

Forage and Hay Outlook

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**University of Florida, Extension Economist
Range Cattle Research and Education Center
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USDA / Risk Management Agency (RMA)

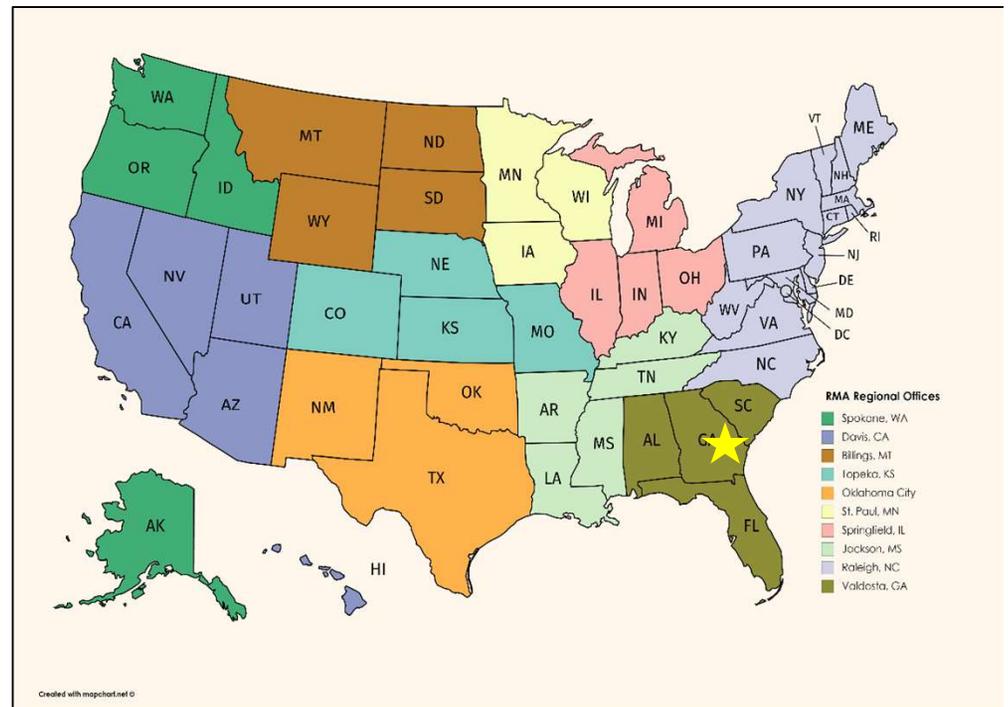
- **Oversees the nation's \$110B+ Federal Crop Insurance Program**
- **Around 450 RMA employees**
- **RMA's main offices are located in Washington, DC, and Kansas City, MO**



Program Sponsorship, Coordination, and Delivery

USDA / Risk Management Agency (RMA)

- Oversees the nation's \$110 billion Federal Crop Insurance Program
- Valdosta Region (1 of 10 nationwide) covers AL, GA, FL, and SC.



Program Sponsorship, Coordination, and Delivery

RMA Mission:

Serving America's agricultural producers through effective, market-based risk management tools to strengthen the economic stability of agricultural producers and rural communities.

www.RMA.USDA.gov



Program Sponsorship, Coordination, and Delivery

Disclaimer

No information in this presentation supersedes official crop insurance program terms and conditions set forth on the RMA website and/or in a specific crop insurance program's actuarial and underwriting documents.

Federal crop insurance programs are sold and serviced by Authorized Insurance Providers (AIPs) through local crop insurance agents. CAS does not in any way endorse or accept funding from AIPs or crop insurance agents.



www.RMA.USDA.gov

Key Risk Management Tools for Livestock Producers

- Common Insurance Products (life, health, etc.)
- Crop Insurance Programs
 - Livestock Risk Protection (LRP)
 - Pasture, Rangeland, Forage (PRF)
 - Whole Farm Revenue Protection (WFRP)
- Management Strategies (diversify, etc.)
- Hedging Instruments (futures and options)
- Analytical Tools like www.BeefBasis.com

Federal Risk Management (Crop Insurance) Programs

United States

In *2018, RMA insured almost \$110 billion in crop value across 1.1 million policies, 700 million acres, and 100+ different commodities.

Florida

In *2018, RMA insured over \$2.8 billion in crop value across 11,900+ policies, over 52 million acres, and 20+ different commodities.

Pasture, Rangeland, Forage (PRF)

In *2018, RMA insured almost \$150 million acres in forage value on nearly \$1.1 million acres with 1,122 million policies. Producers paid less than \$16 million in premiums and collected over \$42 million in indemnities.

Pasture, Rangeland, Forage (PRF)

Based on precipitation, as measured by a NOAA Rainfall Index.

Designed to give producers protection against the effects (ex., increased feed costs, reduced stocking rate, plant depopulation, etc.) of drought related losses on acreage intended to be grazed or harvested for forage.

Pasture, Forage, and Rangeland (PRF) - Overview

- Area plans only –
Losses cover a geographical grid
- Index – based on deviation from normal/historical
- No individual coverage –
Does NOT measure actual individual production
- DOES NOT guarantee payment if a specific area within the grid experiences low precipitation

Pasture, Forage, and Rangeland (PRF) - Overview

Intended Use - Grazing

- Established acreage of perennial forage
- Intended for grazing by livestock
- Acreage must be suitable for grazing

Intended Use - Haying

- Established acreage of perennial forage
- Intended for haying
- Acreage must be suitable for haying

Pasture, Rangeland, Forage (PRF)

- Producers can select one or more two-month time periods (index intervals) to insure.
- Indemnities are calculated based on the difference between **actual** and **average** index.
- **Review historical indices to determine how well past results correspond to historical observations!**



*Not all intervals are available in all counties

PRF Decision Chain

- How much will a 35% precipitation year cost?
- At the highest coverage level, how many acres will return that amount?
- Can I insure that many acres?
- How much can I **SUSTAINABLY** afford?



Livestock Risk Protection (LRP)

Livestock Risk Protection Program (LRP) is designed to insure livestock growers against declining market prices; similar to a CME put option.

- Feeder Cattle
- Fed Cattle
- Swine
- Lamb



Whole Farm Revenue Protection (WFRP)

Provides a risk management safety net for all commodities on a farm under one insurance policy.

WFRP is best suited for

- Highly diverse farms
- Farms producing specialty commodities
- Farms selling to direct markets, specialty markets, regional or local markets, and farm-identity preserved markets.

Whole Farm Revenue Protection (WFRP)

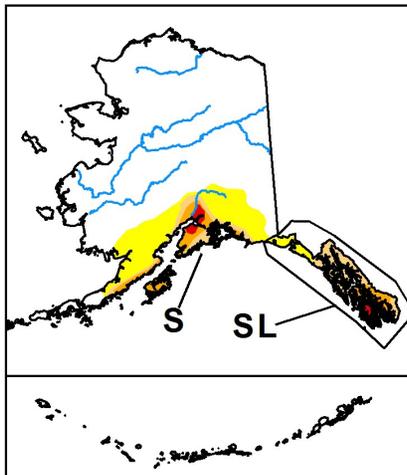
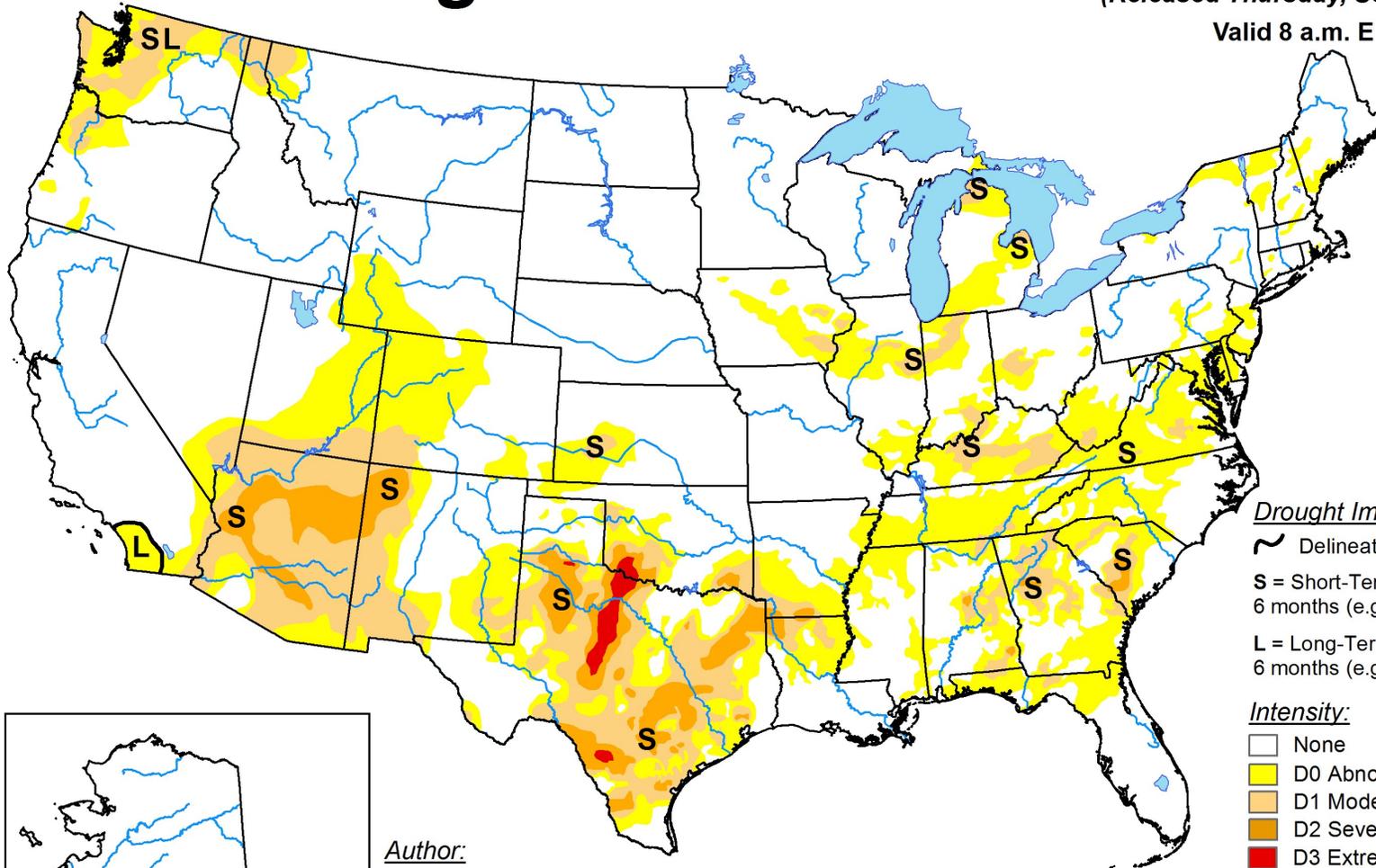
WFRP is designed for well diversified farms that might not have access to crop or revenue insurance for each crop they grow. WFRP insures all the farm's crops within a single, whole-farm, insurance policy.

