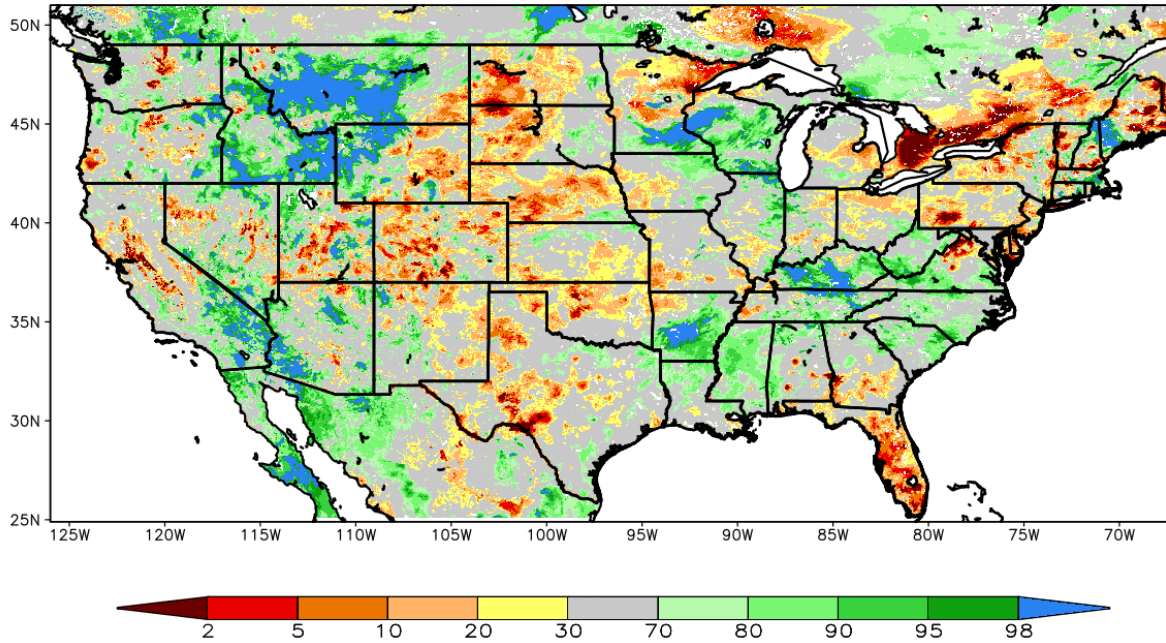
Calculated Soil Moisture Anomaly Change  
JUN 29, 2020 from MAY 31



[https://www.cpc.ncep.noaa.gov/products/Soilmst\\_Monitoring/US/Soilmst/Soilmst.shtml](https://www.cpc.ncep.noaa.gov/products/Soilmst_Monitoring/US/Soilmst/Soilmst.shtml)



SPoRT-LIS 0-40 cm Soil Moisture percentile valid 30 Jun 2020



<https://weather.msfc.nasa.gov/sport/modeling/lis.html>

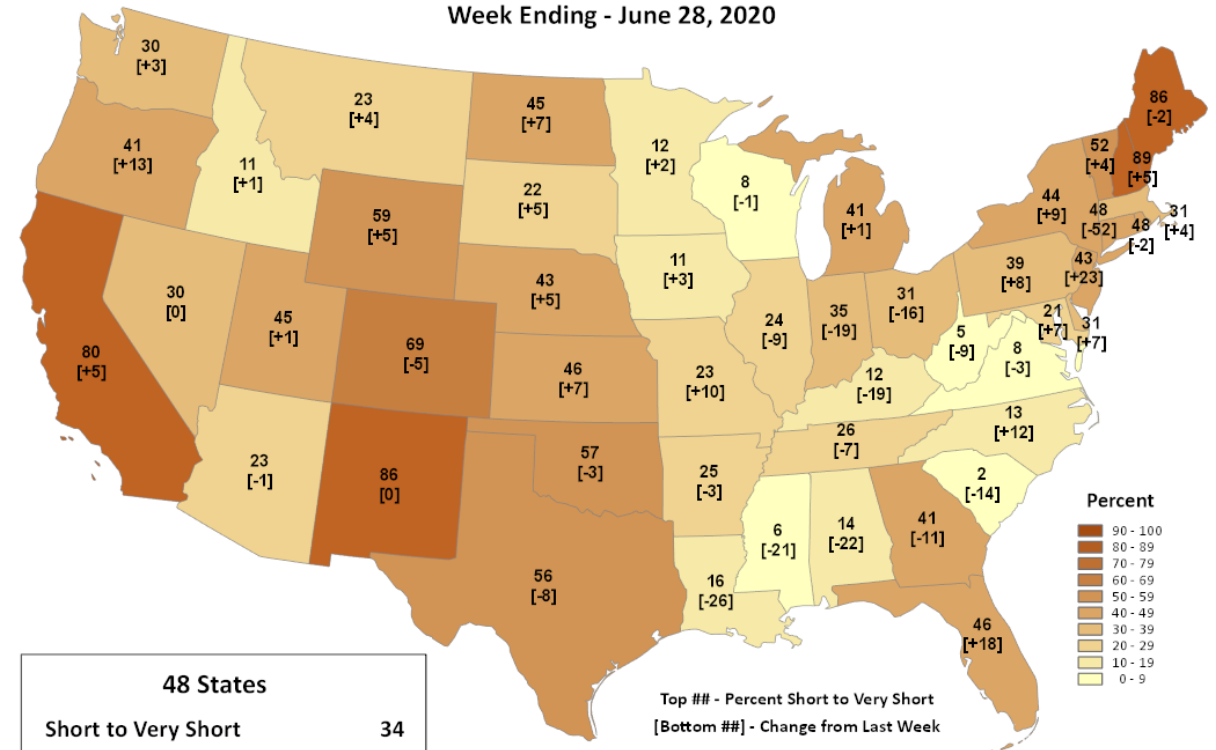
## Soil Moisture

**CFAES**



This product was prepared by the  
USDA Office of the Chief Economist (OCE)  
World Agricultural Outlook Board (WAOB)

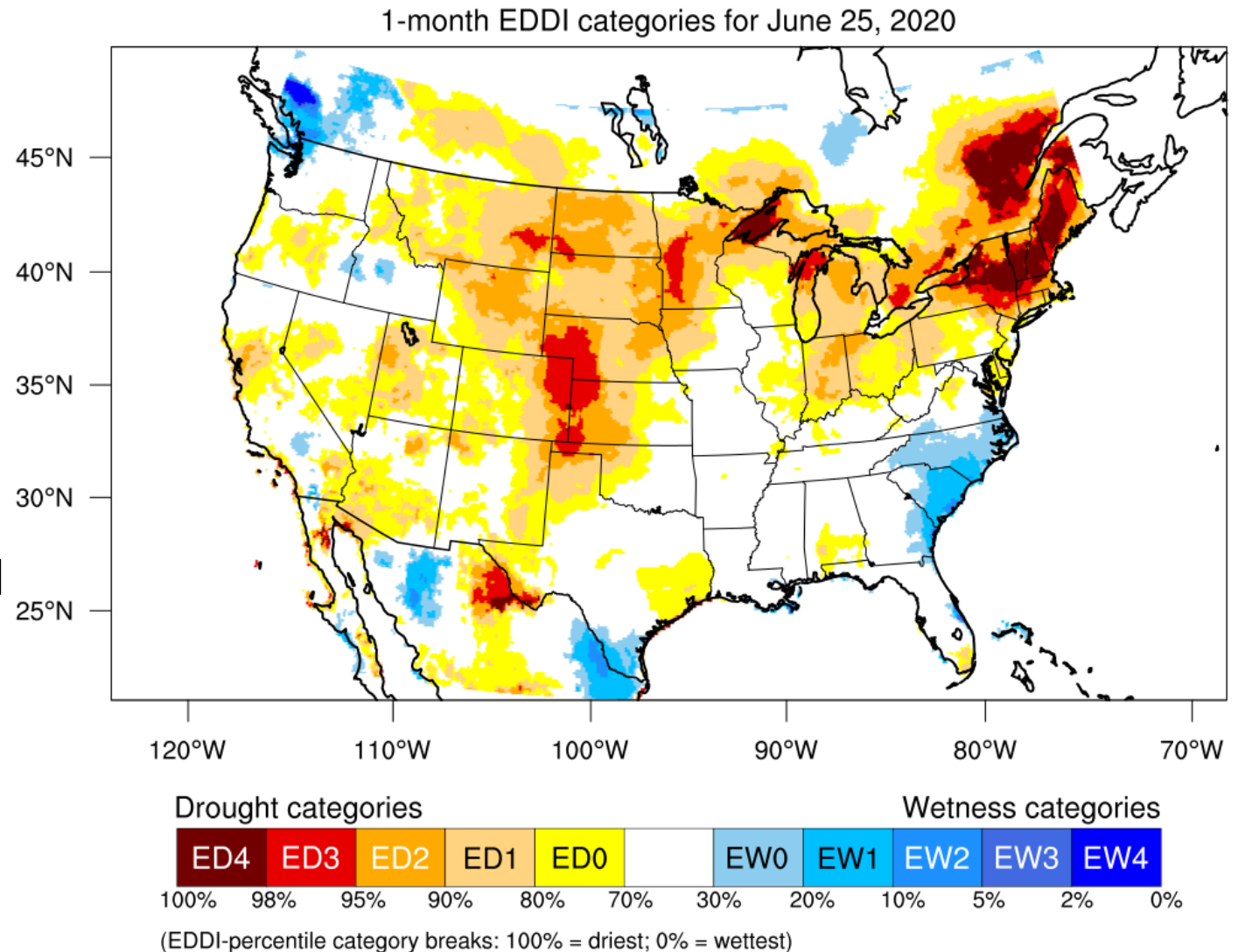
## Topsoil Moisture Percent Short to Very Short Week Ending - June 28, 2020



Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.

## MOISTURE DEMAND

- “Thirst of the atmosphere” or precursor for water stress
- 1-month: Strong indication of drying-conditions across the west, northern Great Lakes, and parts of IN/OH/KY
- Heat and very windy conditions leading to intense evaporation rates across Central and Northern Plains



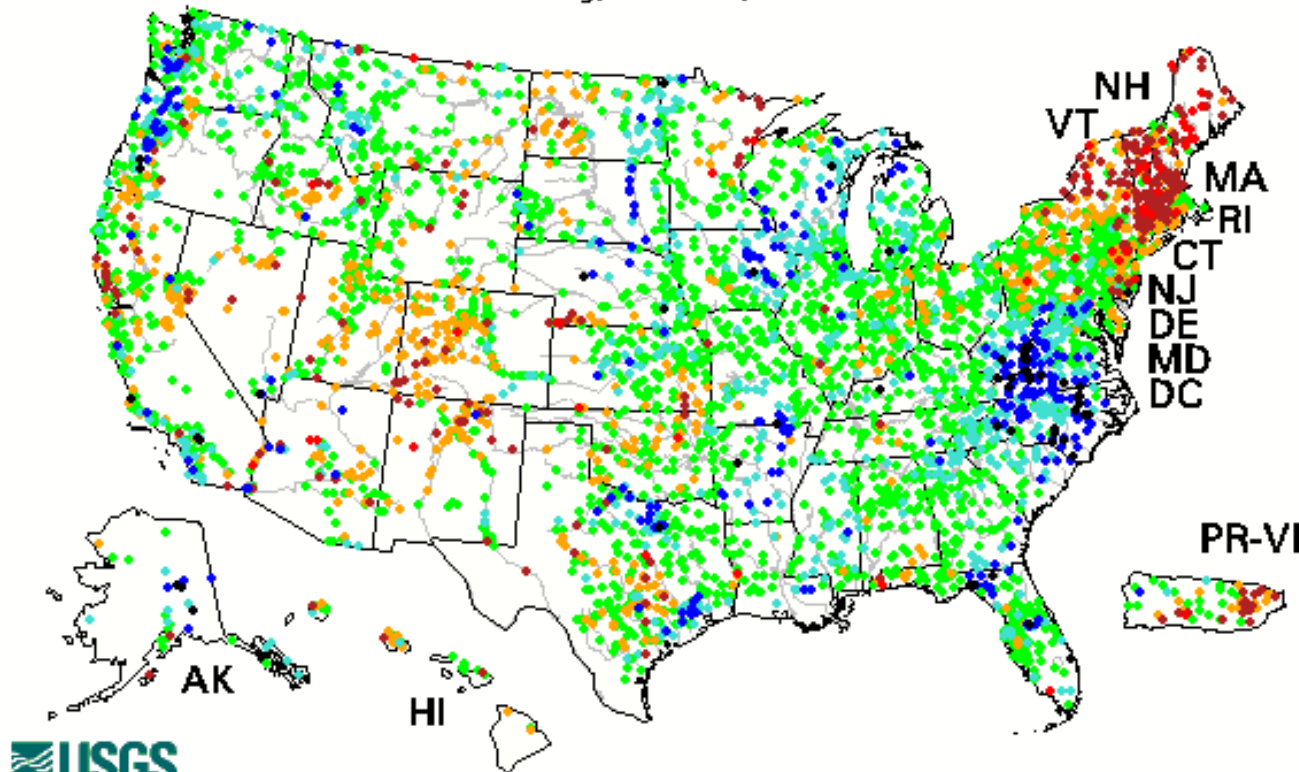
Generated by NOAA/ESRL/Physical Sciences Division

Source: <https://www.esrl.noaa.gov/psd/eddi/>



# STREAM FLOW (14-Day)

Monday, June 29, 2020



Explanation - Percentile classes						
Low	<10	10-24	25-75	76-90	>90	High
	Much below normal	Below normal	Normal	Above normal	Much above normal	

- Stream Flows generally falling across the region
- Below normal for parts of IN/OH, southern KS, central MN, and western ND
- Above the 90<sup>th</sup> percentile in central MO northward through IA, WI, and MI

Source: <http://waterwatch.usgs.gov/index.php?id=pa07d>

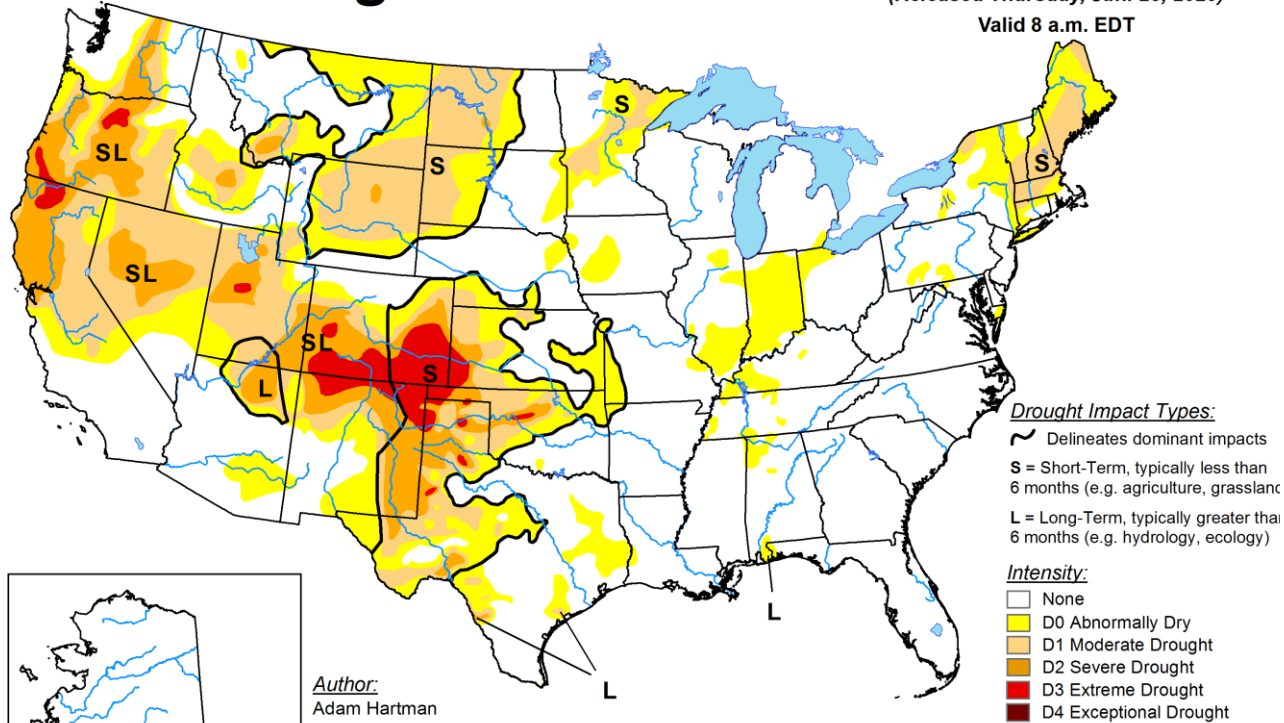
# U.S. DROUGHT MONITOR

## U.S. Drought Monitor

June 23, 2020

(Released Thursday, Jun. 25, 2020)