- Get more info from a Crop Insurance Agent or via the RMA website at www.RMA.USDA.gov

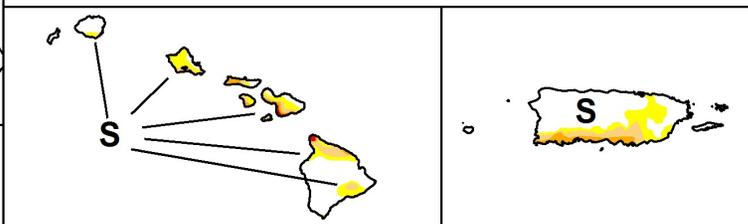
U.S. Drought Monitor

September 17, 2019
 (Released Thursday, Sep. 19, 2019)

Valid 8 a.m. EDT



Author:
 Eric Luebehusen
 U.S. Department of Agriculture



Drought Impact Types:

- ~ Delineates dominant impacts
- S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
- 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. See accompanying text summary for forecast statements.



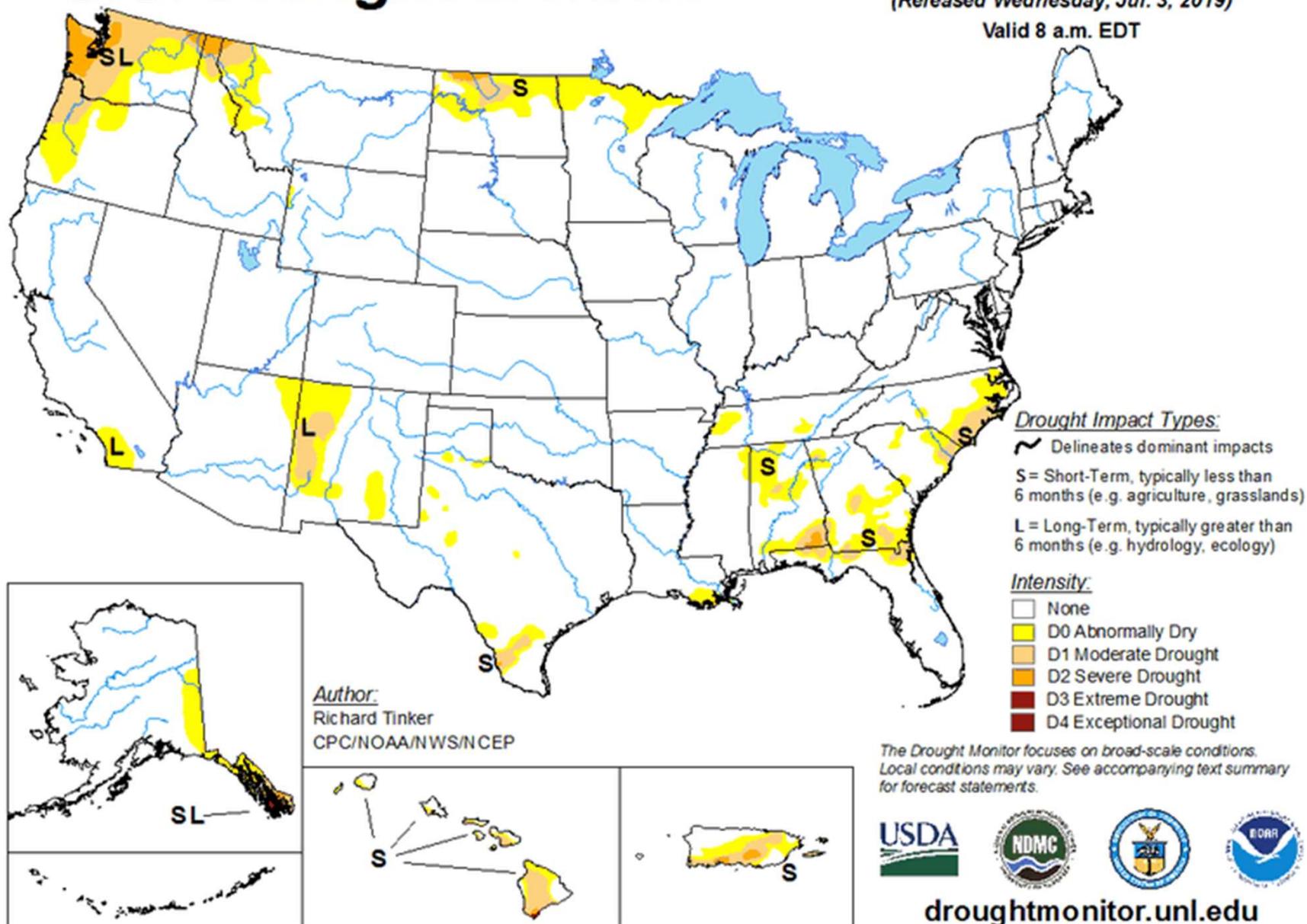
droughtmonitor.unl.edu

U.S. Drought Monitor

July 2, 2019

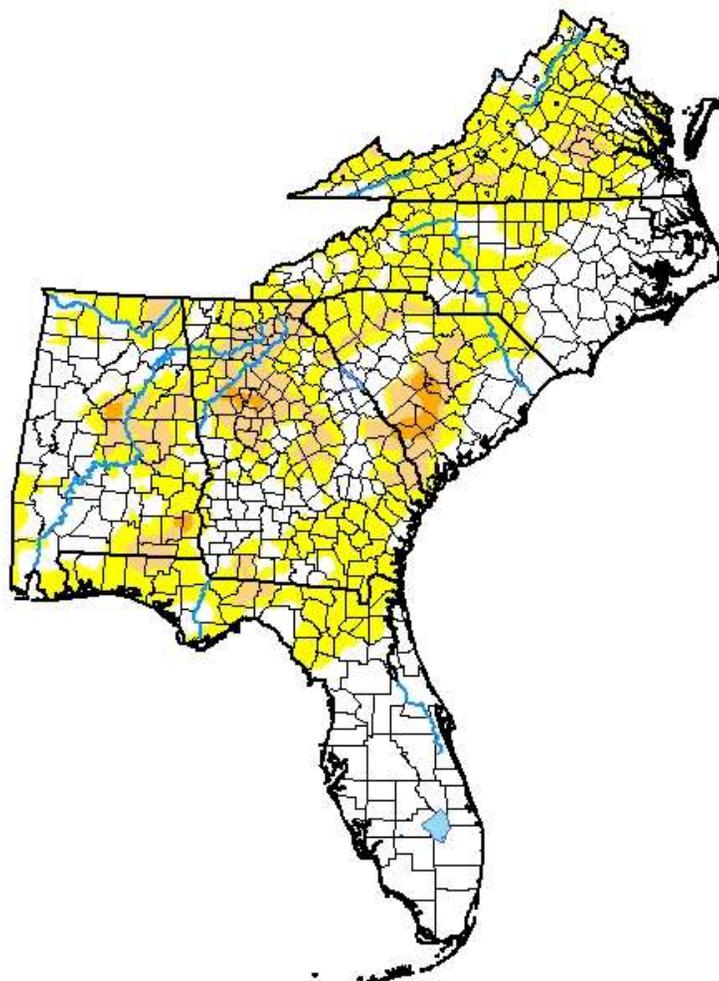
(Released Wednesday, Jul. 3, 2019)

Valid 8 a.m. EDT



U.S. Drought Monitor Southeast

September 17, 2019
(Released Thursday, Sep. 19, 2019)
Valid 8 a.m. EDT



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. See accompanying text summary for forecast statements.

Author:

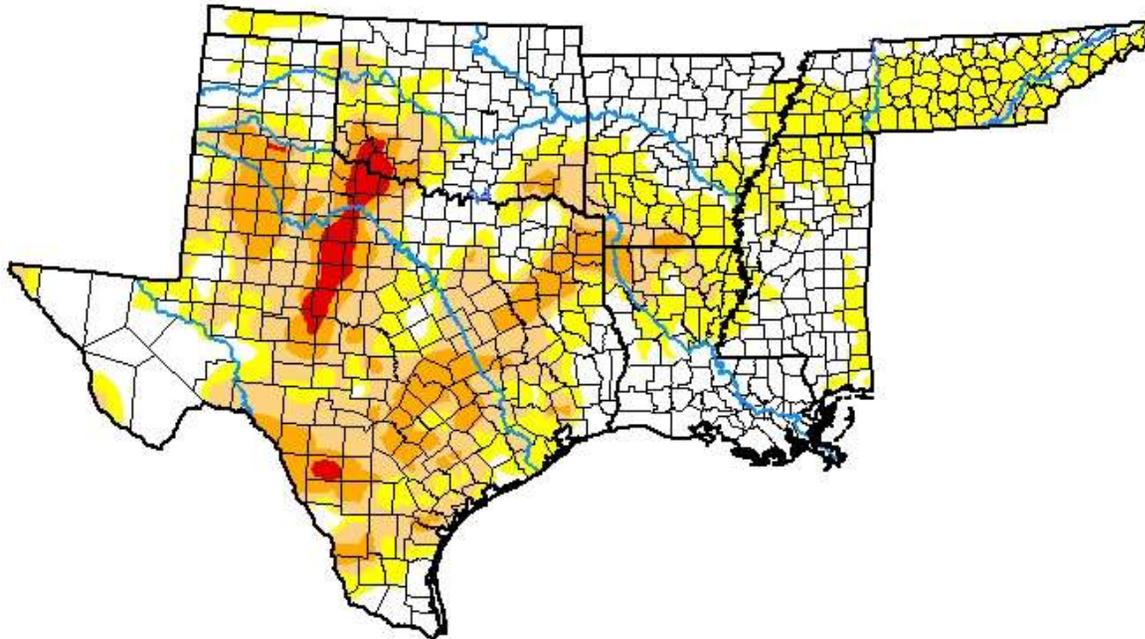
Eric Luebehusen
U.S. Department of Agriculture



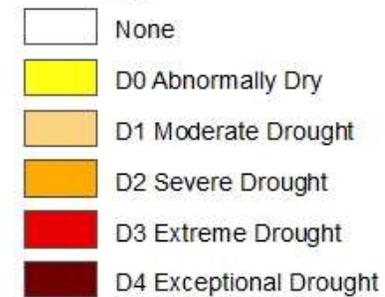
droughtmonitor.unl.edu

U.S. Drought Monitor South

September 17, 2019
(Released Thursday, Sep. 19, 2019)
Valid 8 a.m. EDT



Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

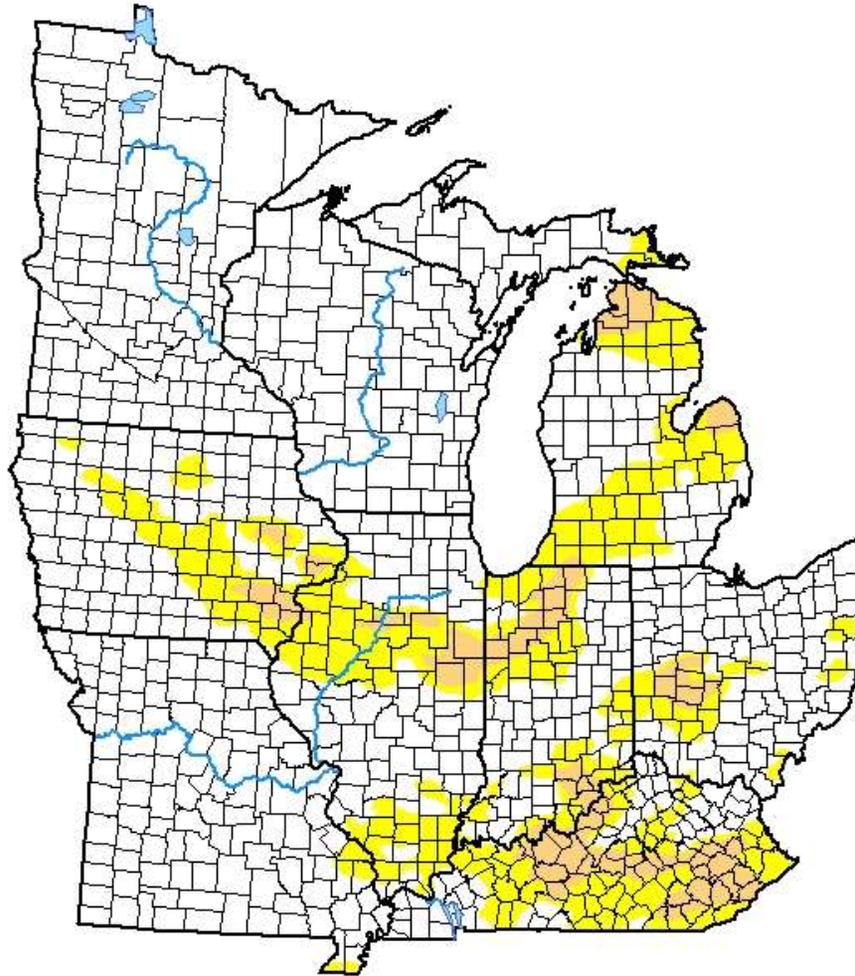
Eric Luebehusen
U.S. Department of Agriculture



droughtmonitor.unl.edu

U.S. Drought Monitor Midwest

September 17, 2019
(Released Thursday, Sep. 19, 2019)
Valid 8 a.m. EDT



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. See accompanying text summary for forecast statements.