Valid 8 a.m. EDT



### Drought Impact Types:

- ~ Delineates dominant impacts
- S = Short-Term, typically less than 6 months (e.g. agriculture, grassland)
- L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

### Intensity:

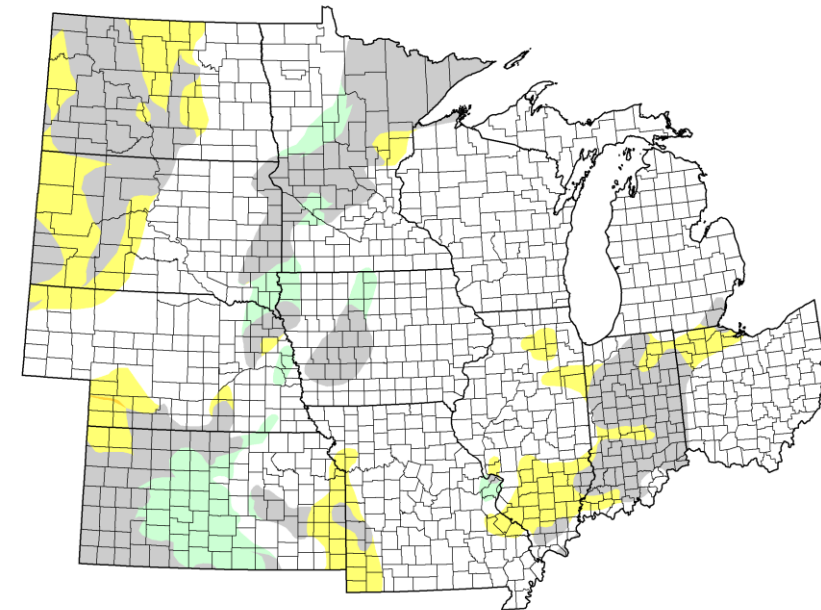
- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>



[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

### U.S. Drought Monitor Class Change - North Central 1 Week



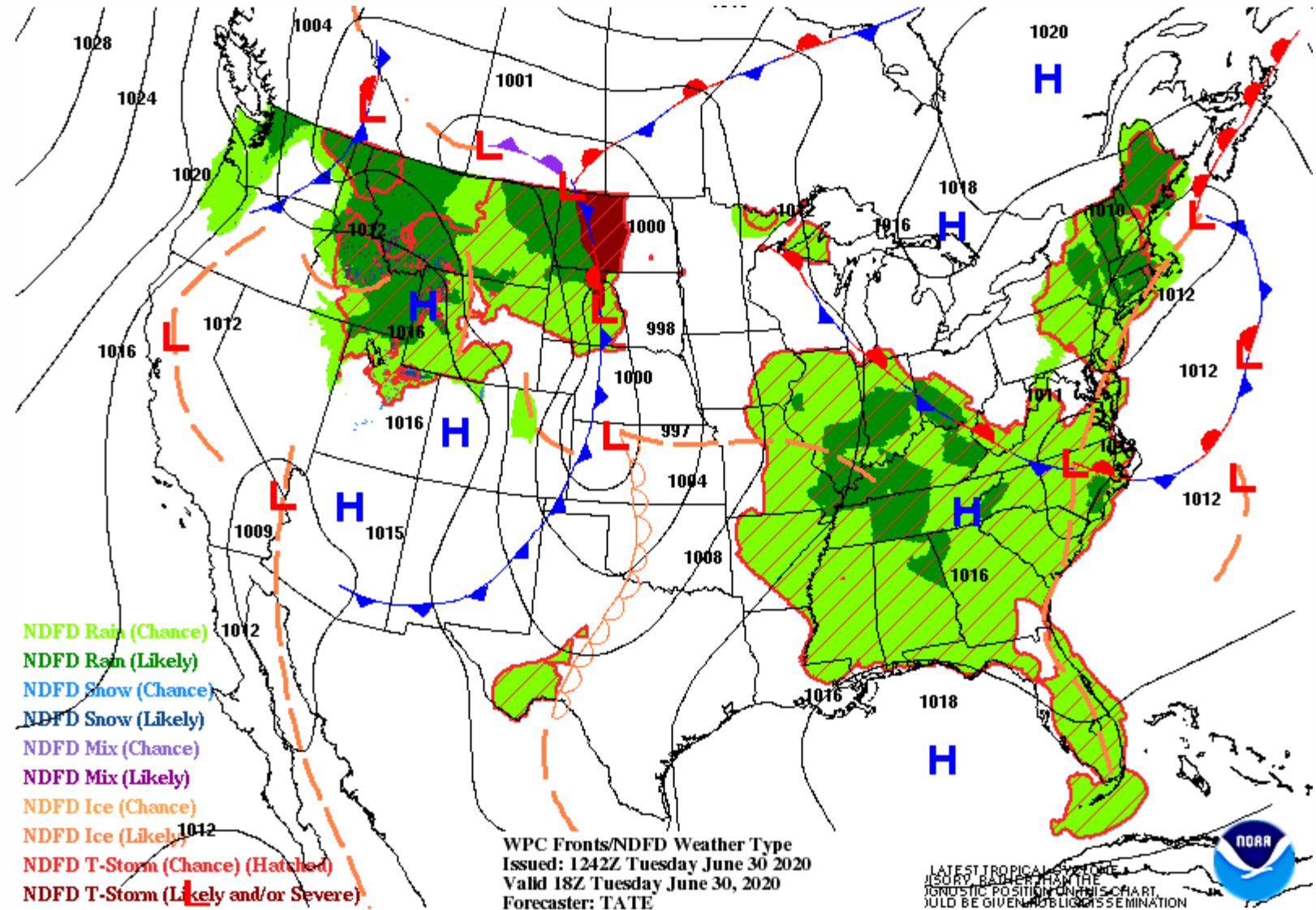
June 23, 2020  
compared to  
June 16, 2020

[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)



- 5 Class Degradation
- 4 Class Degradation
- 3 Class Degradation
- 2 Class Degradation
- 1 Class Degradation
- No Change
- 1 Class Improvement
- 2 Class Improvement
- 3 Class Improvement
- 4 Class Improvement
- 5 Class Improvement