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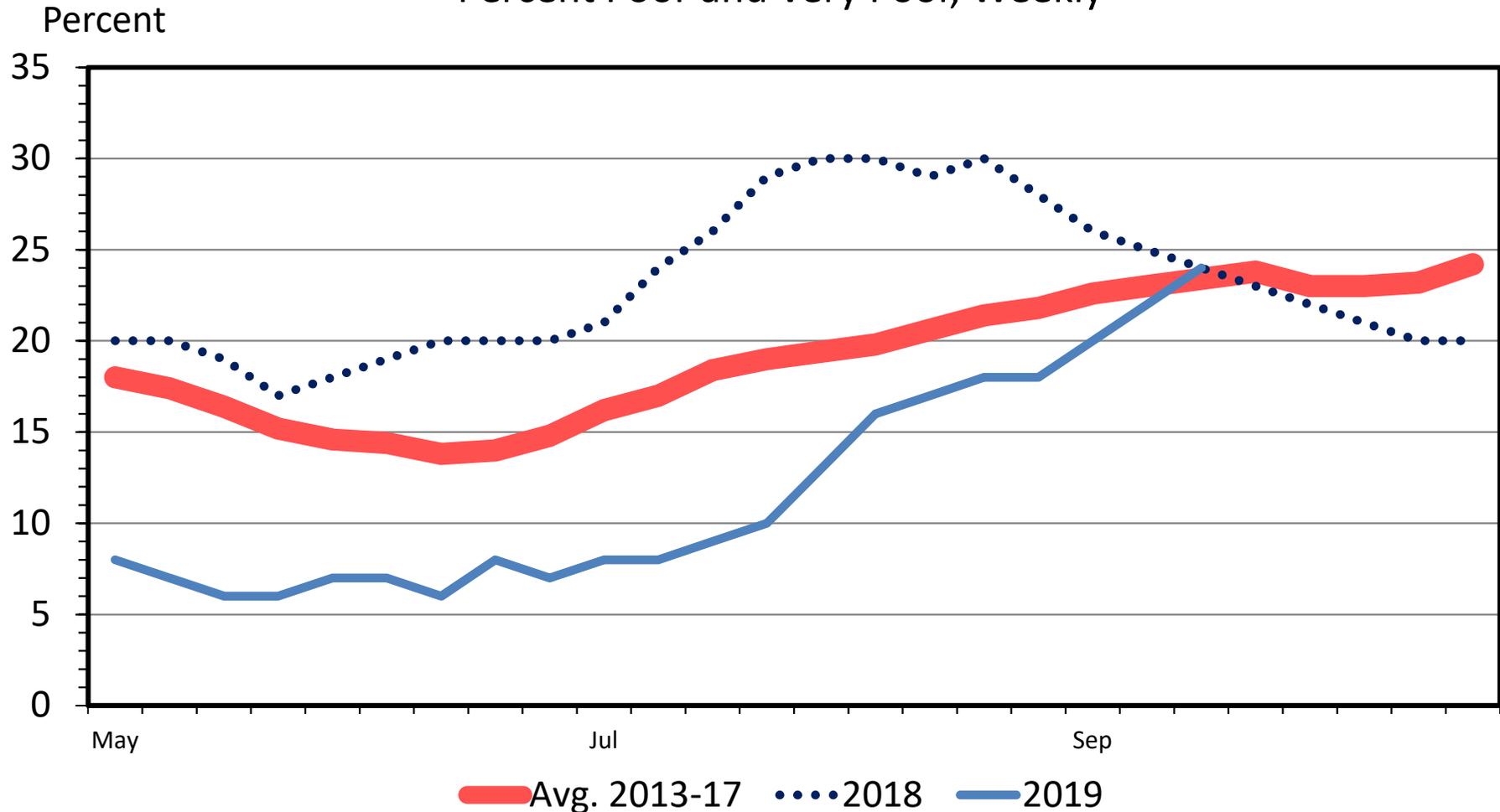
Eric Luebehusen
U.S. Department of Agriculture