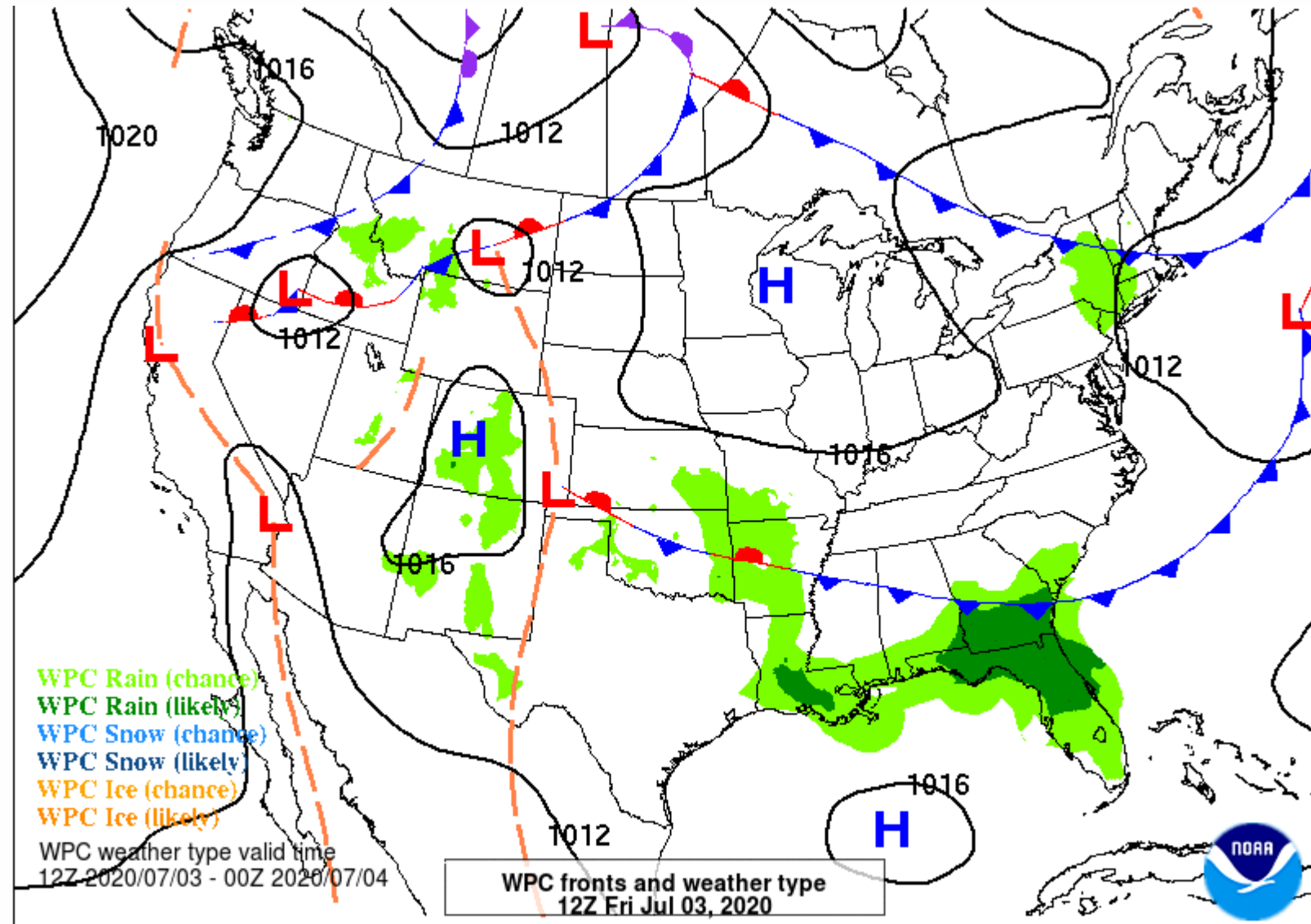
## FORECAST



TODAY

<https://www.wpc.ncep.noaa.gov/#page=ovw>

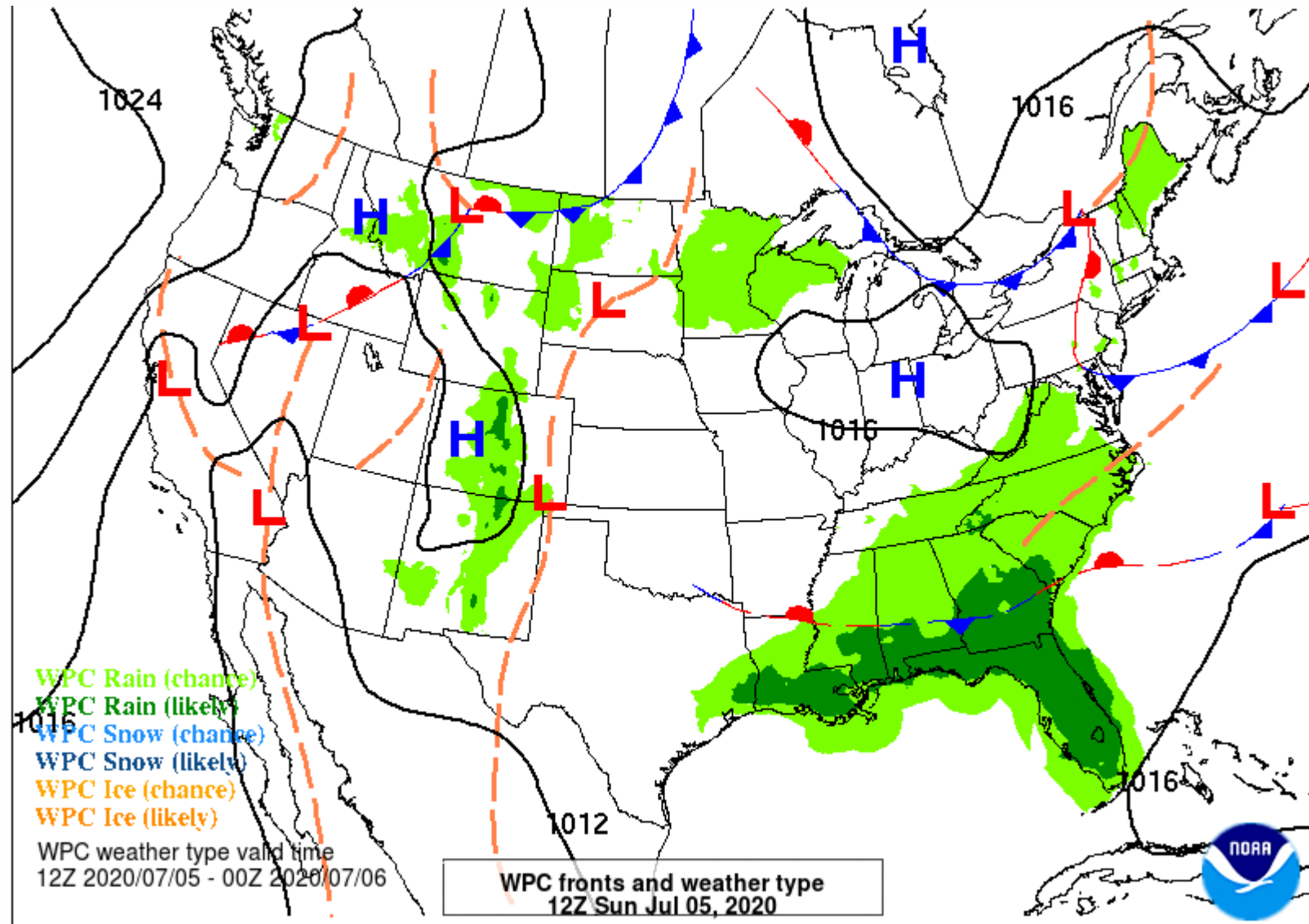
## FORECAST



FRIDAY

<https://www.wpc.ncep.noaa.gov/#page=ovw>

## FORECAST

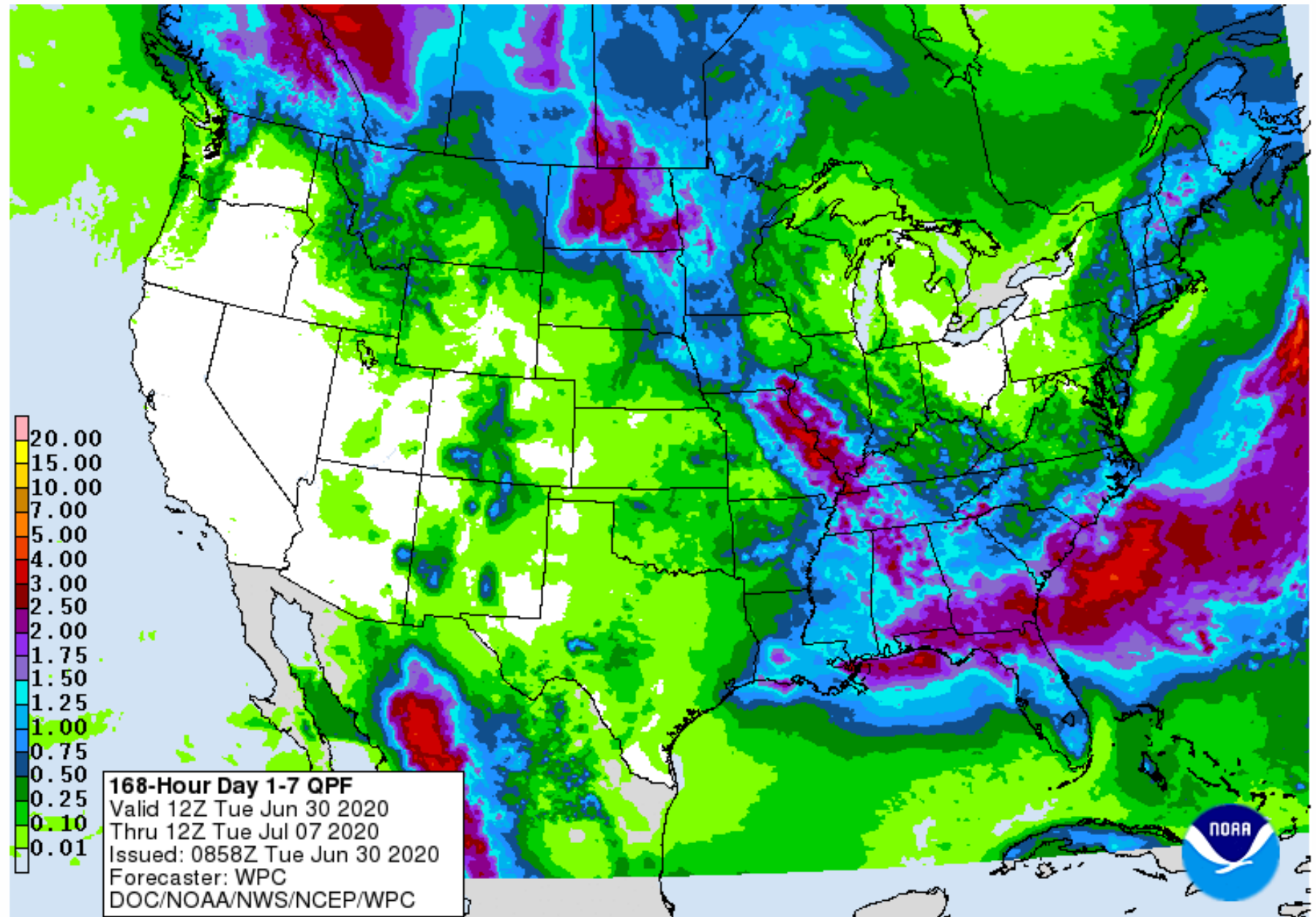


SUNDAY

<https://www.wpc.ncep.noaa.gov/#page=ovw>

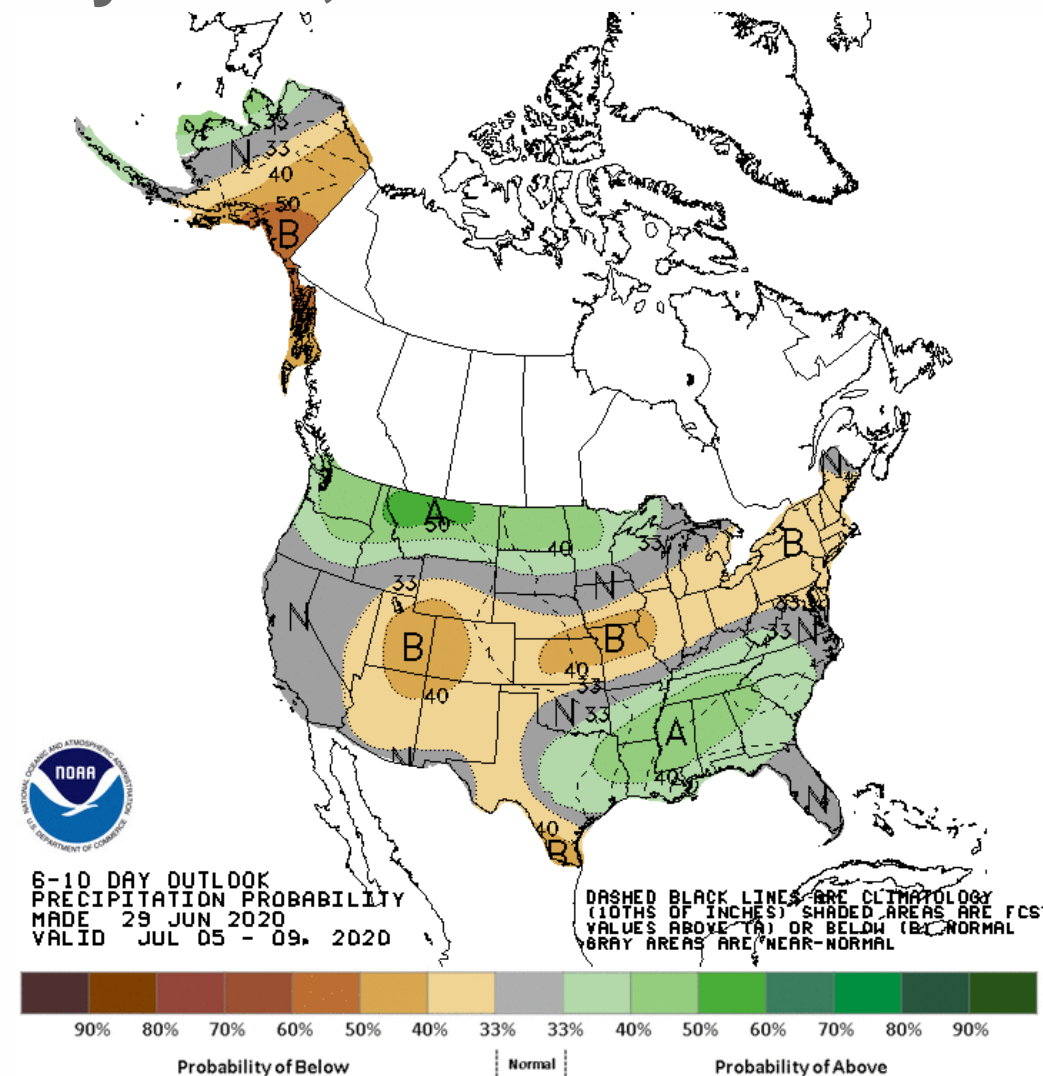
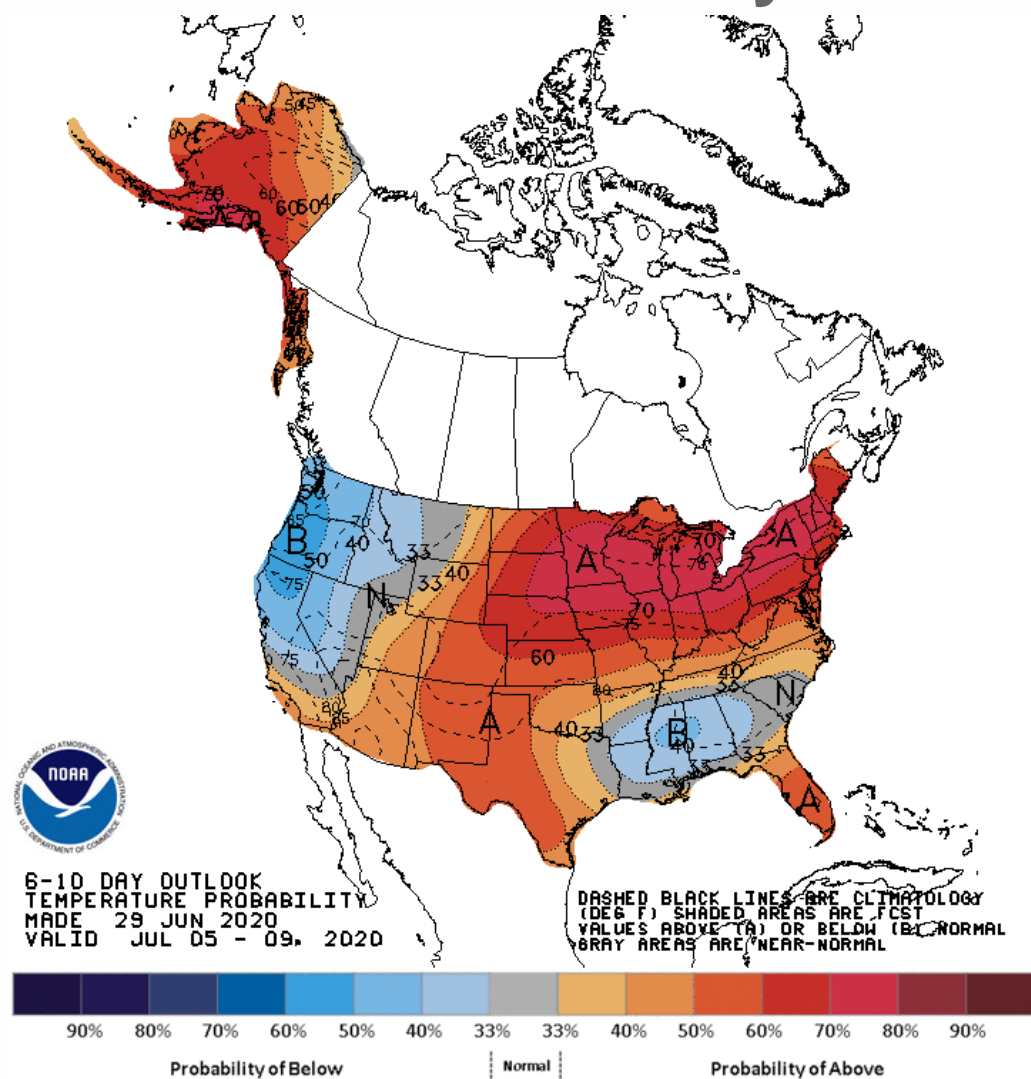