droughtmonitor.unl.edu

US RANGE AND PASTURE CONDITION

Percent Poor and Very Poor, Weekly



Data Source: USDA-NASS, Compiled & Analysis by LMIC

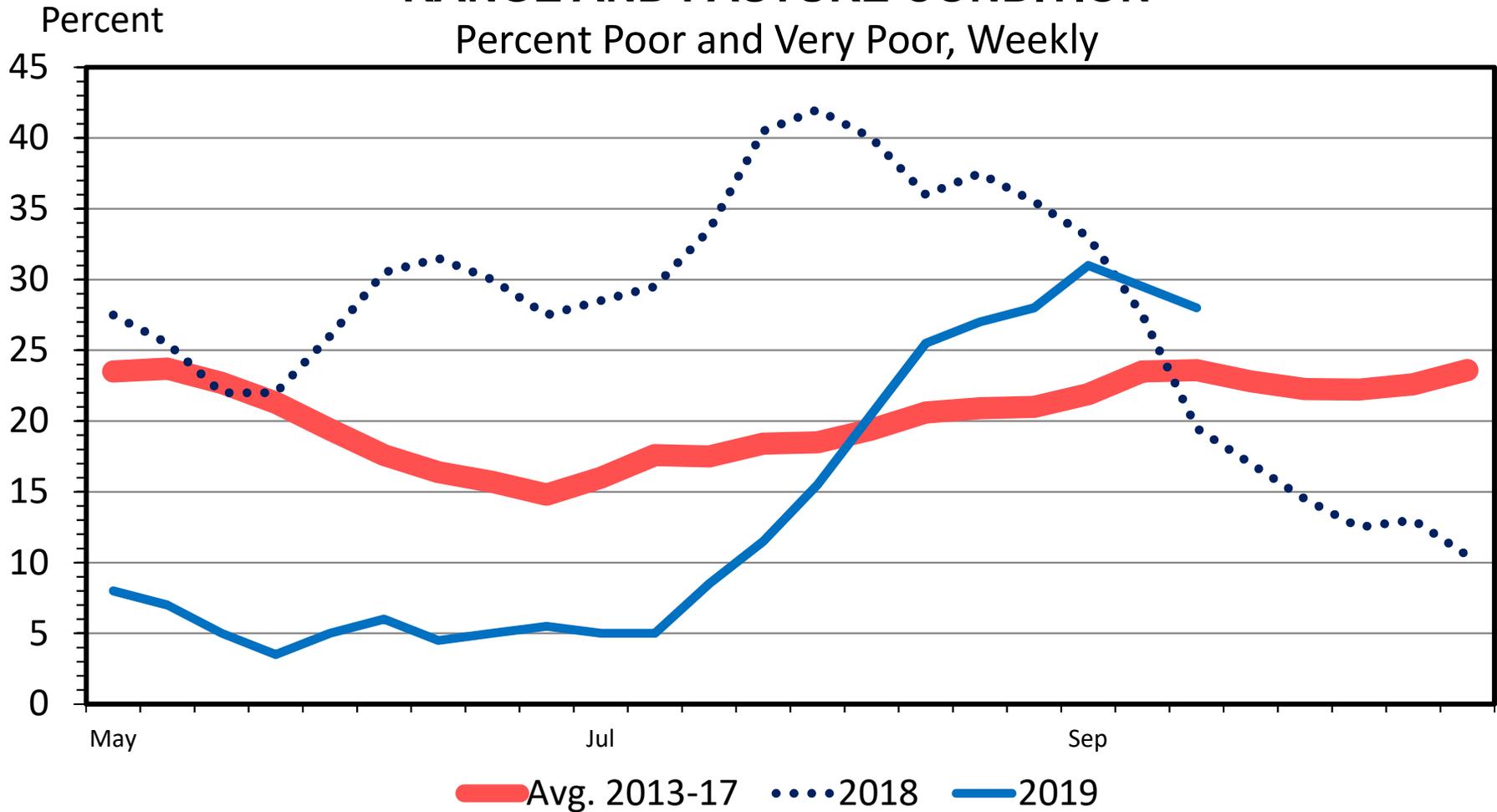
Livestock Marketing Information Center

G-NP-30

09/23/19

SOUTHERN PLAINS REGION RANGE AND PASTURE CONDITION

Percent Poor and Very Poor, Weekly



Data Source: USDA-NASS, Compiled & Analysis by LMIC

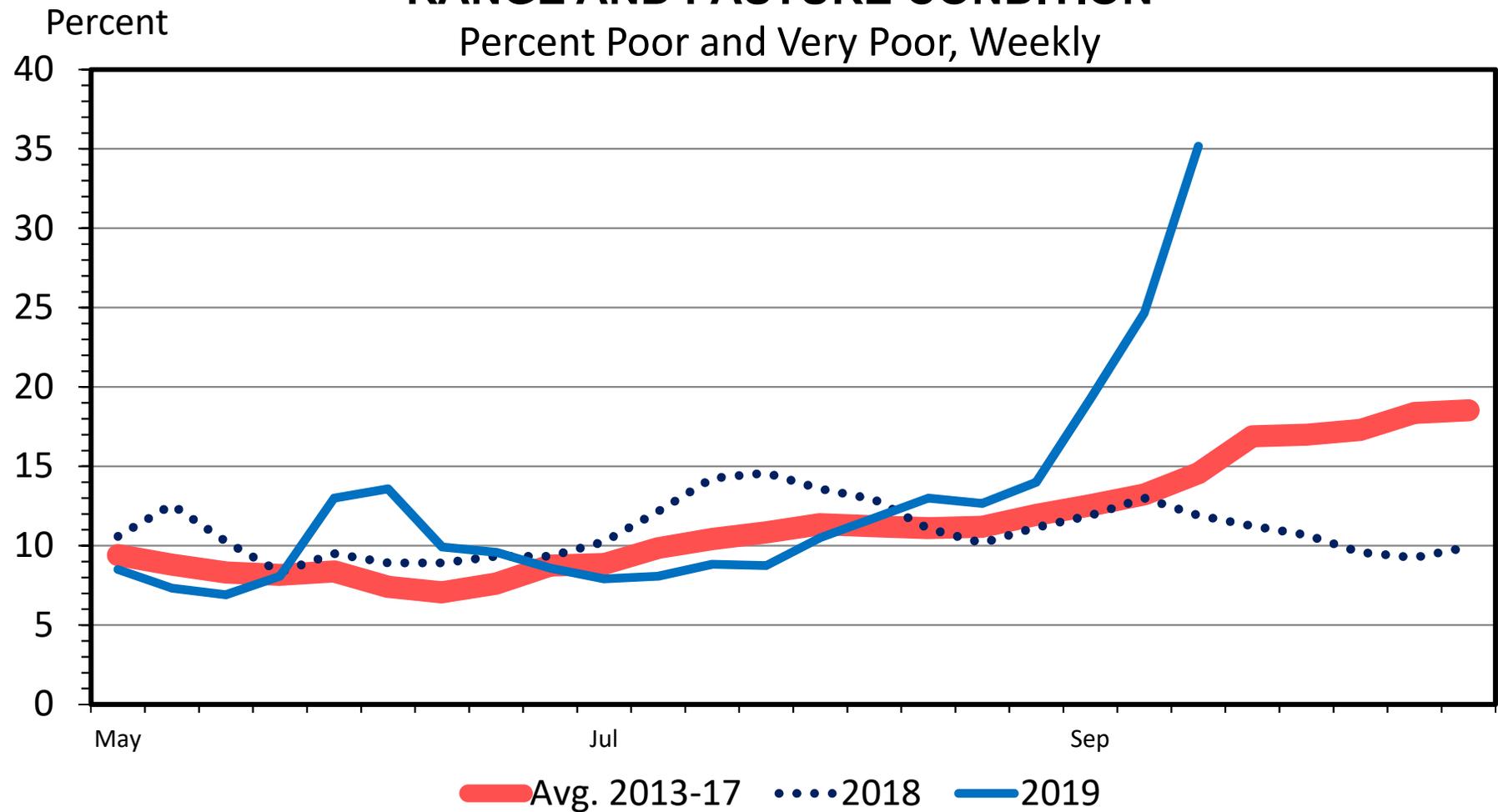
Livestock Marketing Information Center

G-NP-33

09/23/19

SOUTHEAST REGION RANGE AND PASTURE CONDITION

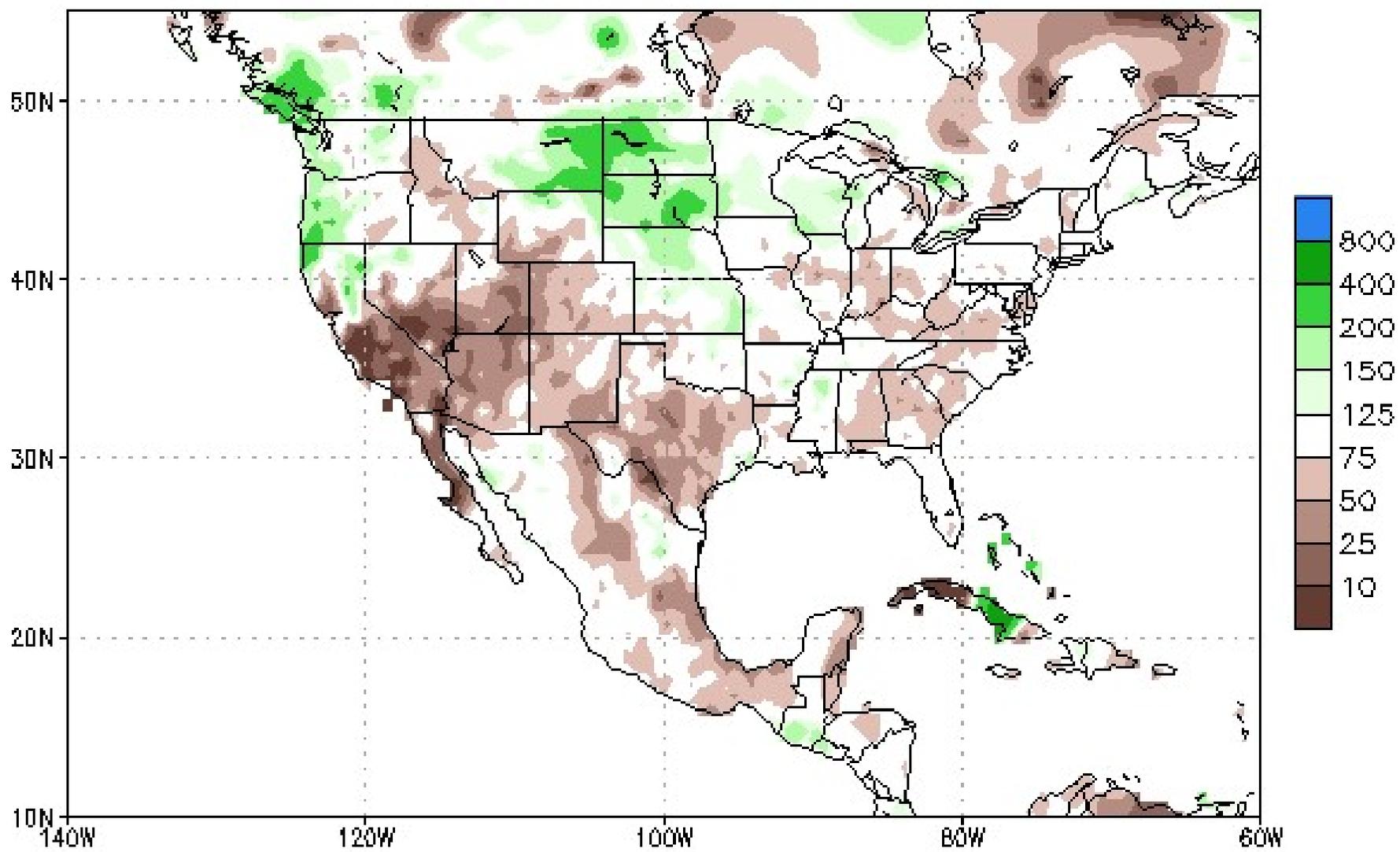
Percent Poor and Very Poor, Weekly



Data Source: USDA-NASS, Compiled & Analysis by LMIC
Livestock Marketing Information Center