# 7-DAY PRECIPITATION FORECAST

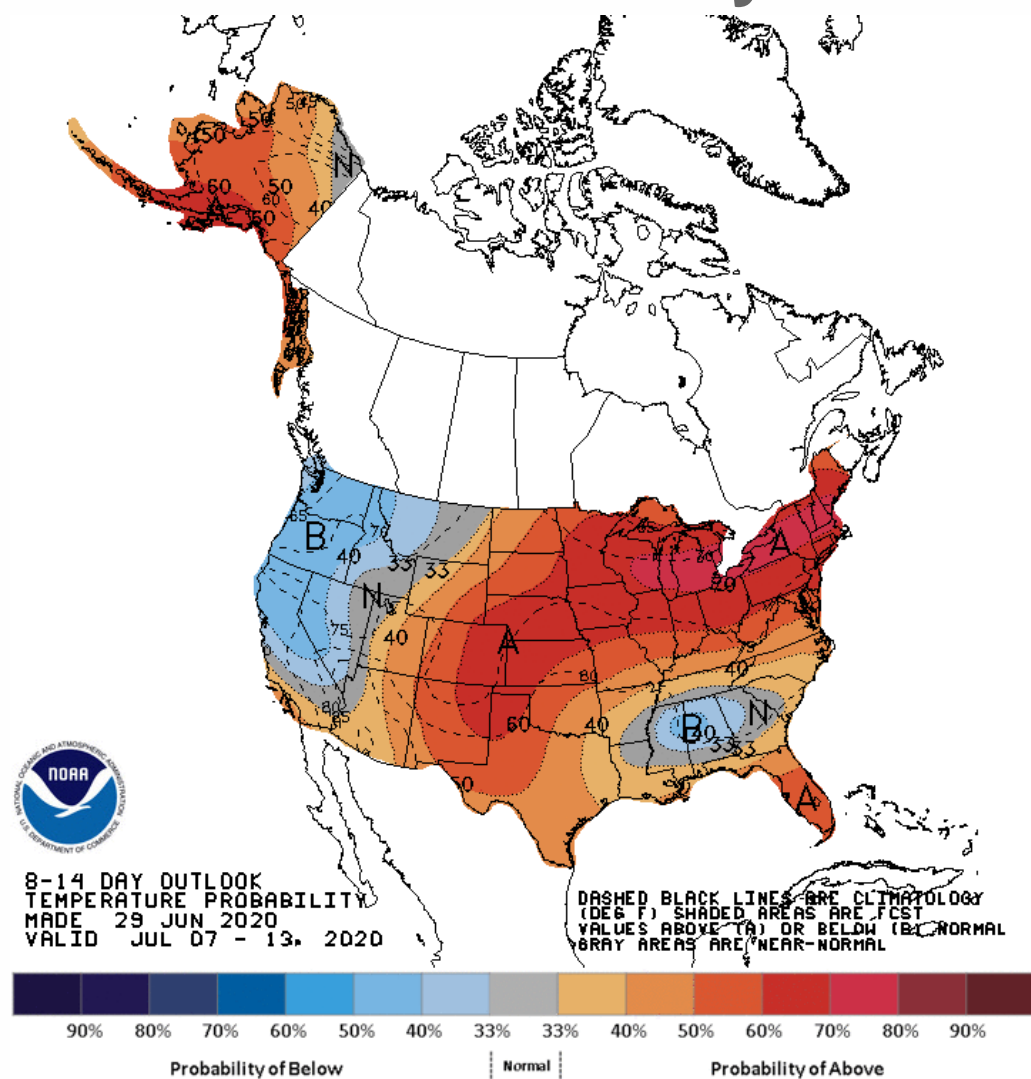


<https://www.wpc.ncep.noaa.gov/#>

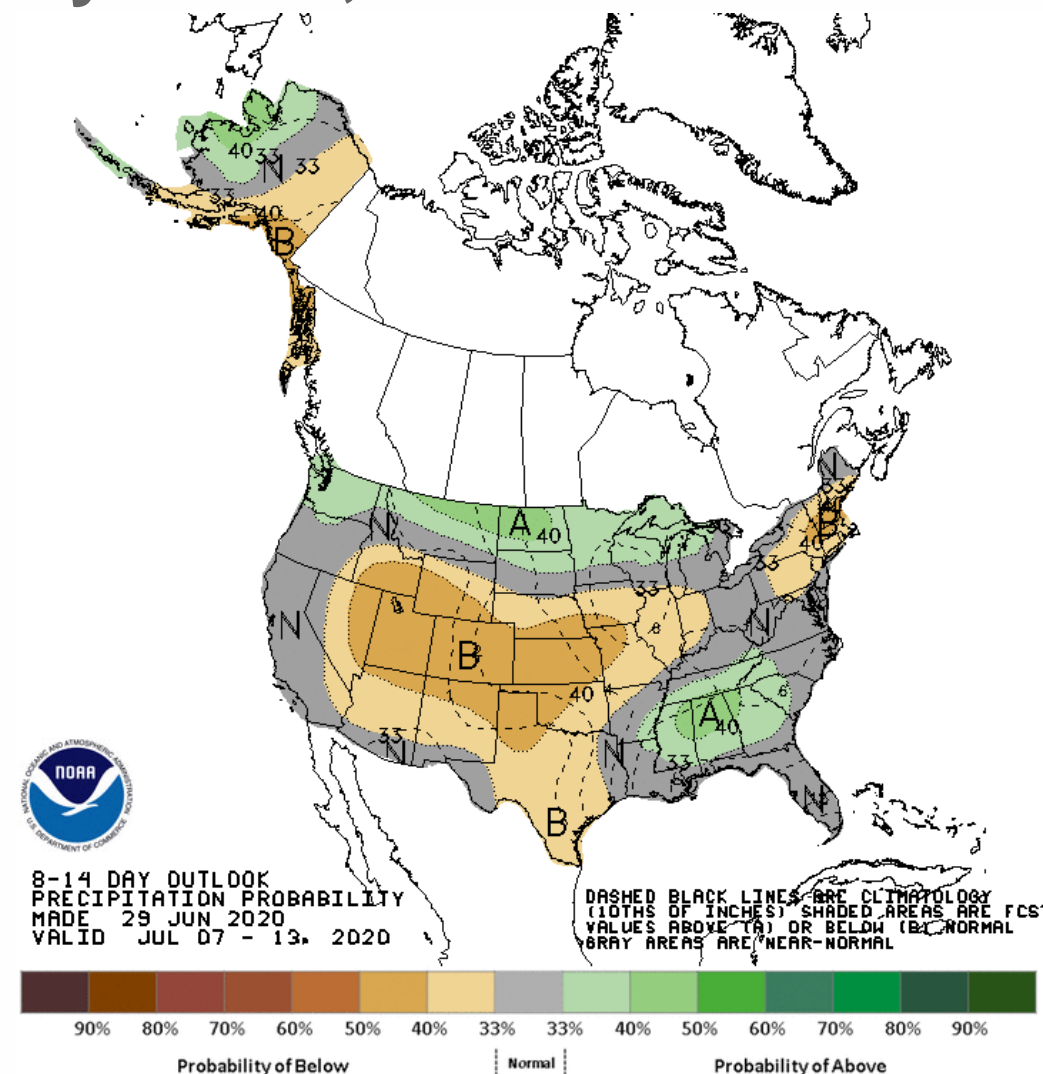
# 6-10 Day Outlook: July 5 – 9, 2020



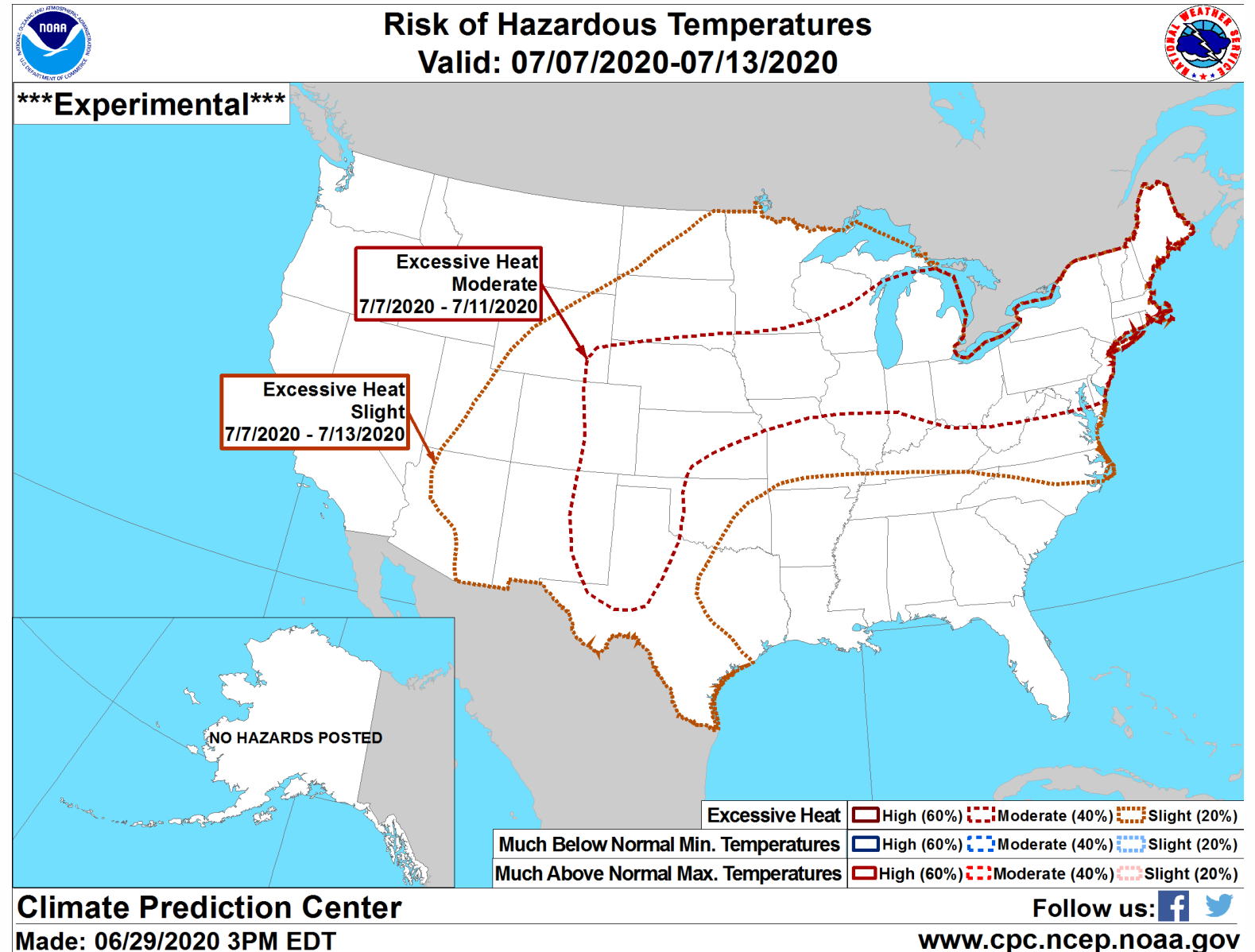
# 8-14 Day Outlook: July 7 – 13, 2020



<https://www.cpc.ncep.noaa.gov/>

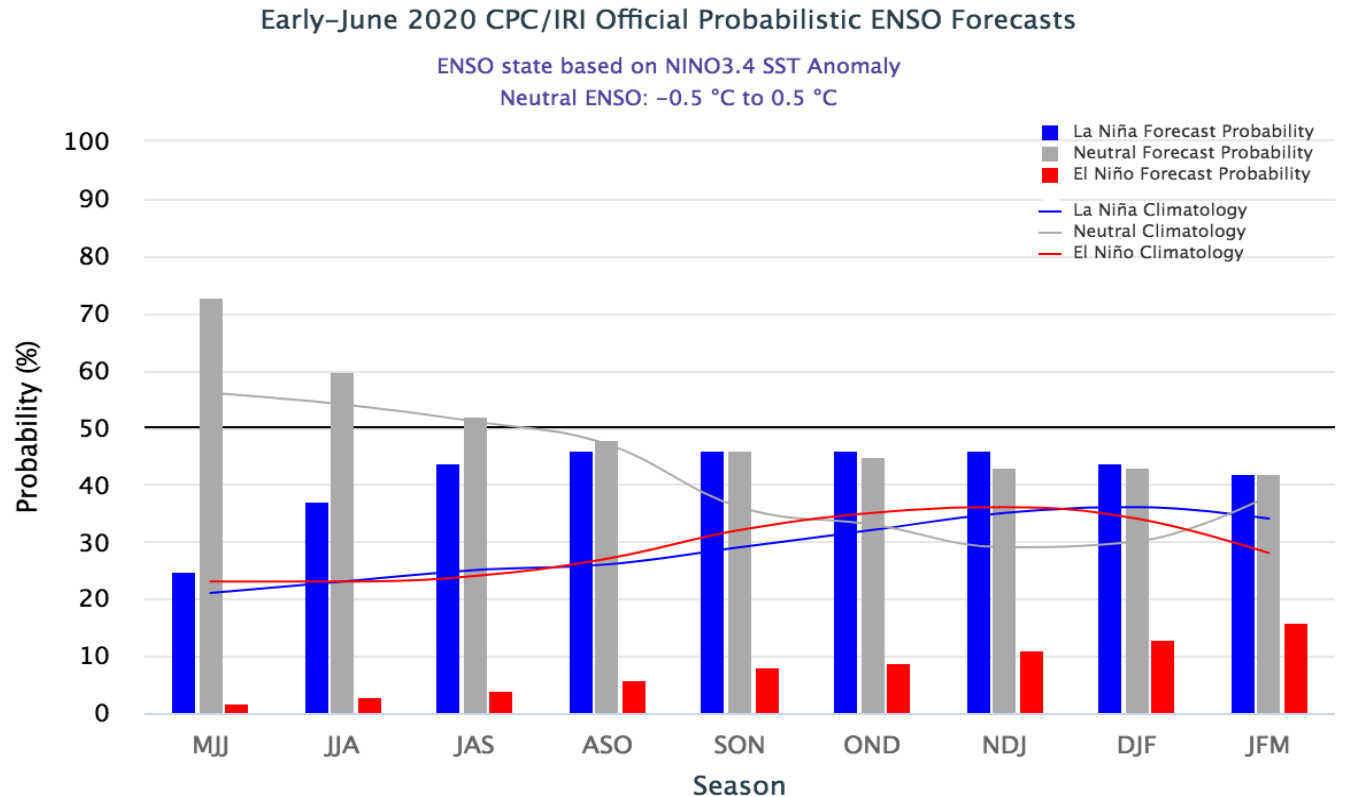


## 8-14 DAY RISKS



# ENSO

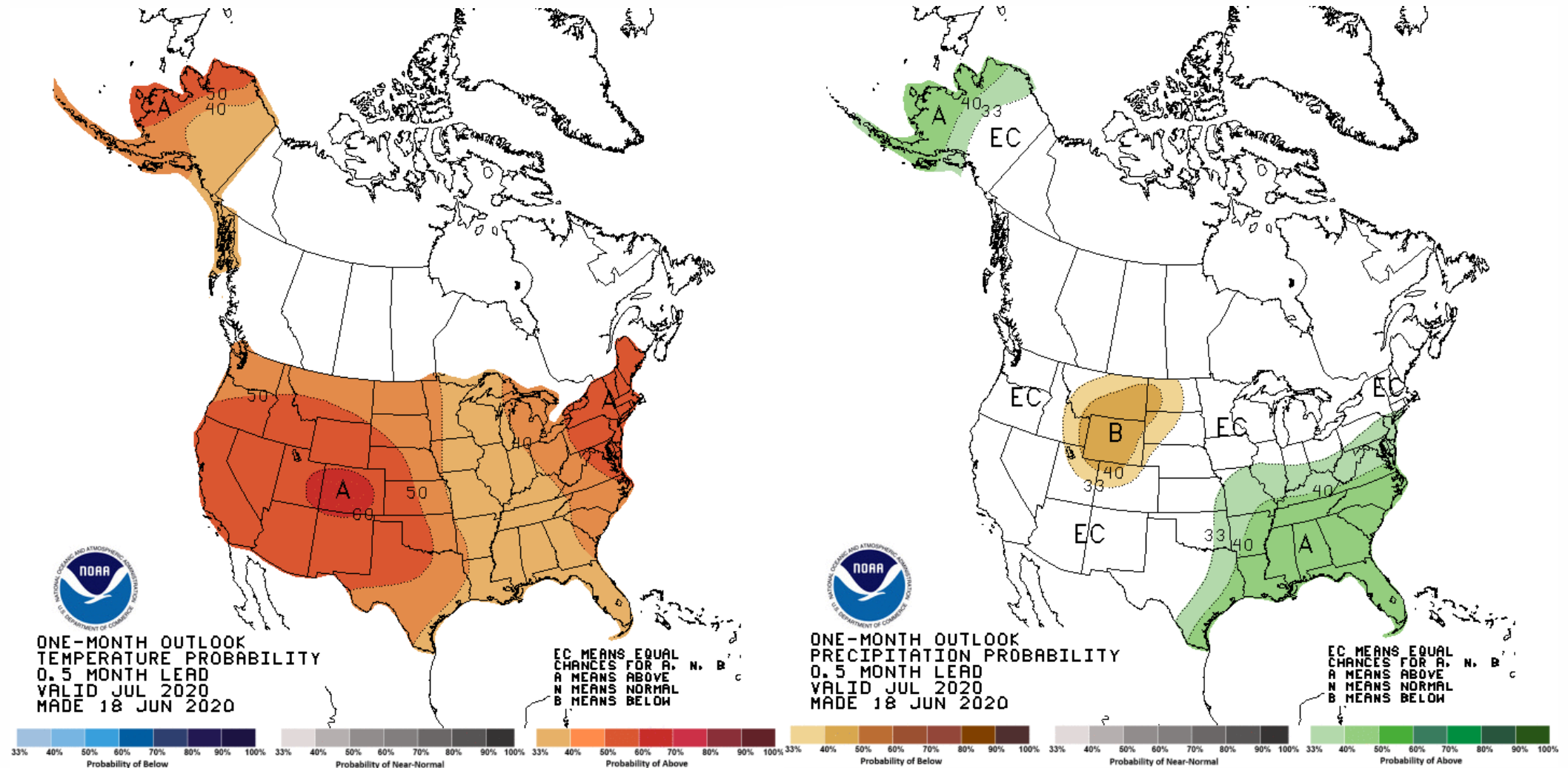
- ENSO-neutral is most likely to continue through the Northern Hemisphere summer 2020, with roughly equal chances of ENSO-neutral or La Niña beginning in August-October 2020.
- Not currently forecasting La Niña



Source: <https://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/enso.shtml#discussion>

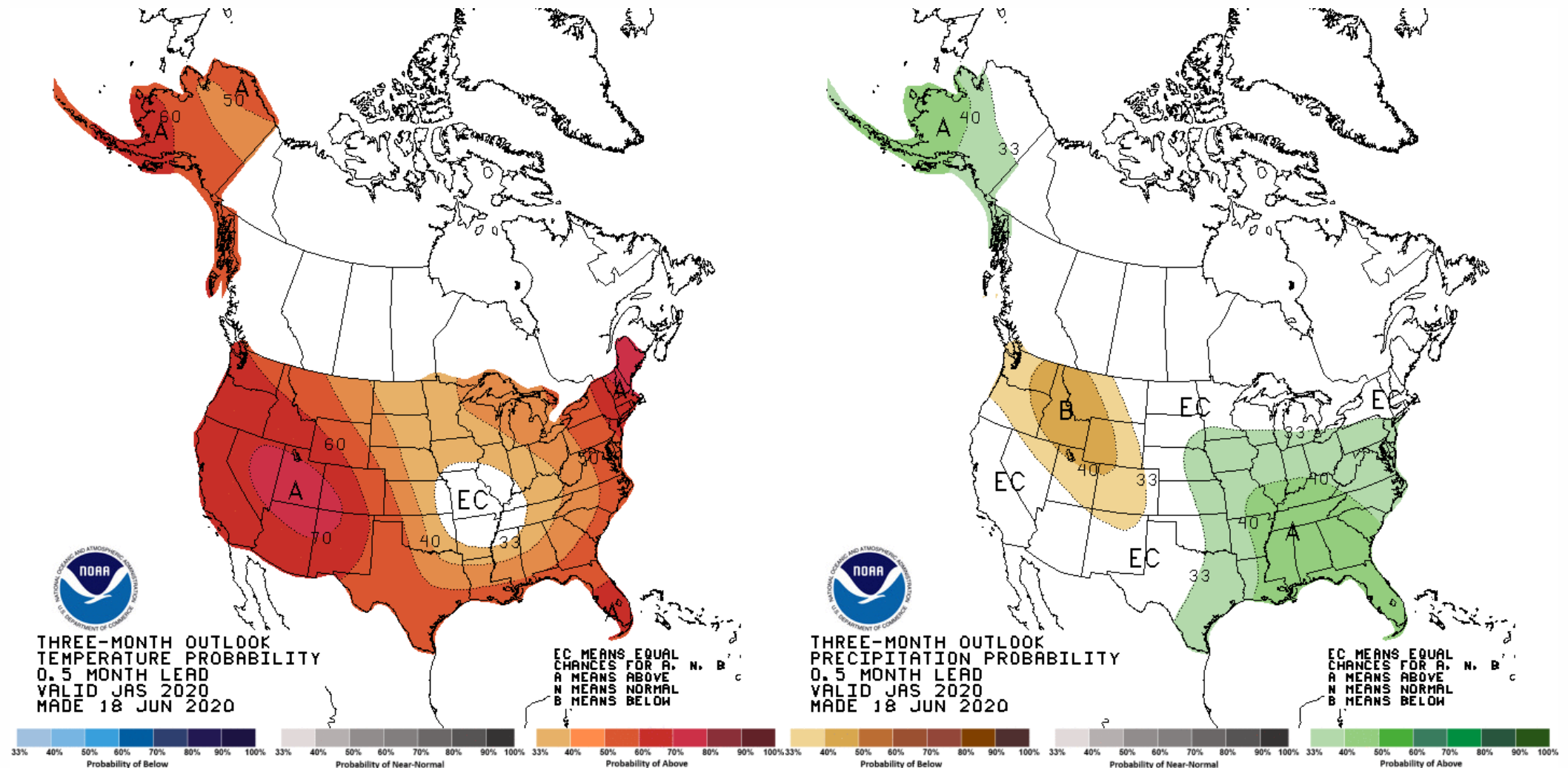


# July Outlook





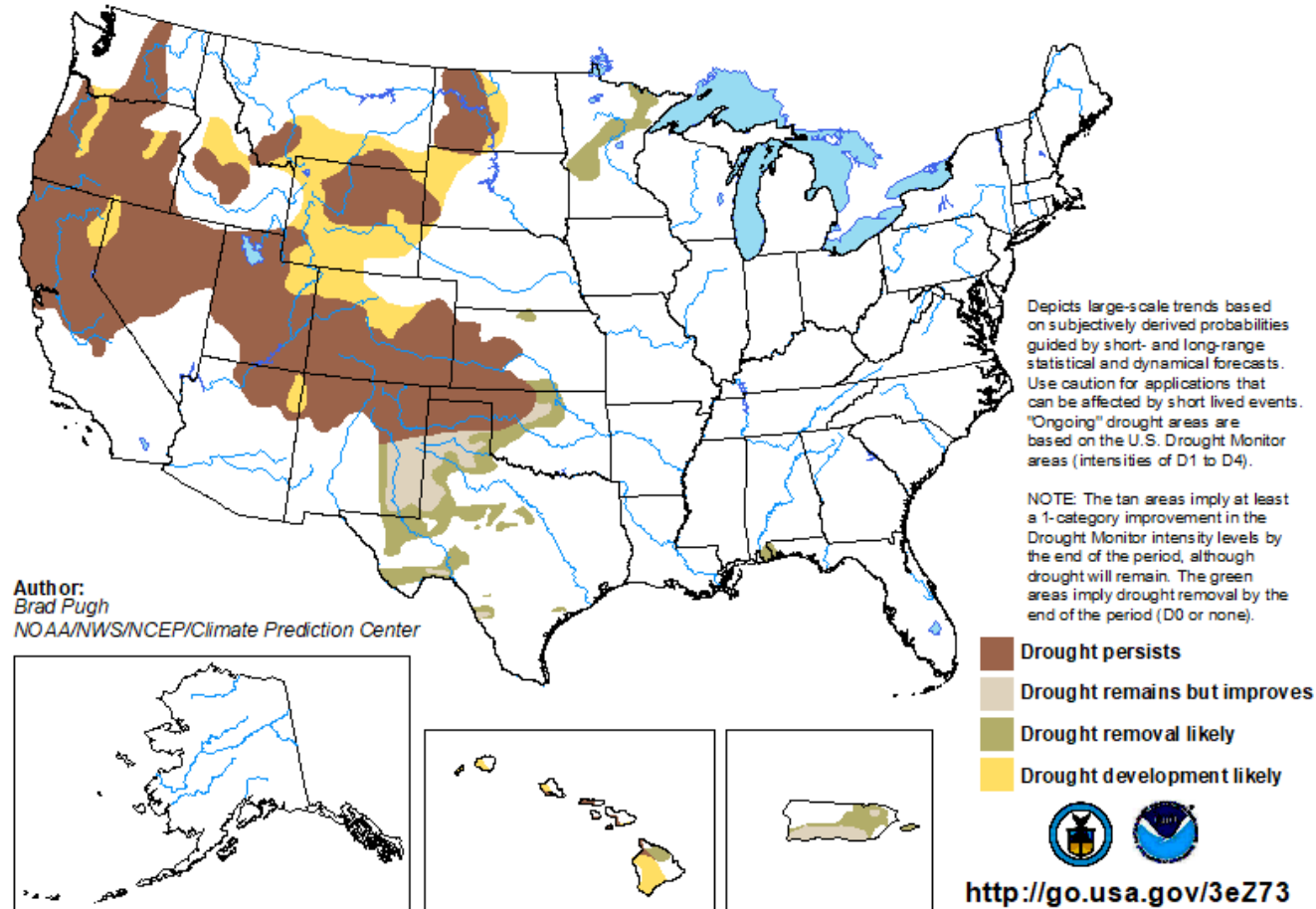
# July - September Outlook



# DROUGHT OUTLOOK

## U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for June 18 - September 30, 2020  
Released June 18



## Summary

- Transitioned from cooler (April – May) to warmer (June) than average across the North Central Region
- Rapidly increasing demand for water with intense evaporation occurring
- Soils are drying; Stream flows are dropping
- Drought conditions continue in the west (KS, NE, Dakotas, C. MN); developing in W. IA, IL/IN/OH
- Short-term forecasts are hot and dry; Warmer than average areawide for the rest of the summer; Precipitation is mixed in the east, drier than average in the western Plains

## Partners and Webinars

A lot of partners throughout the North Central Region:

NOAA NCEI/NWS/OAR/NIDIS/

USDA Climate Hubs

American Association of State Climatologists

Midwest and High Plains Regional Climate Centers

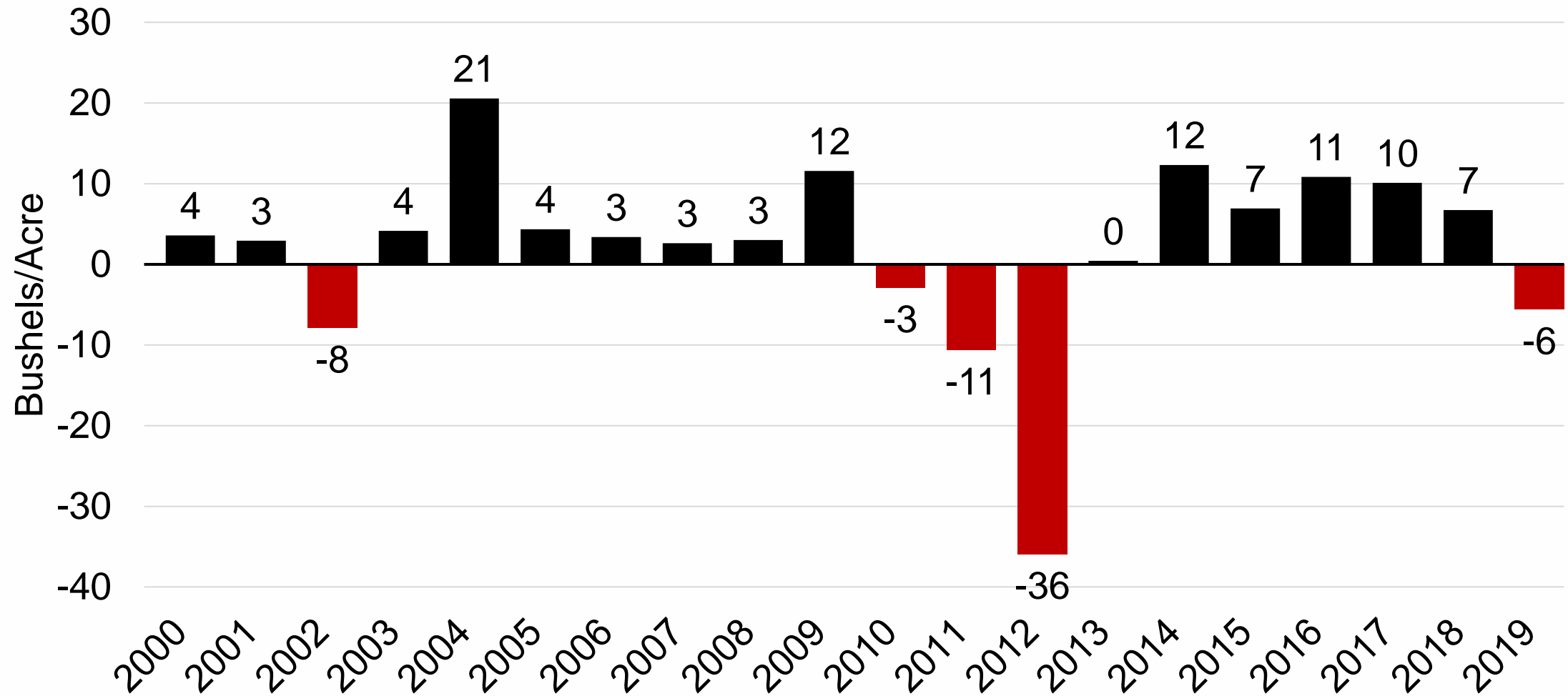
National Drought Mitigation Center

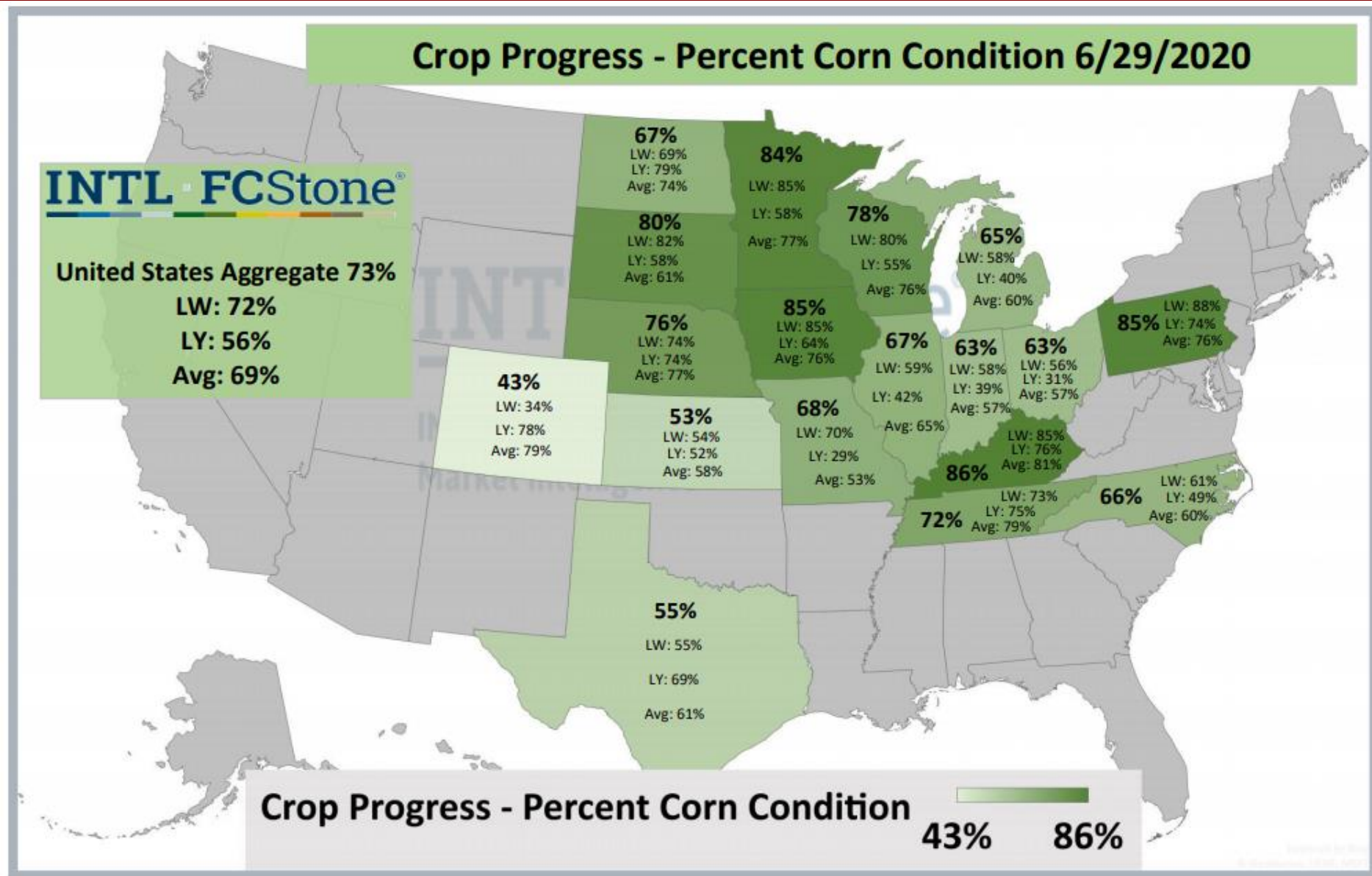
North Central U.S. Climate and Drought Outlook Webinar – 3<sup>rd</sup> Thursday of every month

- <https://attendee.gotowebinar.com/register/7528179497868100876>
- July 16, 2020 (1 PM CDT) Martha Shulski – Nebraska State Climatologist