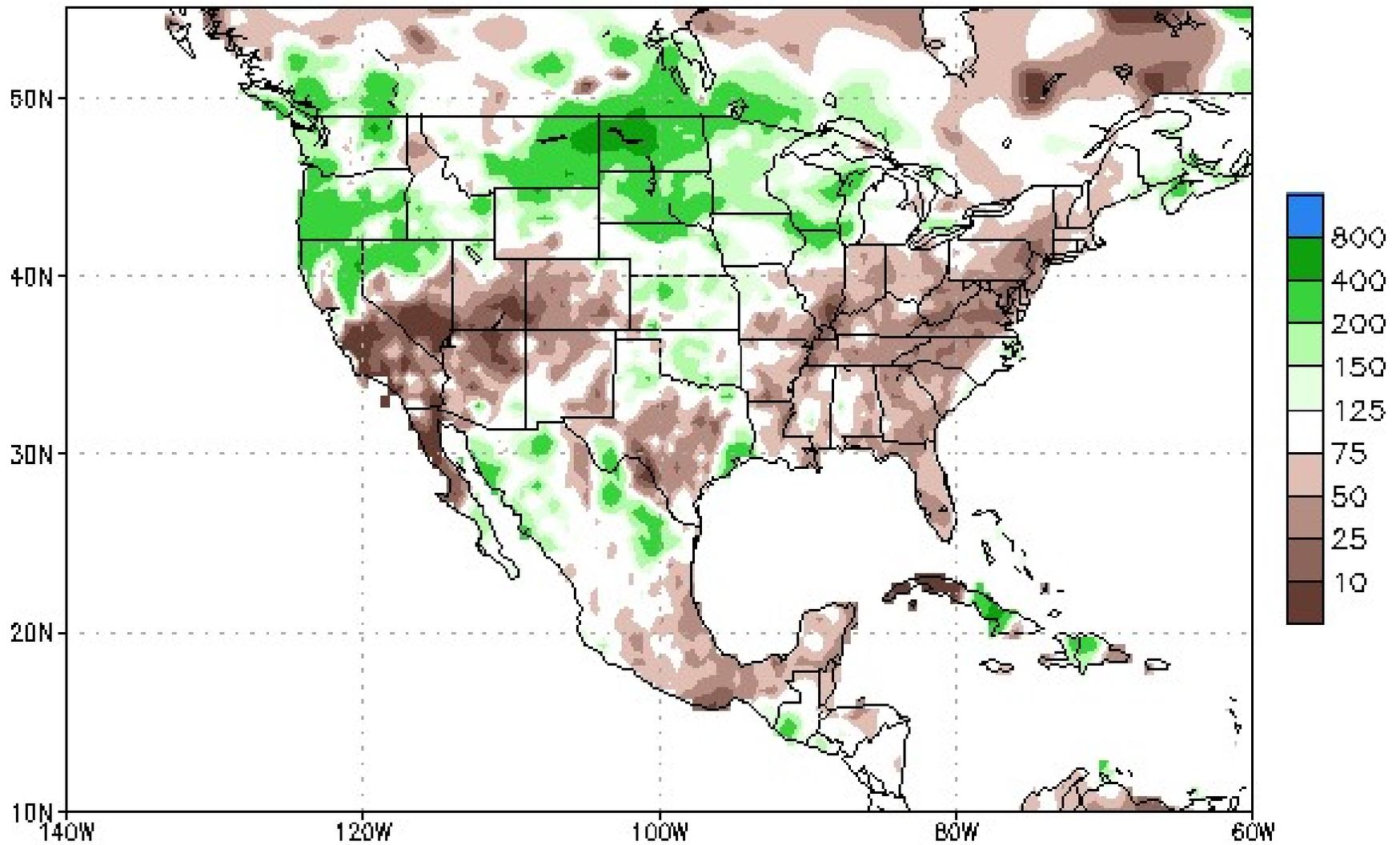
G-NP-36
09/23/19

90-day Accumulated Prep % of Normal 25JUN2019-22SEP2019



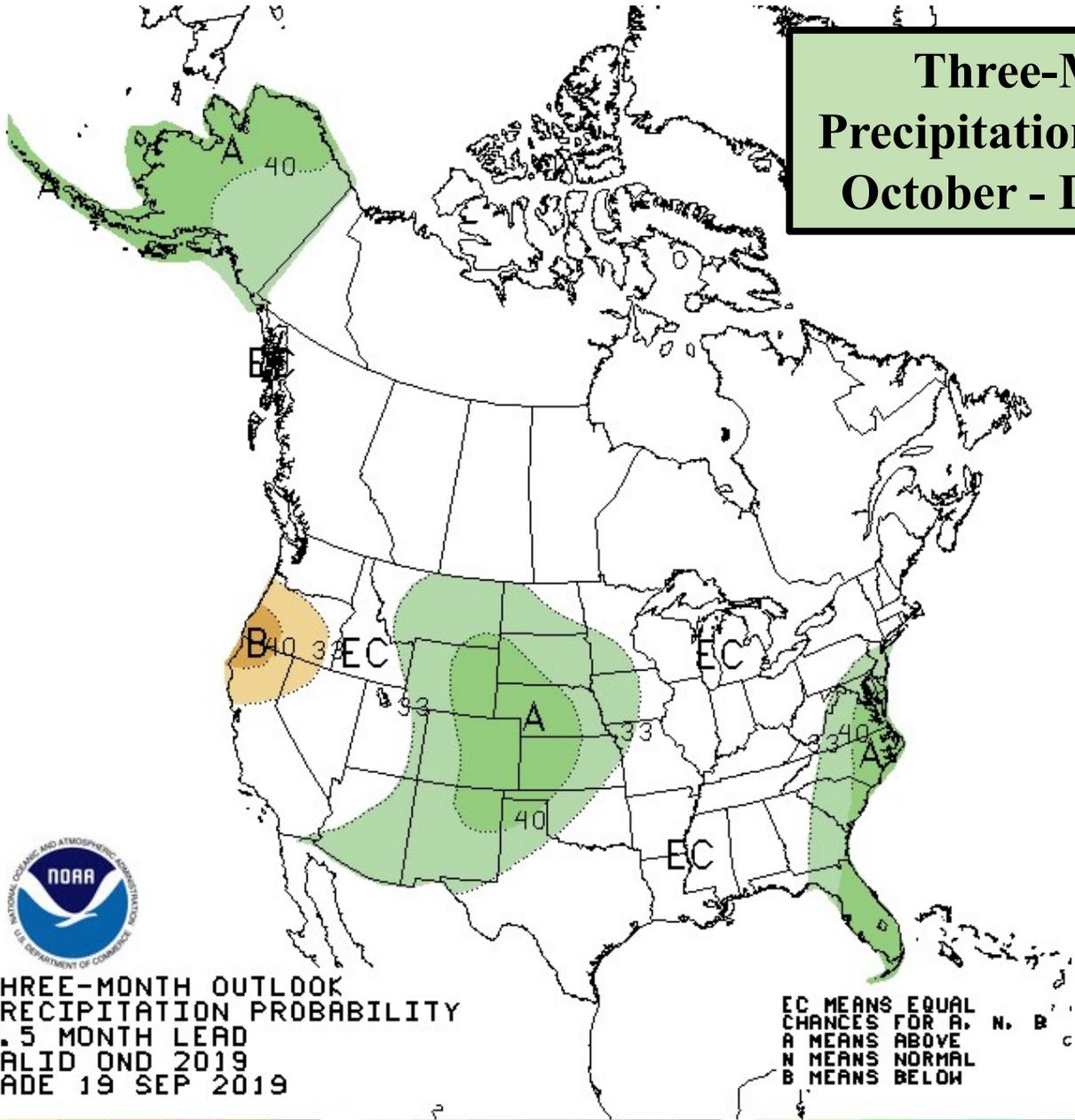
Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) Precipitation Analysis Climatology (1981-2010)

30-day Accumulated Precip % of Normal 24AUG2019-22SEP2019



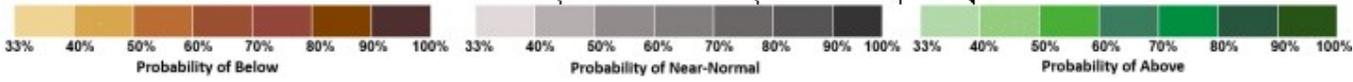
Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) Precipitation Analysis Climatology (1981-2010)

Three-Month Precipitation Outlook, October - December

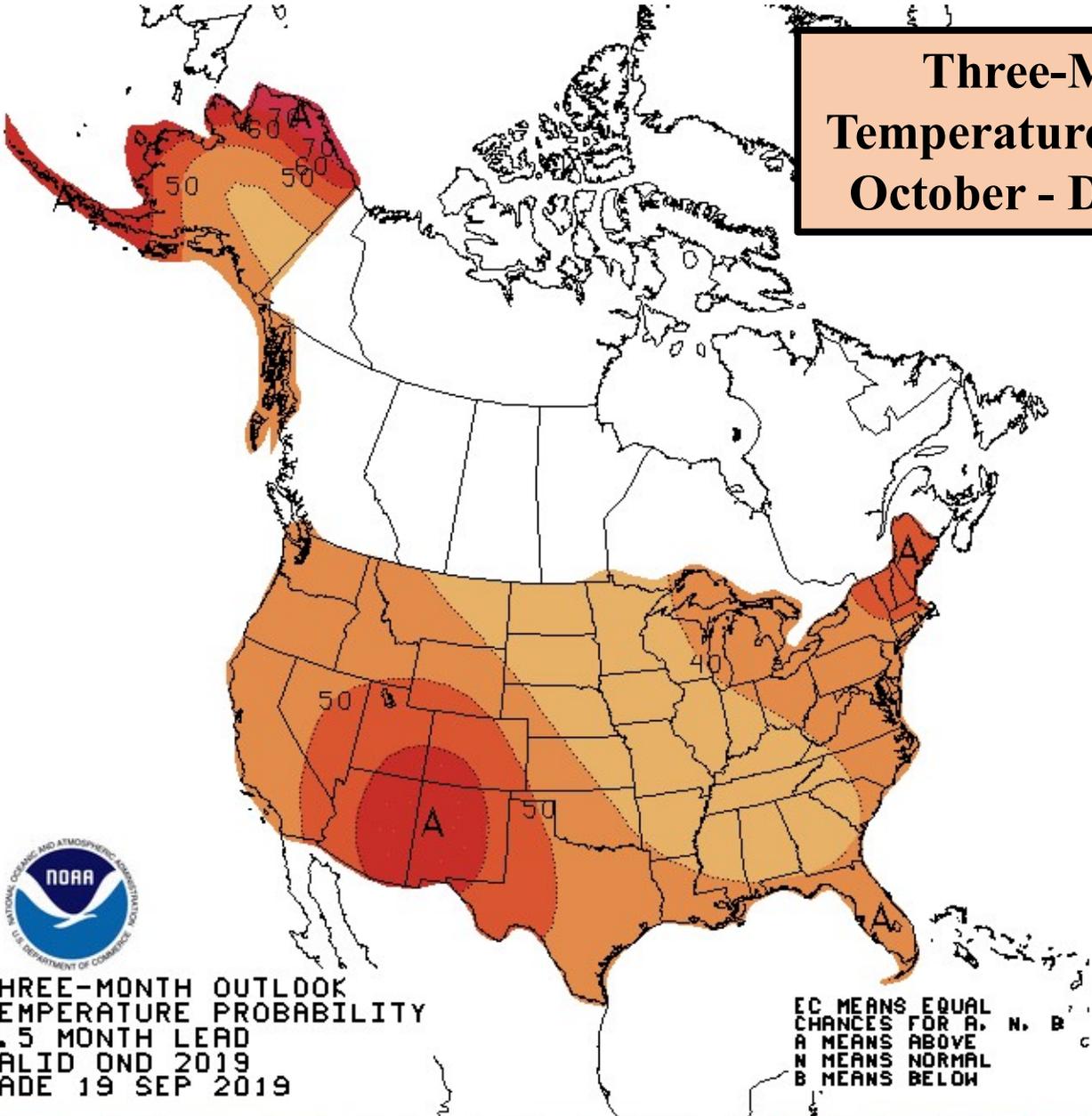


THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.5 MONTH LEAD
VALID OND 2019
MADE 19 SEP 2019

EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

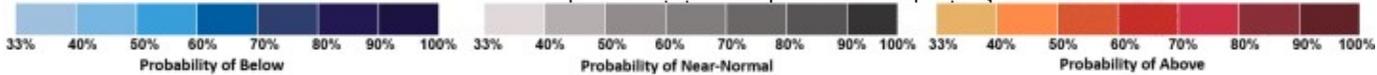


Three-Month Temperature Outlook, October - December

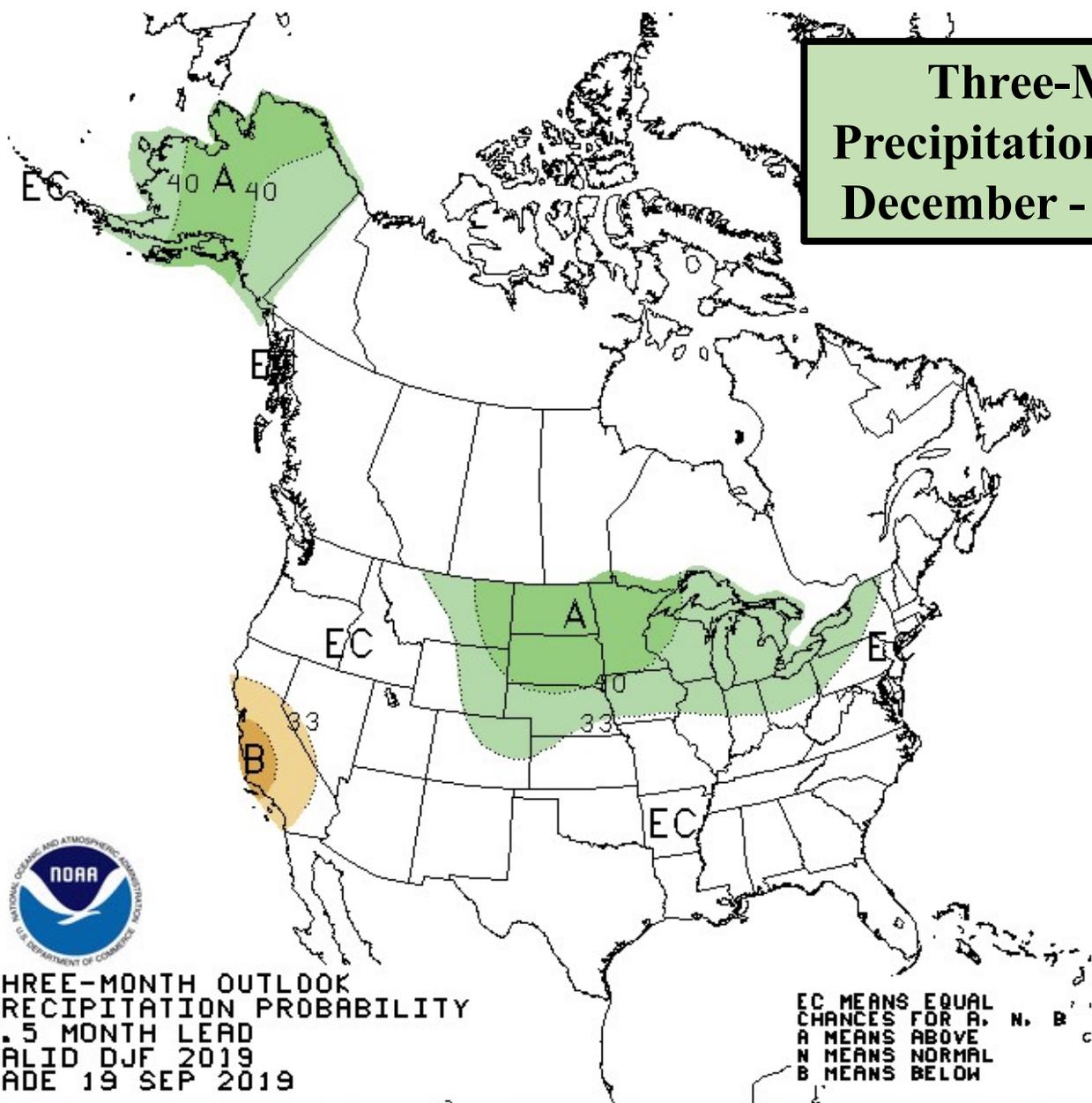


THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.5 MONTH LEAD
VALID OND 2019
MADE 19 SEP 2019