# Market Outlook: **Corn Yield- Where will we end up?**

## Corn Yield Deviation from Estimated 40-yr Trend Yield



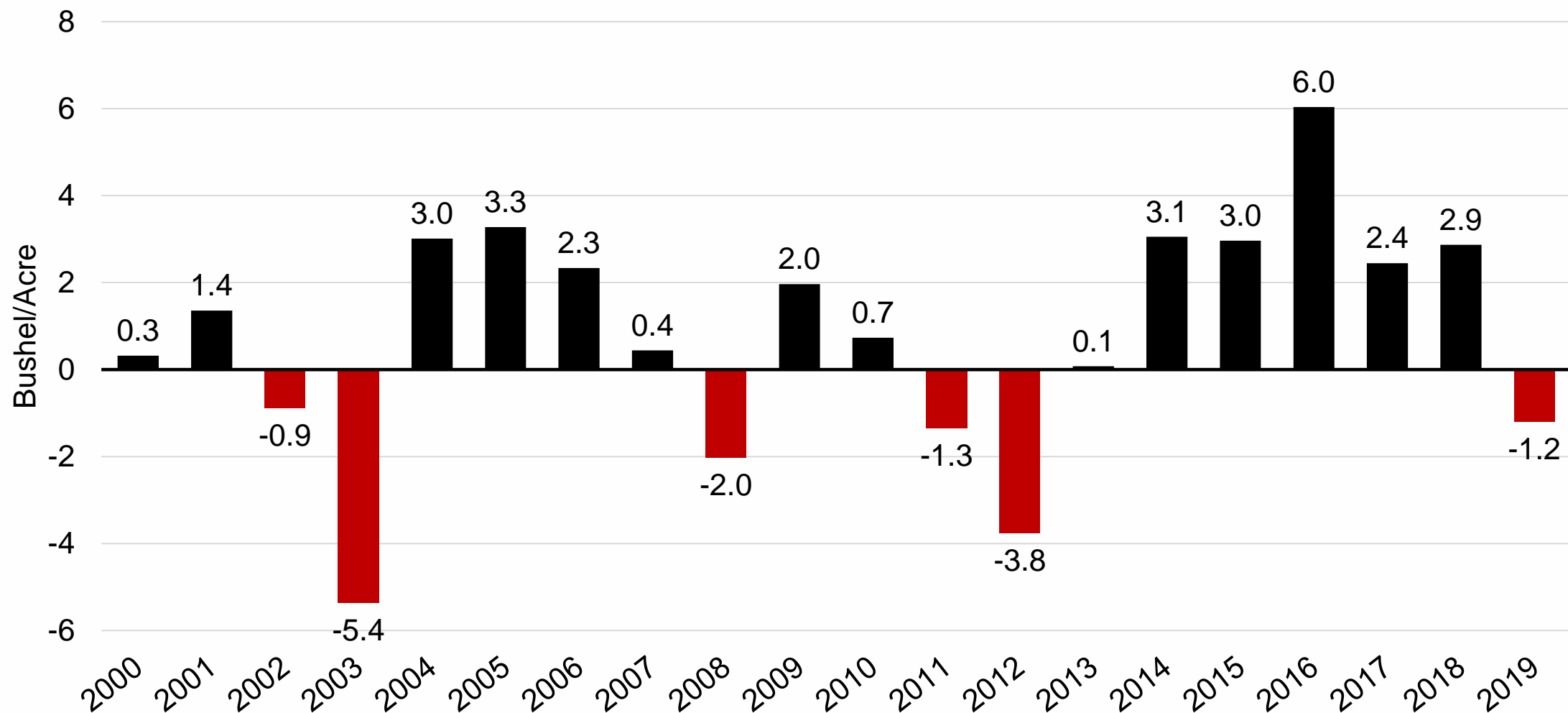


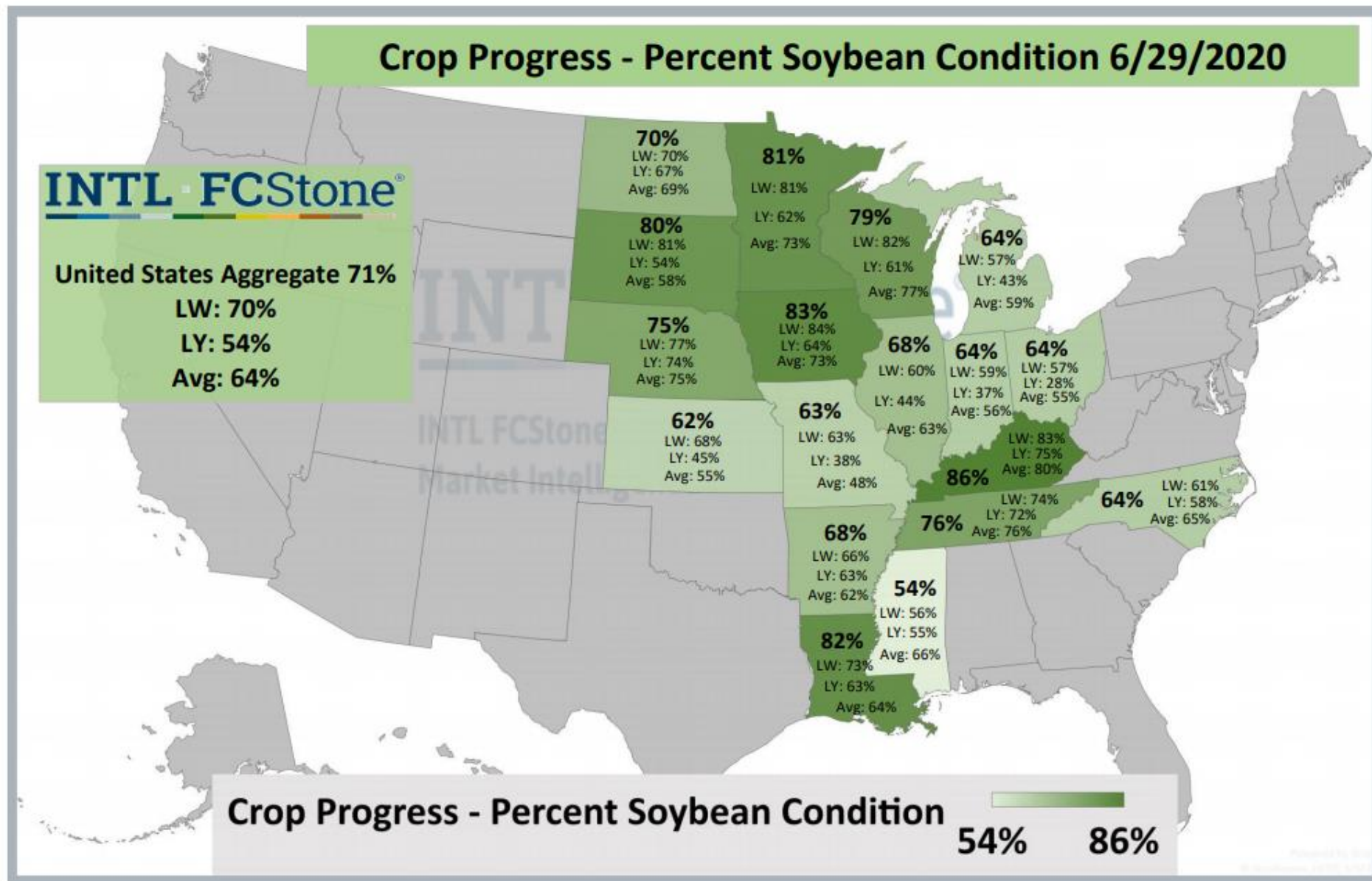
Data Source: USDA NASS, Image Source: StoneX Group Inc.



# New Crop Outlook: Soybean Yield

Soybean Yield Deviation from Estimated 40-yr Trend Yield





Data Source: USDA NASS, Image Source: StoneX Group Inc.

# Acreage Report: Price Comparison

## ❖ March Planting Intentions

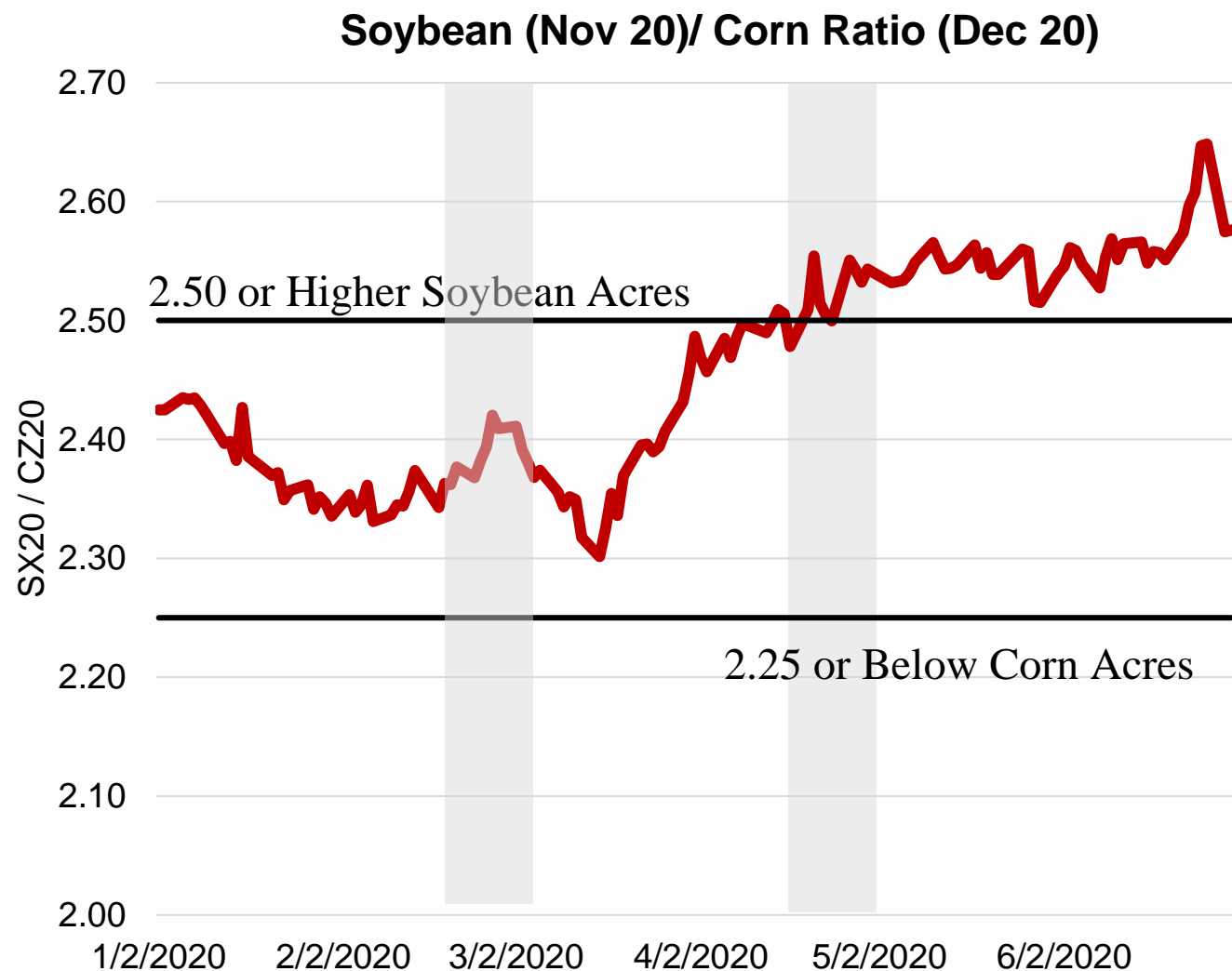
- ❖ Corn: 97 million acres
- ❖ Soybeans: 83.5 million acres

## ❖ Conditions Changed Rapidly in March

- ❖ The ratio of corn to soybean futures prices fell as ethanol production slowed.
- ❖ New crop corn basis fell 20-30 cents in eastern corn-belt

## ❖ Acreage

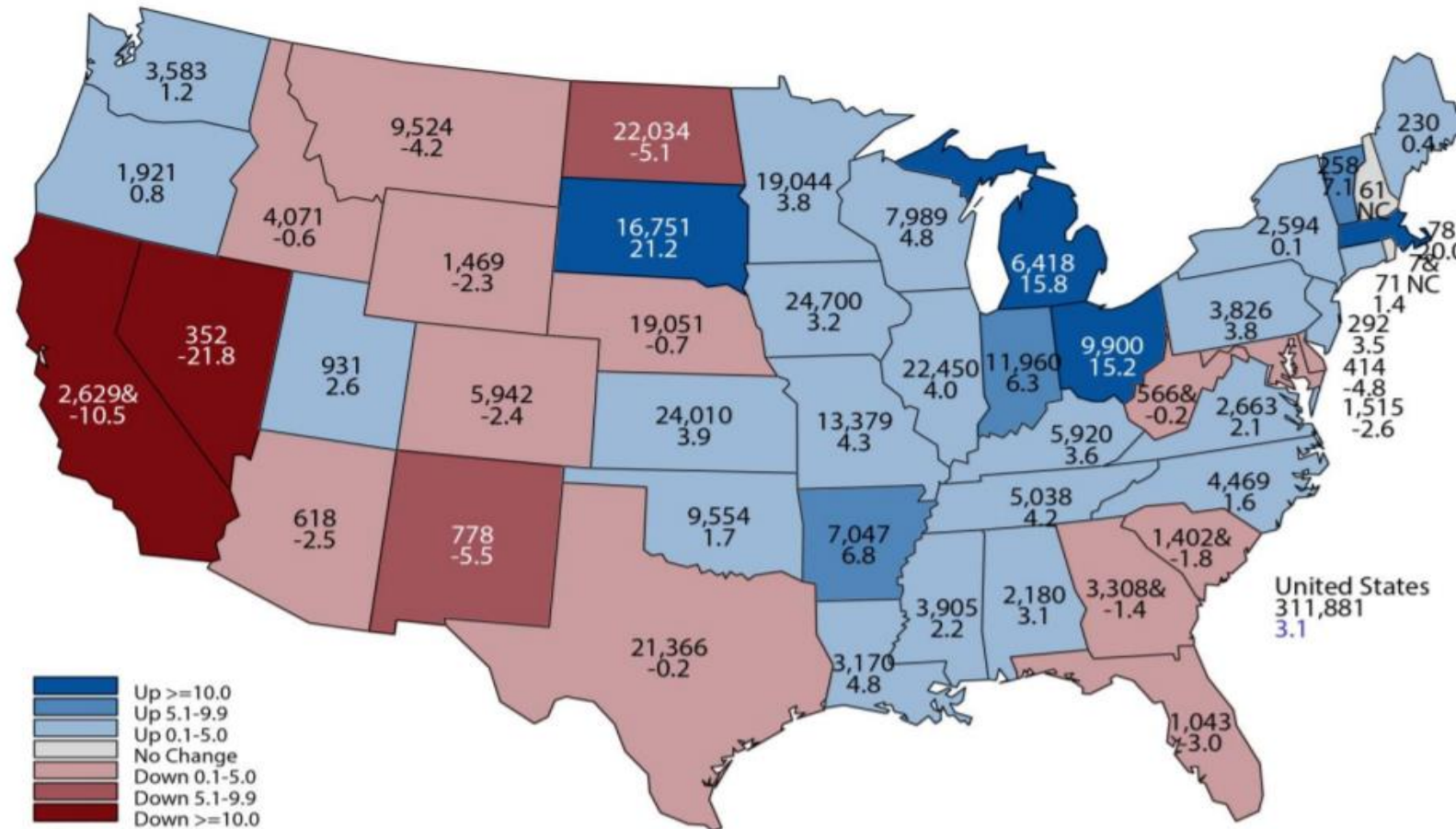
- ❖ Outside of ND, not a lot of prevented planting expected
- ❖ Did producer change what they planted from their March planting intentions?



# Acreage Report: Total Acres



## June 2020 Principal Crops Planted (000) Acres and Percent Change from Previous Year



Total Planted Acres  
of all Principal Crops  
**311,881,000**

Down **2.3%** from  
March Planting  
Intentions

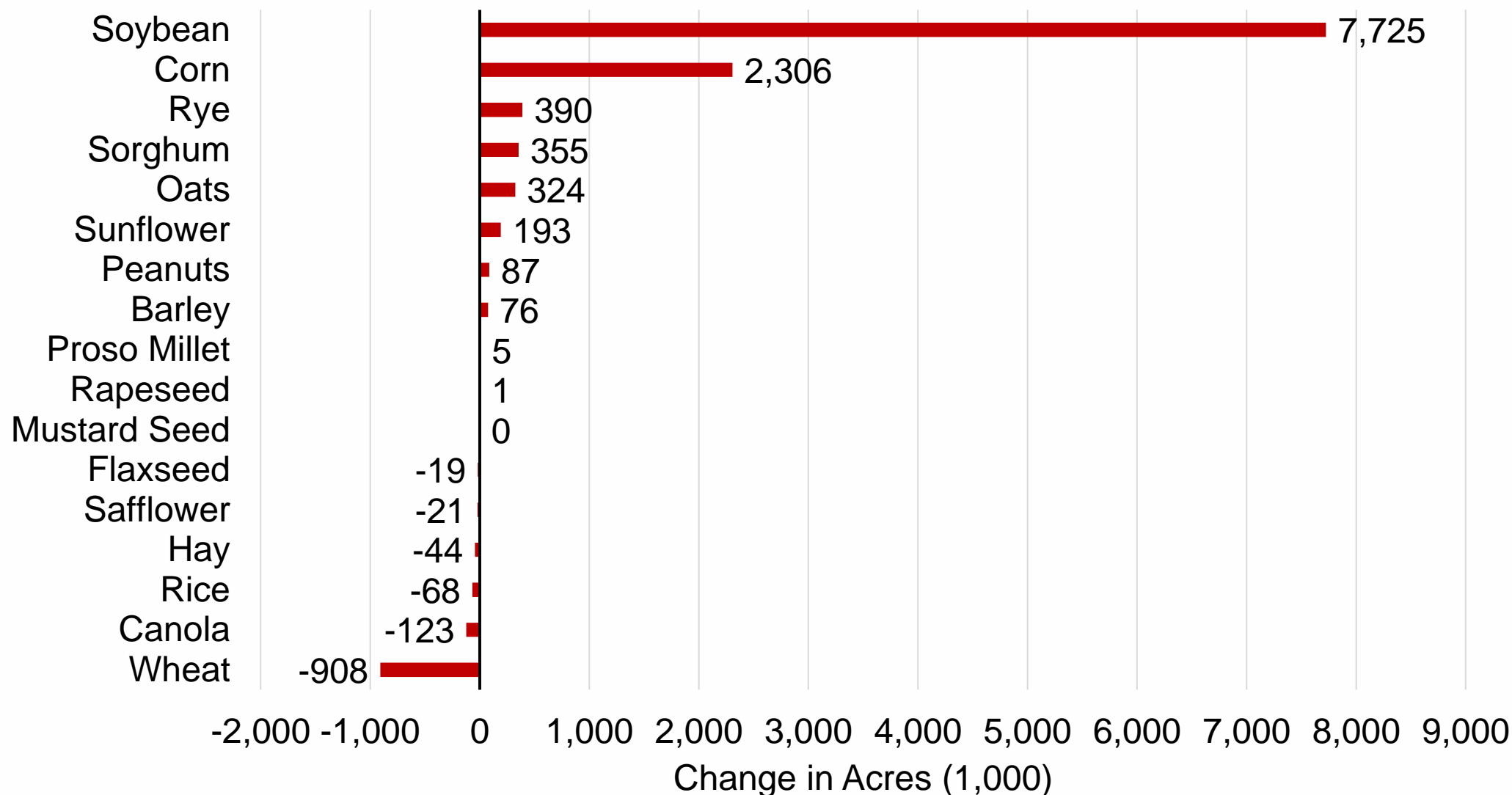
Up **3.1%** from 2019

### Total Acres

2016:	319,242
2017:	318,184
2018:	319,305
2019:	302,623
2020:	311,881

# Acreage Report: Change in Acres by Crop

Change in Acreage 2020 from 2019

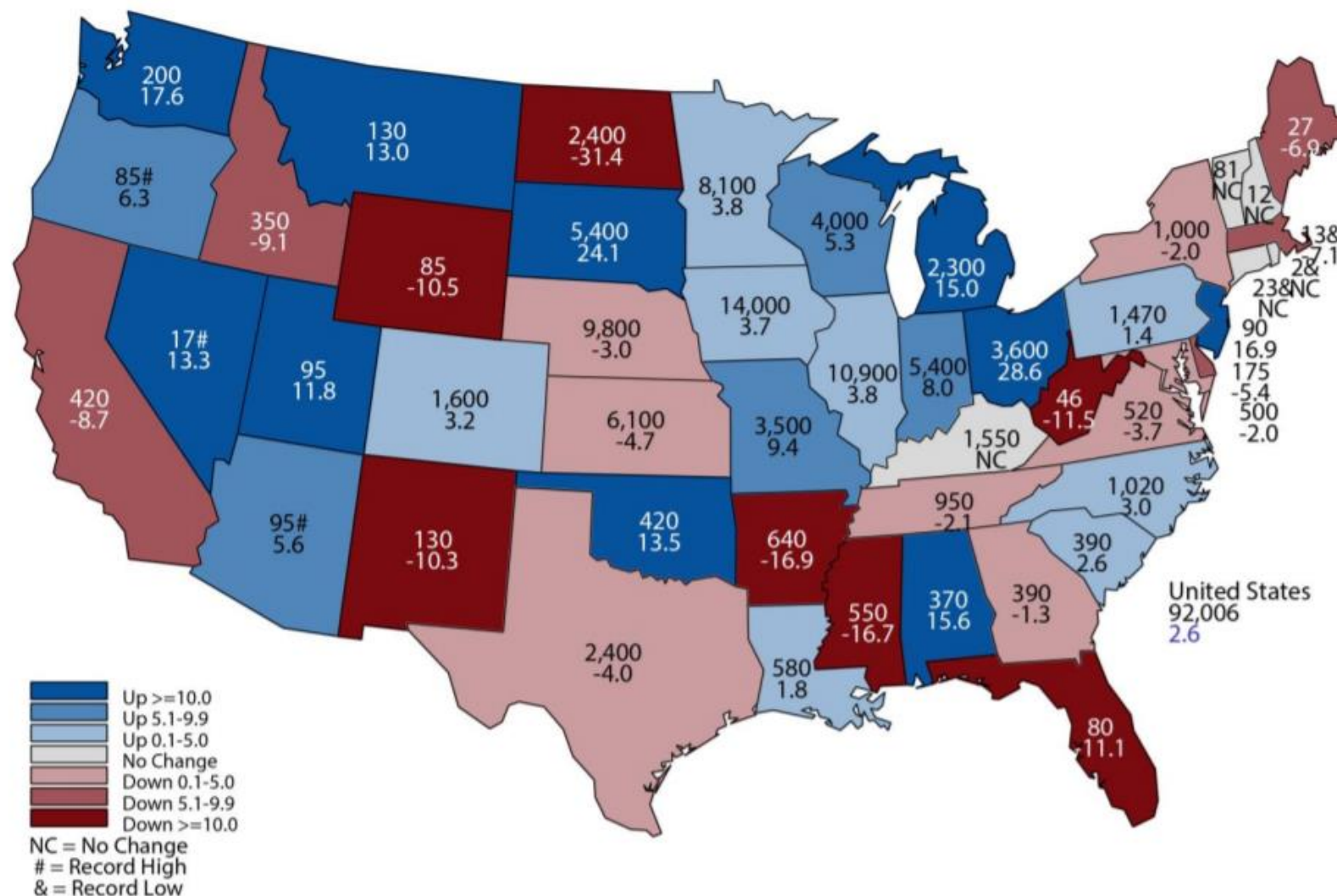






# June 2020 Corn Planted Area

## (000) Acres and Percent Change from Previous Year



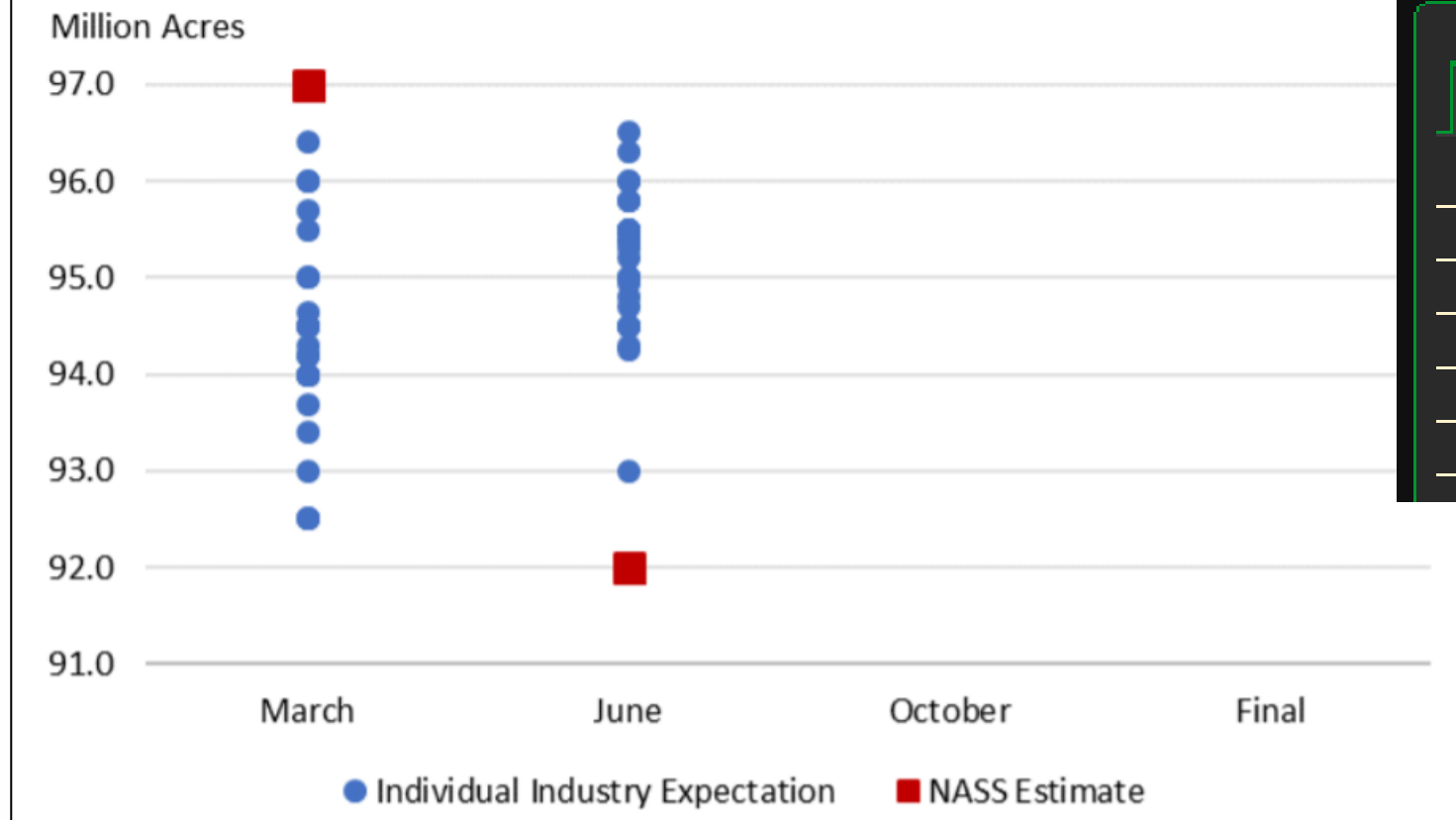
Total Corn Acres  
Planted for All  
Purposes:  
**92,006,000**

Change from March  
Planting Intentions  
**down 5.1%**

**Up 2.6%** from 2019

# Acreage Report: Acreage Surprise

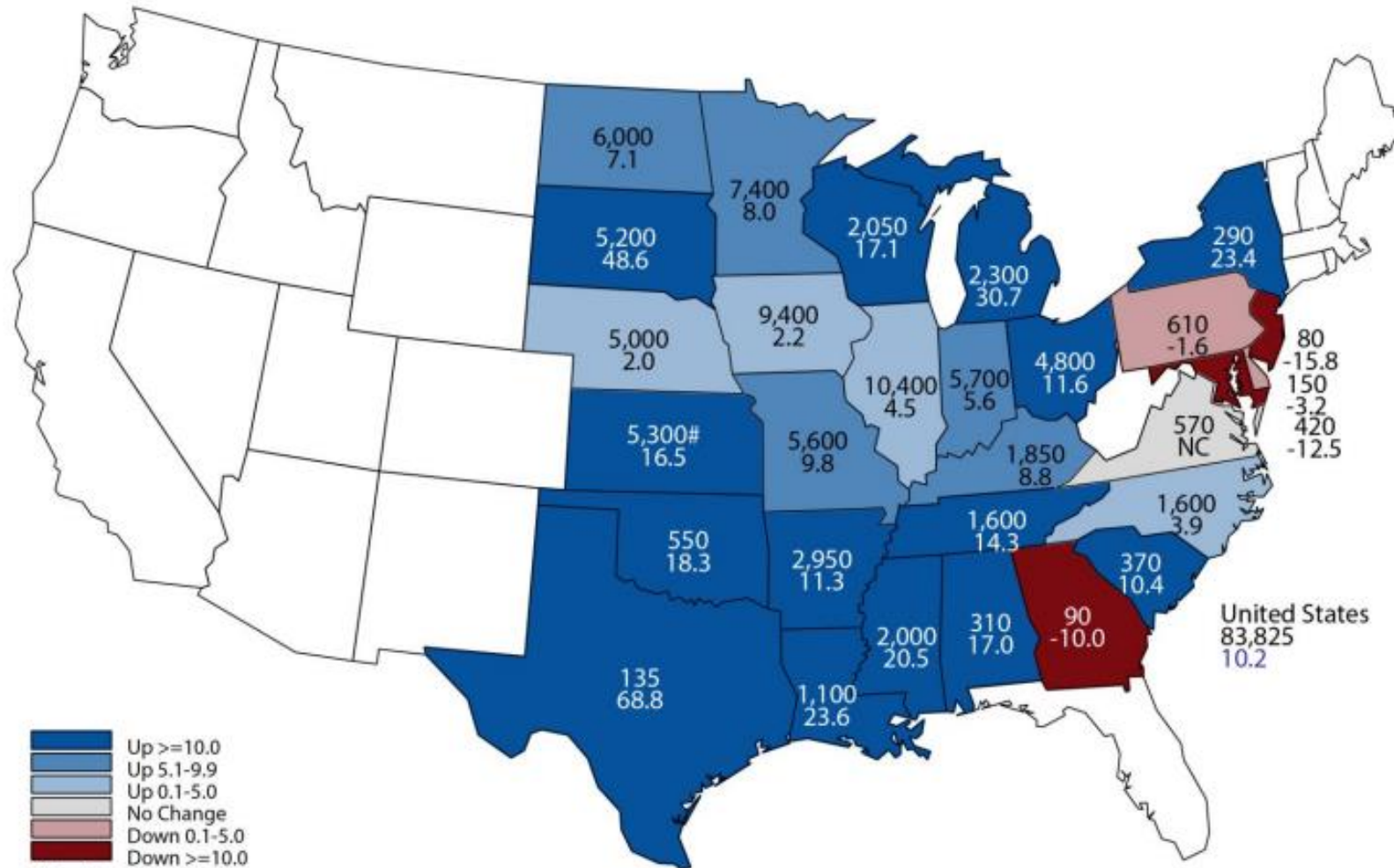
## 2020 United States Corn Acres Industry Expectations vs NASS



	Corn	CORN	SOYBEANS	WHEAT
	Ticker Symbol	Last	Change	Hig
1	@CN20	339' 4	13' 2	
2	@CU20	342' 6	14' 0	
3	@CZ20	351' 2	16' 4	
4	@CH21	361' 4	16' 0	
5	@CK21	367' 6	15' 2	
6				



# June 2020 Soybean Planted Area (000) Acres and Percent Change from Previous Year



Up >=10.0  
Up 5.1-9.9  
Up 0.1-5.0  
No Change  
Down 0.1-5.0  
Down >=10.0  
NC = No Change  
# = Record High  
& = Record Low

Total Soybean Acres  
Planted for All  
Purposes:  
**83,852,000**

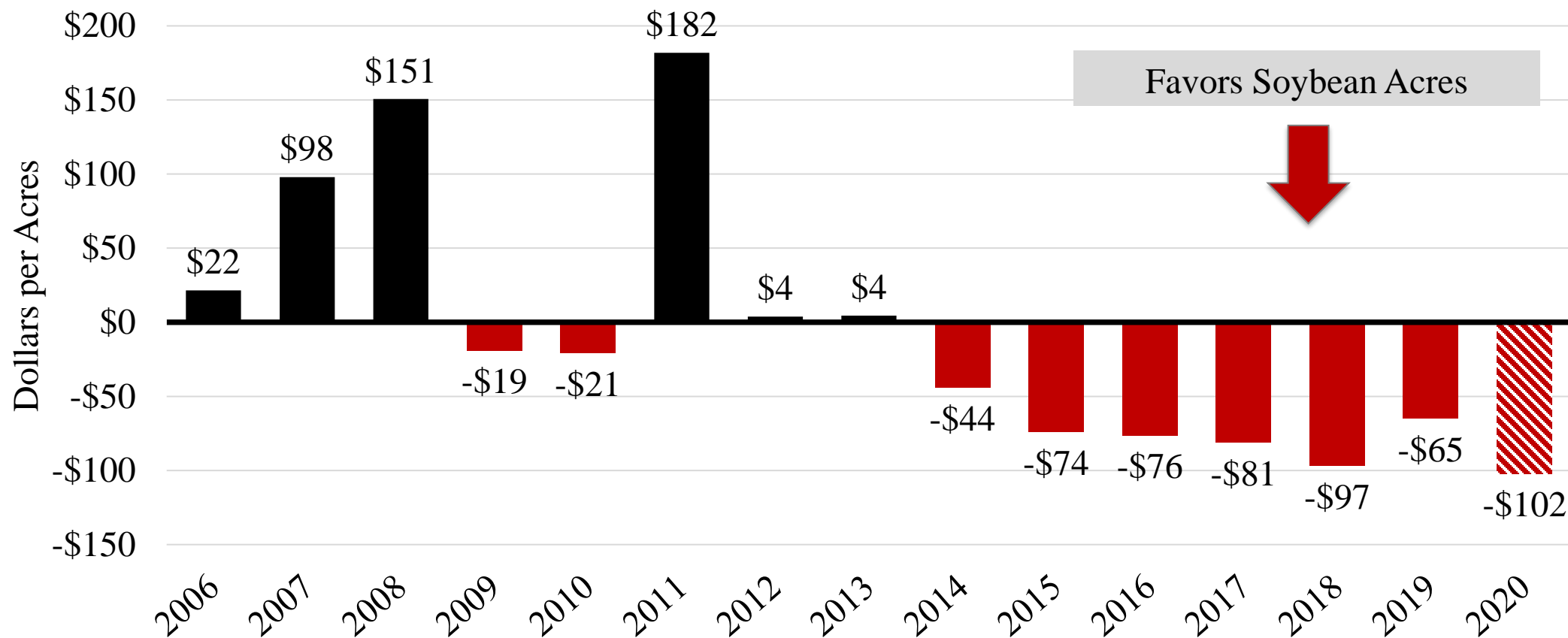
Trade was  
expecting- 84.7  
million acres