EC MEANS EQUAL
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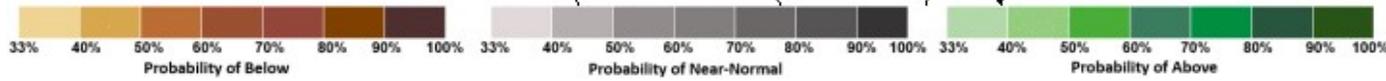


Three-Month Precipitation Outlook, December - February

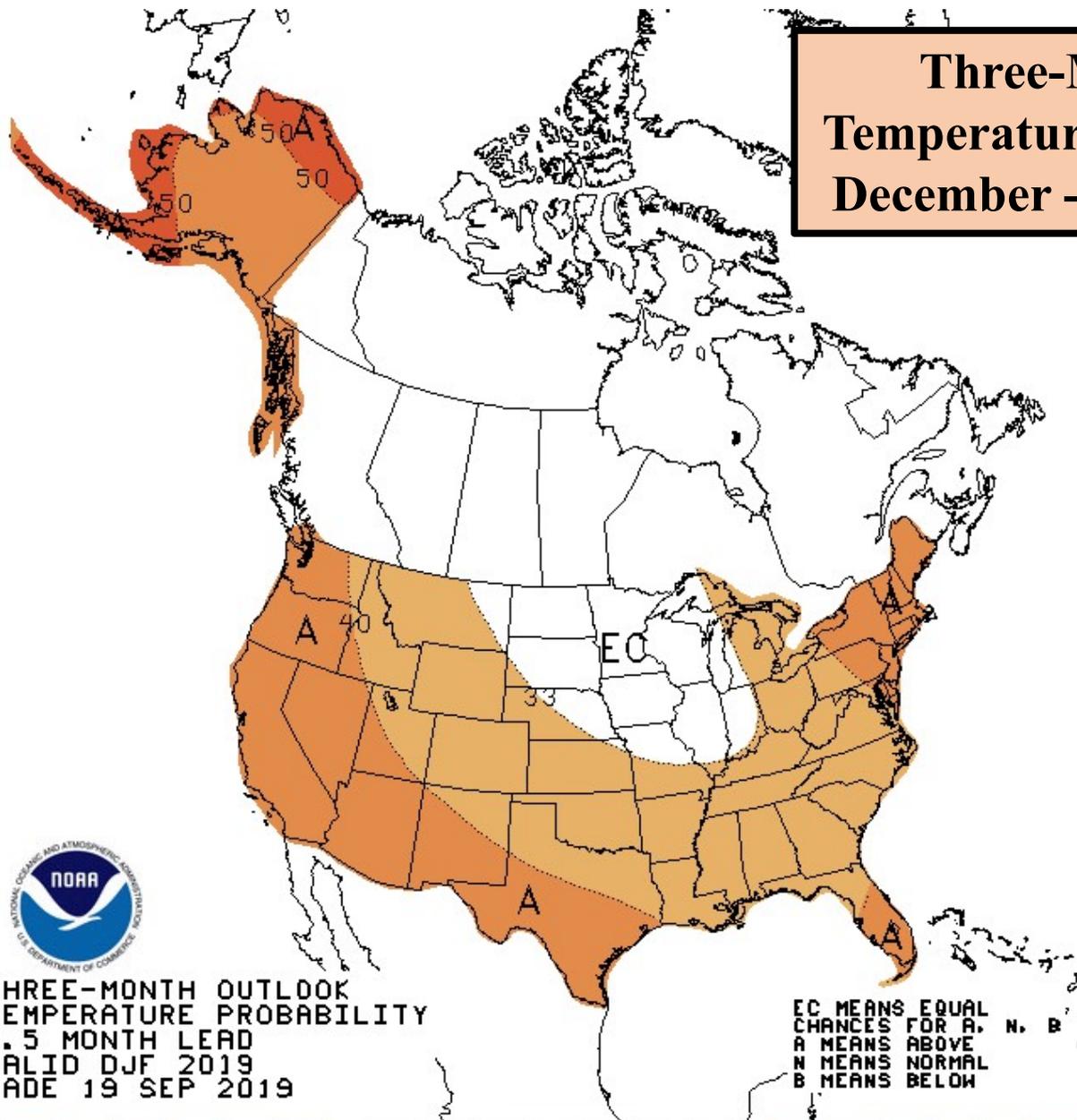


THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
2.5 MONTH LEAD
VALID DJF 2019
MADE 19 SEP 2019

EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

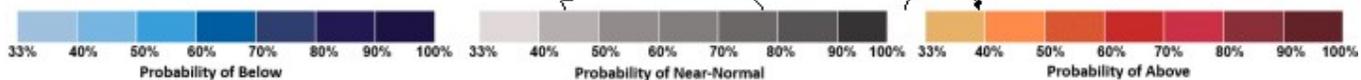


Three-Month Temperature Outlook, December - February

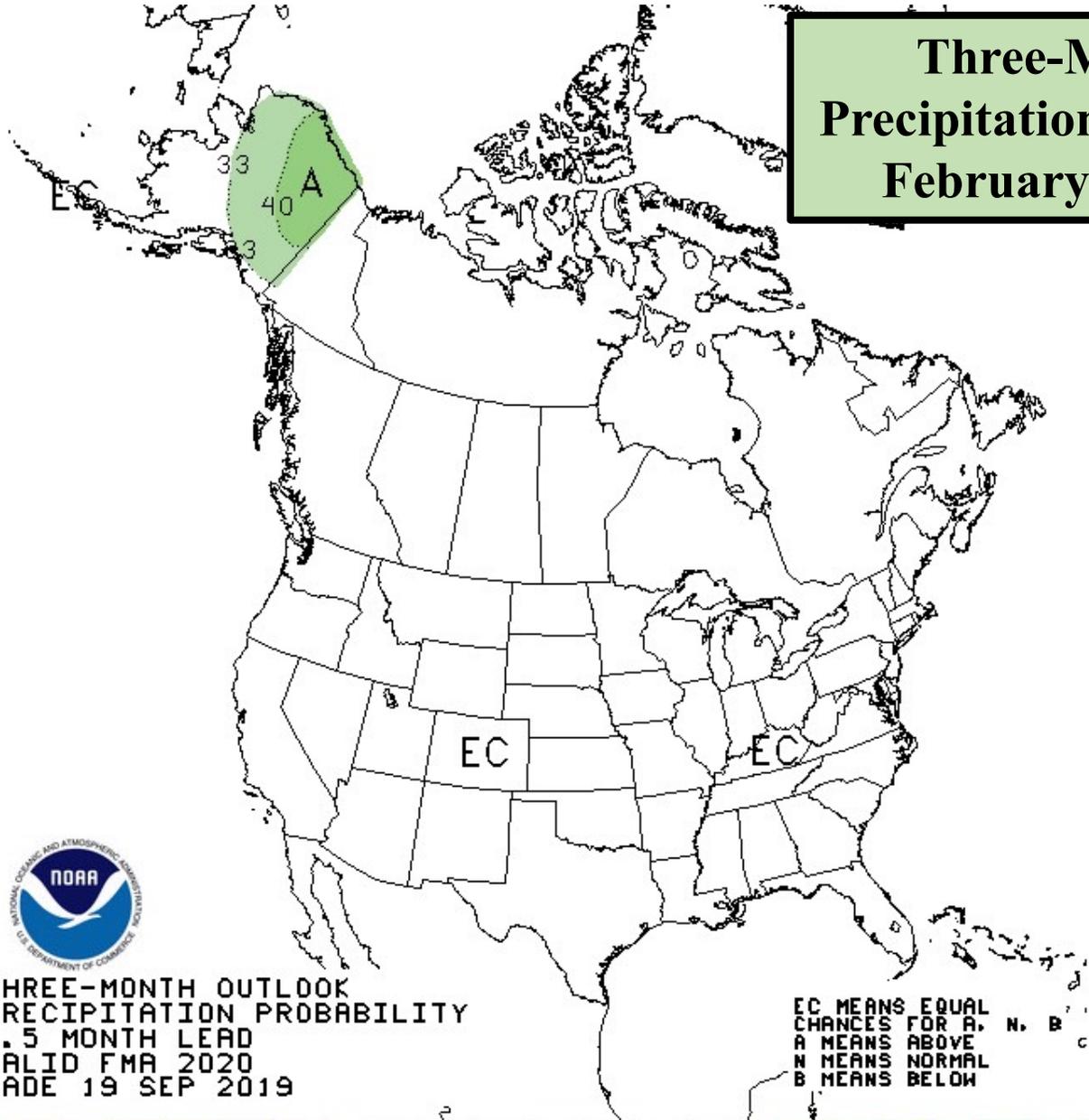


THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
2.5 MONTH LEAD
VALID DJF 2019
MADE 19 SEP 2019

EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

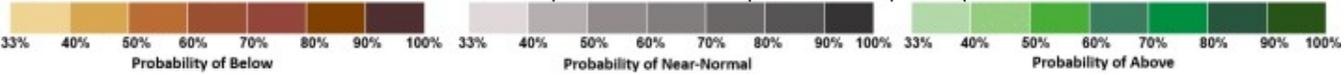


Three-Month Precipitation Outlook, February - April

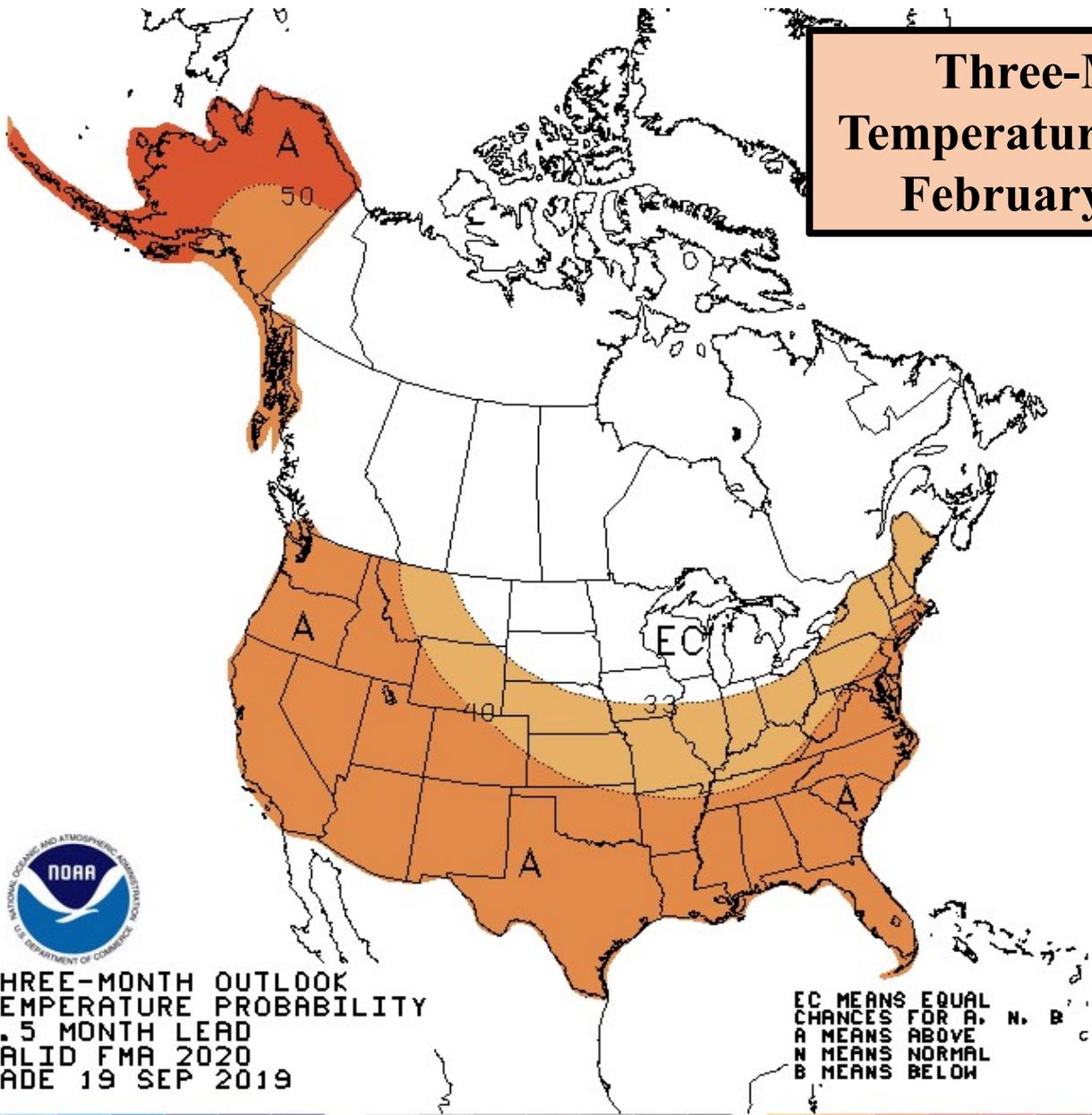


THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
4.5 MONTH LEAD
VALID FMA 2020
MADE 19 SEP 2019

EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

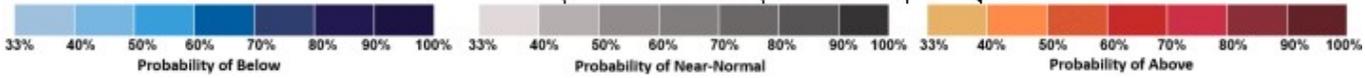


Three-Month Temperature Outlook, February - April



THREE-MONTH OUTLOOK
 TEMPERATURE PROBABILITY
 4.5 MONTH LEAD
 VALID FMA 2020
 MADE 19 SEP 2019

EC MEANS EQUAL CHANCES FOR A, N, B
 A MEANS ABOVE
 N MEANS NORMAL
 B MEANS BELOW

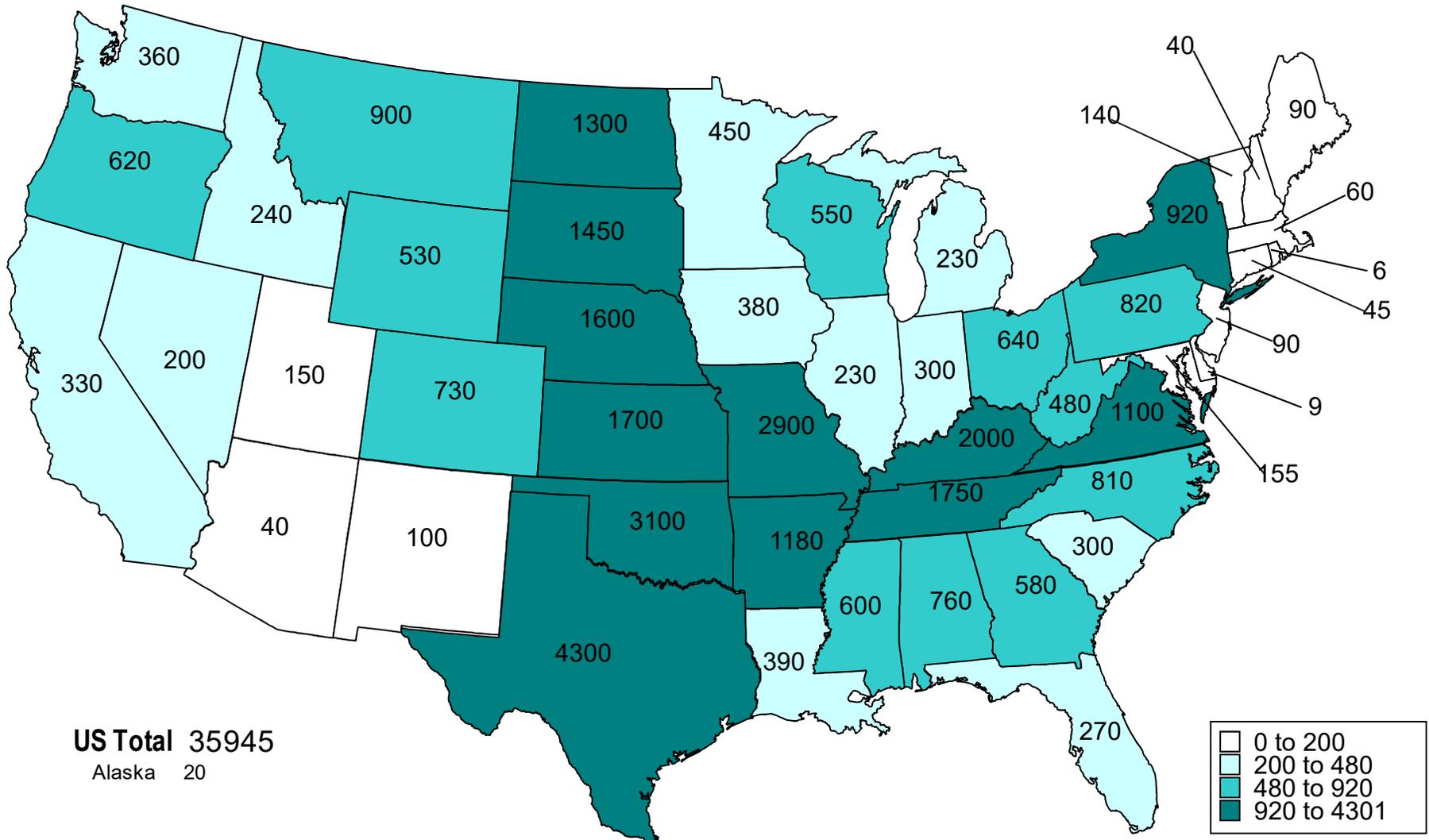


Hay Supply



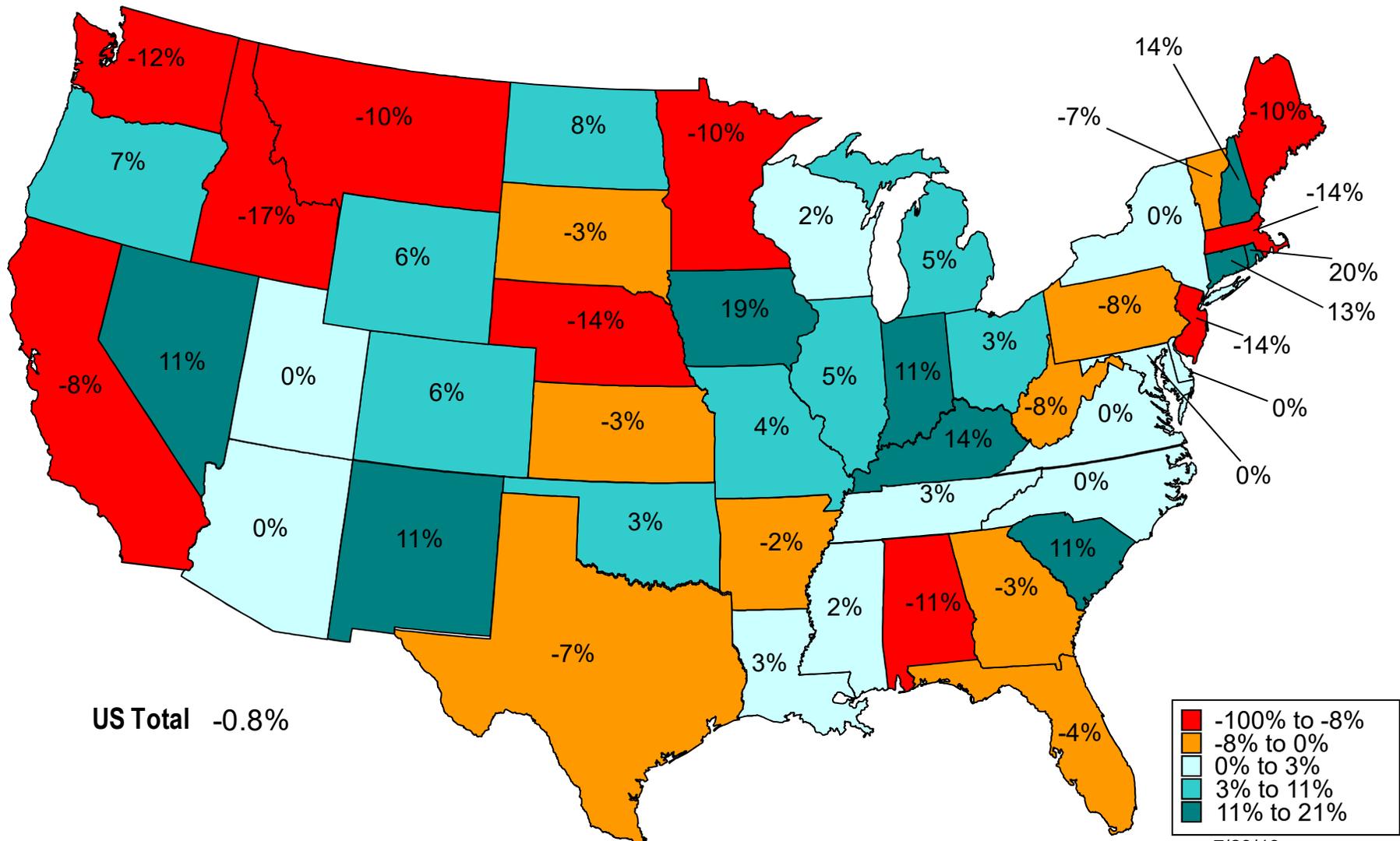
2019 OTHER HAY ACRES

(1000 Acres)

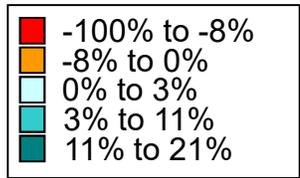


US Total 35945
Alaska 20

PERCENT CHANGE OTHER HAY ACRES (2018-2019)