Up 0.4% from March  
Planting Intentions

Up 10.2% from 2019

# Acreage Report: Financial Considerations

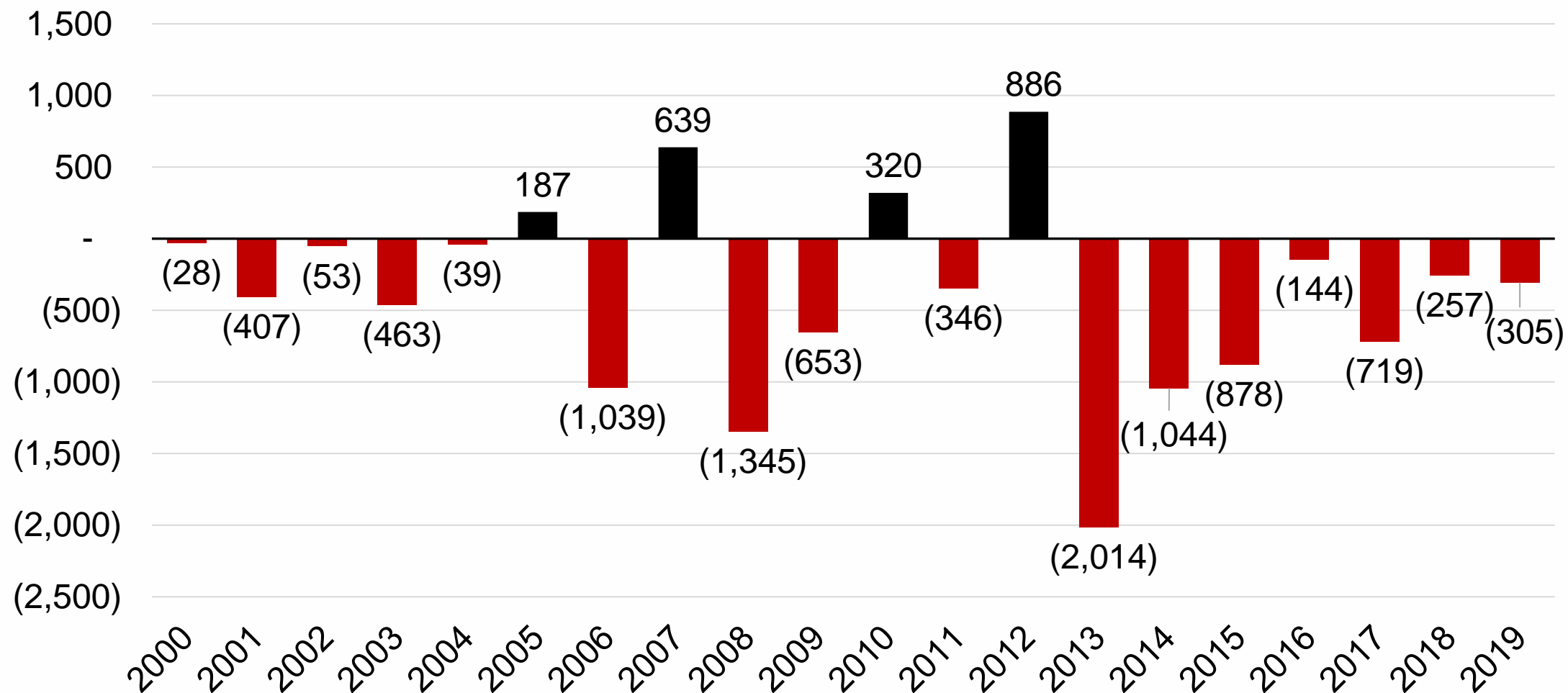
Difference in Contribution Margins  
Eastern Corn-Belt (Corn - Soybeans) as of the 3rd Week in April



Data Sources: Futures Prices and Historical Basis- DTN Prophetx  
Variable Costs- OSU Production Budgets, Barry Ward

# Acreage Report: **Change in Corn Acres**

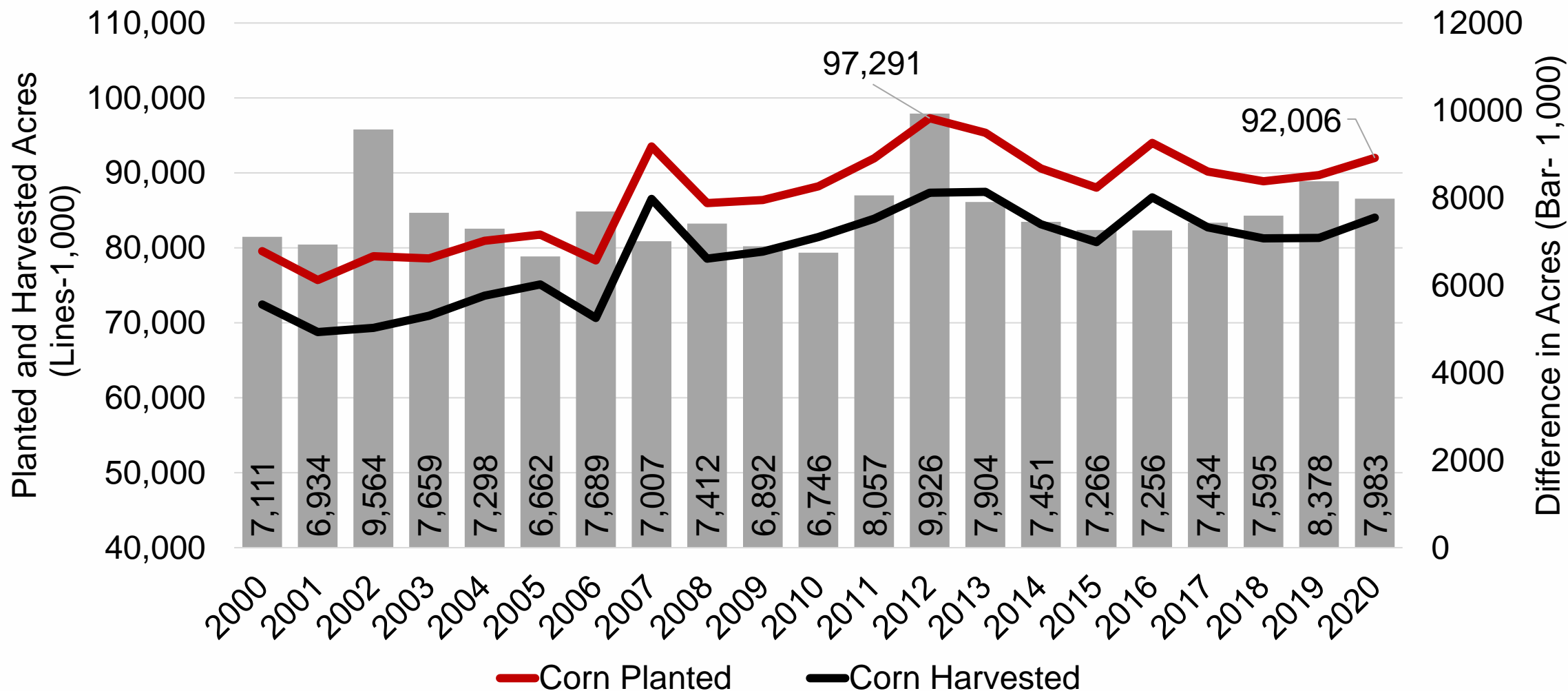
Final Planted Acreage minus June Acreage Report





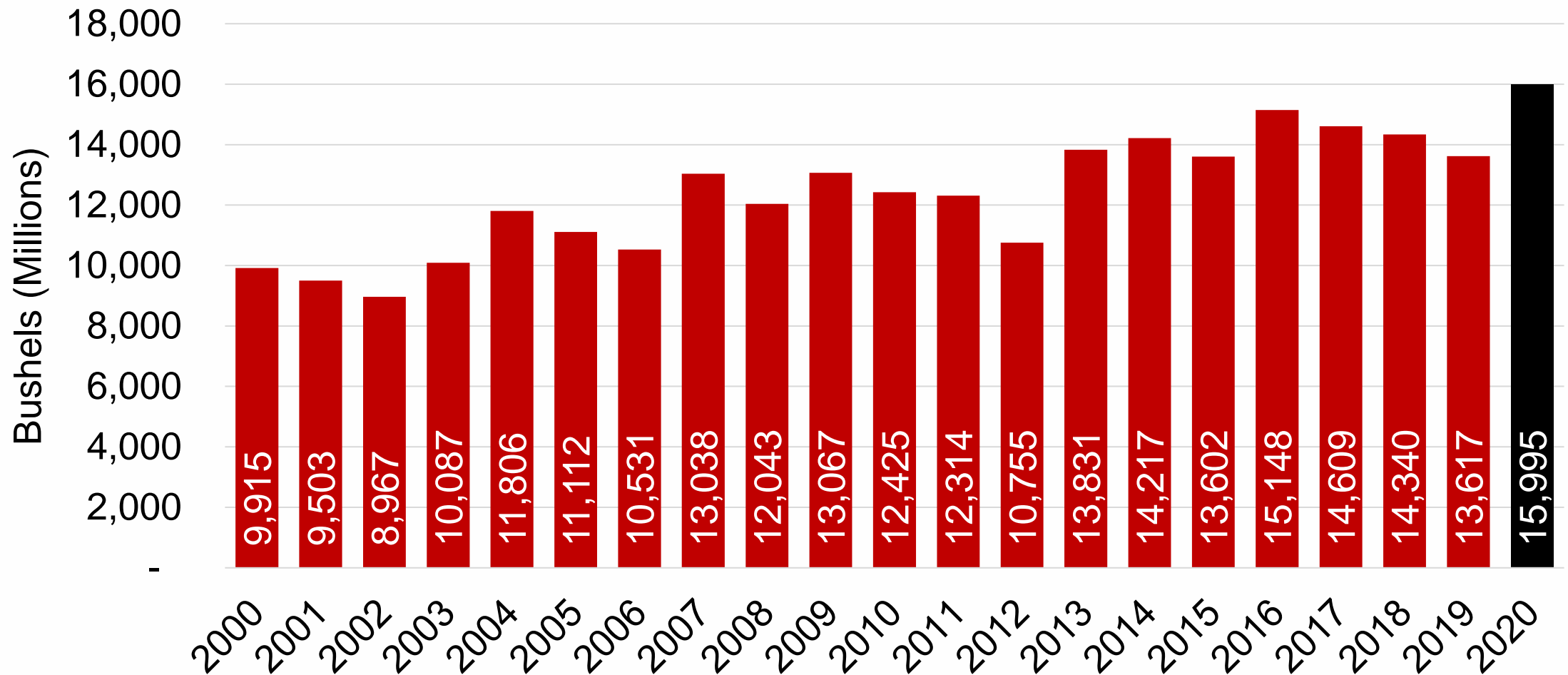
# Acreage Report: Harvested Corn Acres

## Planted vs Harvest Corn Acres



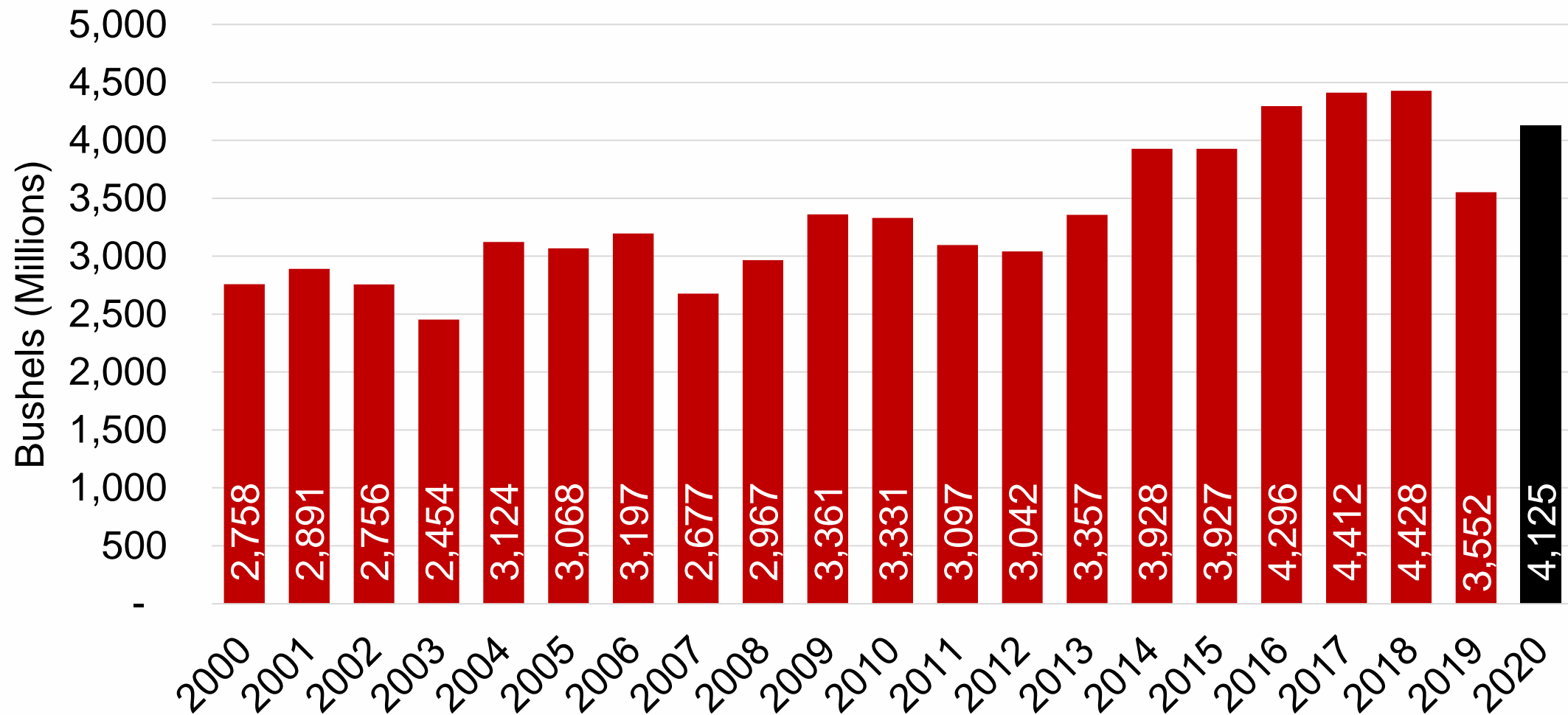
# New Crop Outlook: US Corn Production

## US Corn Production



# New Crop Outlook: US Soybean Production

## US Soybean Production



Corn Balance Sheet	USDA-June	6/30/2020	USDA-June	New Crop Estimates 6/30/2020		
	2019-20	2019-20	2020-21	2020-21	Bearish	Bullish
Planted Acres	89.7	89.7	97.0	92.0	92.0	92.0
Harvested Acres	81.3	81.3	89.6	84.0	84.0	84.0
Yield	167.4	167.4	178.5	179.4	<b>180.5</b>	<b>173.5</b>
Beginning Stocks	2,221	2,221	2,103	2,223	2,223	2,223
Production	13,617	13,617	15,995	15,069	15,162	14,574
Imports	45	45	25	50	50	50
Total Supply	15,883 (-45)	15,883	18,123 (+5)	17,343	17,435	16,847
Feed Use and Res.	5,700	<b>5,675 (-50)</b>	6,050	<b>5,650</b>	<b>5,625</b>	<b>5,600</b>
Food, Seed, Ind.	6,305 (-50)	6,220	6,600	6,515	6,515	6,865
Ethanol	4,900 (-50)	<b>4,825 (-75)</b>	5,200	5,100	<b>5,100</b>	<b>5,400</b>
Total Domestic	12,005 (-50)	11,895	12,650	12,165	12,140	12,465
Exports	1,775	<b>1,765 (-10)</b>	2,150	2,250	<b>2,000</b>	<b>2,375</b>
Total Use	13,780 (-50)	13,660	14,800	14,415	14,140	14,840
Ending Stocks	2,103 (+5)	2,223	3,318 (+5)	<b>2,828</b>	3,295	2,007
Stocks to Use	15.2%	16.3%	22.4%	19.5%	23.3%	13.5%
Farm Cash Price	\$3.60	\$3.60	\$3.20	\$3.20	\$2.85	\$3.85

Soy Balance Sheet	USDA-June	6/30/20	USDA-May	New Crop Estimates 6.7.2020		
	2019-20	2019-20	2020-21	2020-21	Bearish	Bullish
Planted Acres	76.1	76.1	83.5	83.8	83.8	83.8
Harvested Acres	75.0	75.0	82.8	83.0	83.0	83.0
Yield	47.4	47.4	49.8	50.5	51.3	48
Beginning Stocks	909	909	585	599	599	599
Production	3,552	3,552	4,125	4,192	4,258	3,984
Imports	15	15	15	15	20	20
Total Supply	4,476 (-5)	4,476	4,725	4,806	4,878	4,603
Crushing	2,140 (+15)	2,140	2,145 (+15)	2,140	2,125	2,145
Seed	97	97	100	90	90	90
Residual	4	5	35	20	20	20
Total Domestic	2,241 (+15)	2,242	2,280	2,250	2,235	2,255
Exports	1,650 (-25)	1,635 (-15)	2,050	1,950	1,800	2,100
Total Use	3,891 (-10)	3,877	4,330	4,200	4,035	4,355
Ending Stocks	585 (+5)	599	395 (-10)	606	843	248
Stocks to Use	15.0%	15.5%	9.1%	14.4%	20.8%	5.7%
Farm Cash Price	\$8.50	\$8.55	\$8.20	\$8.55	\$8.05	\$9.40



*Thank you- hope to see you  
around Ohio soon!*

**Ben Brown**

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**CFAES**