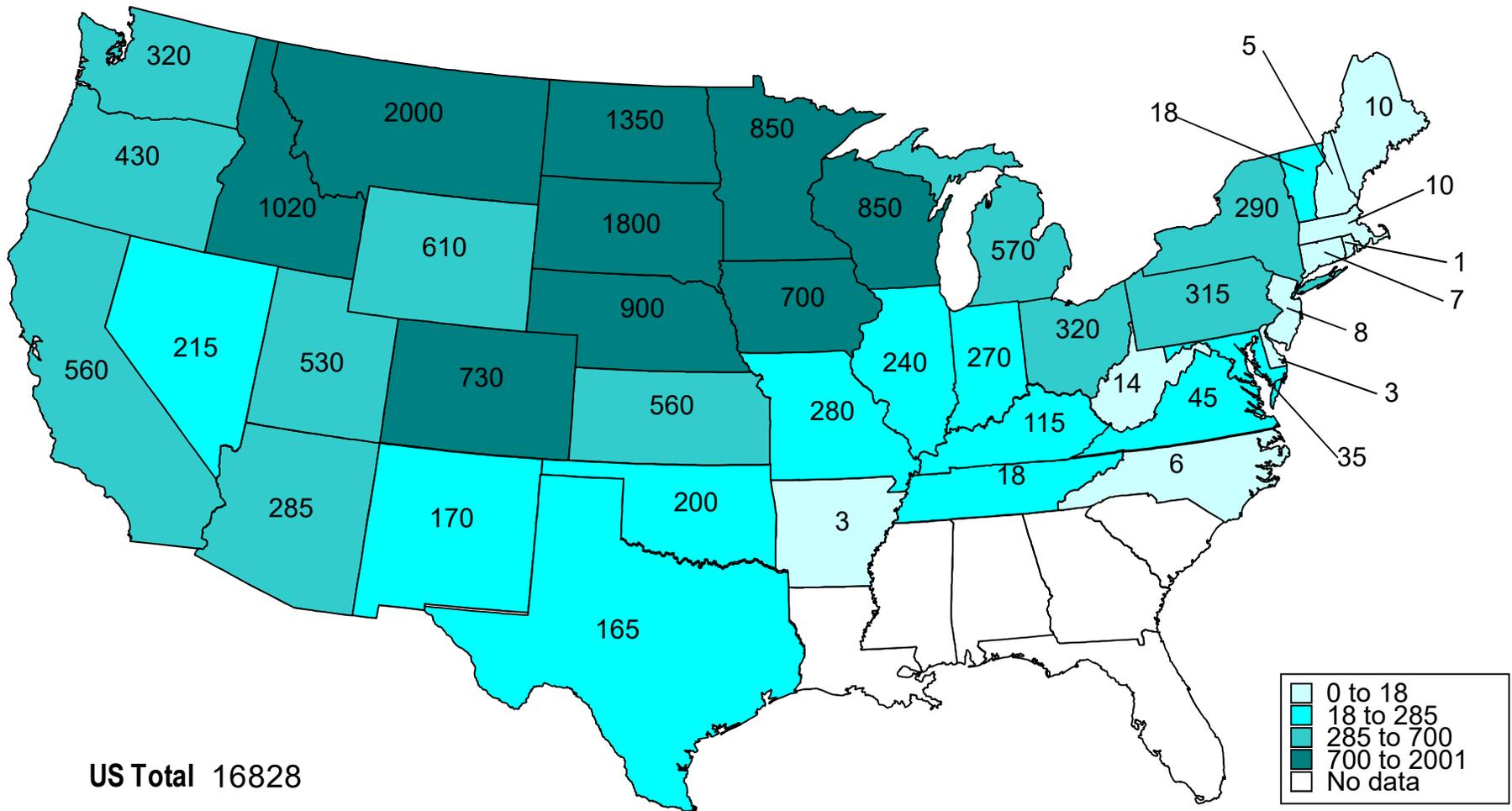


US Total -0.8%

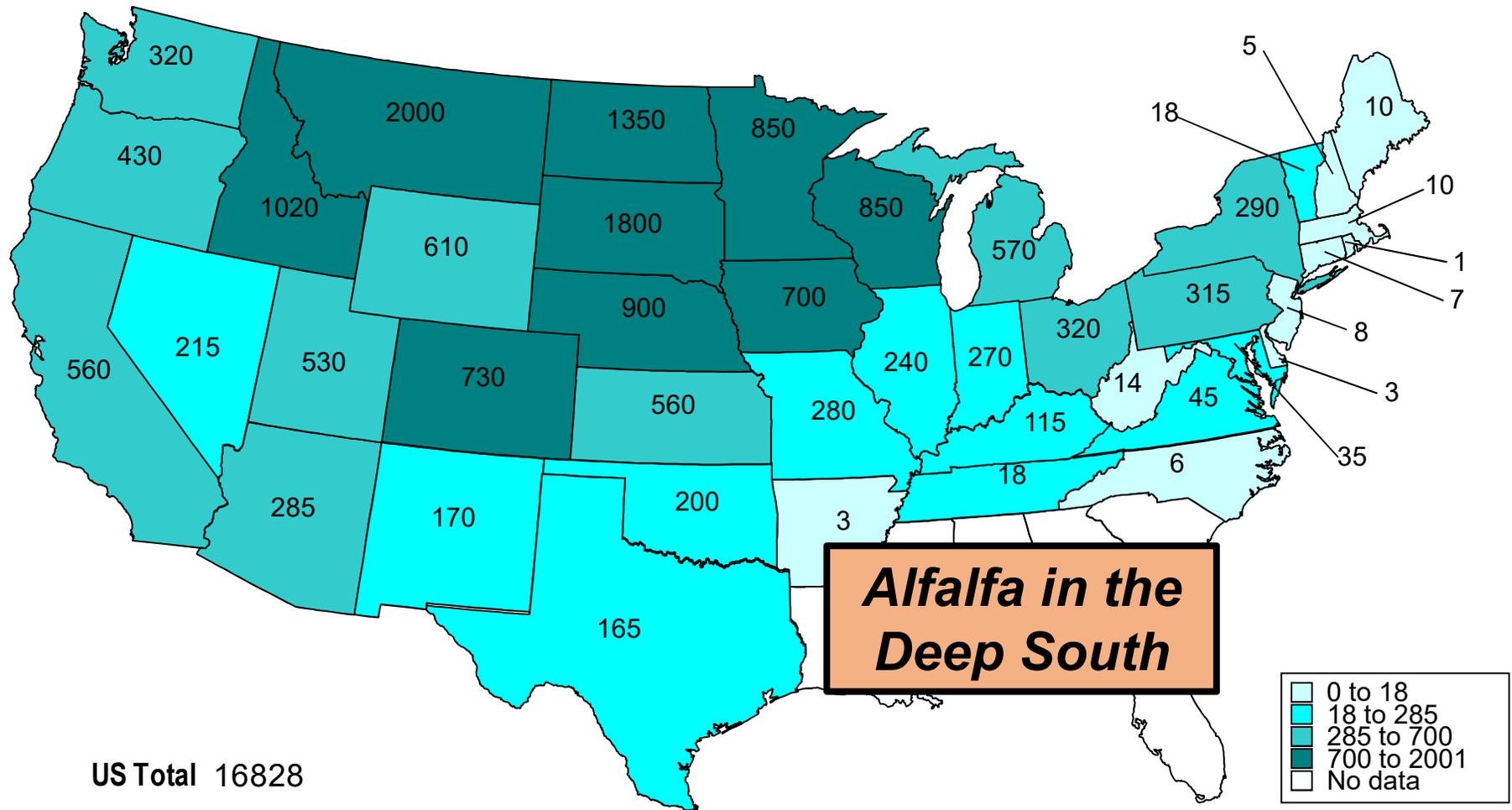


2019 ALFALFA HAY ACRES

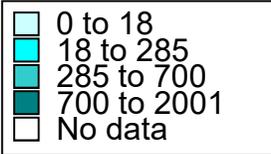
(1000 Acres)



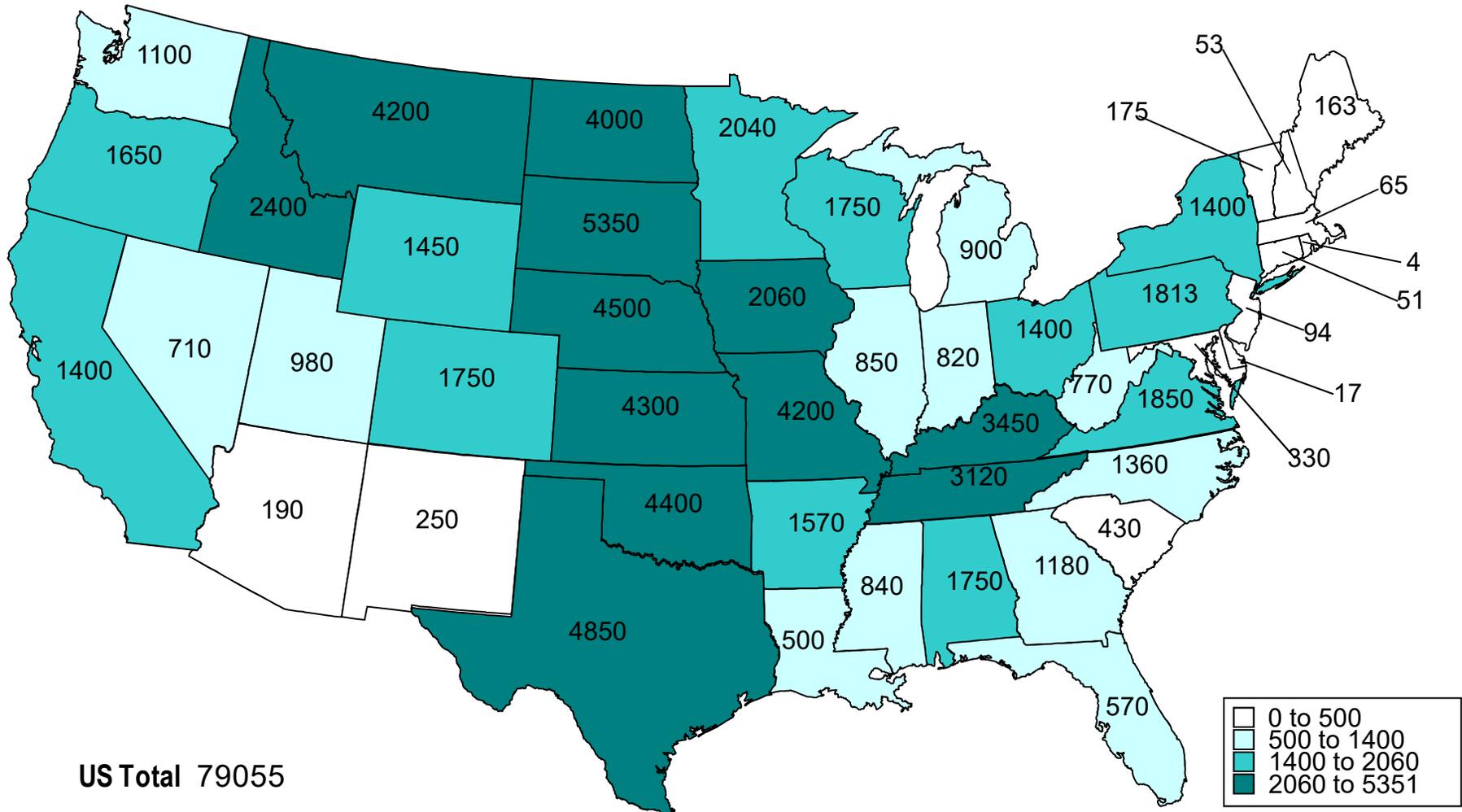
2019 ALFALFA HAY ACRES (1000 Acres)



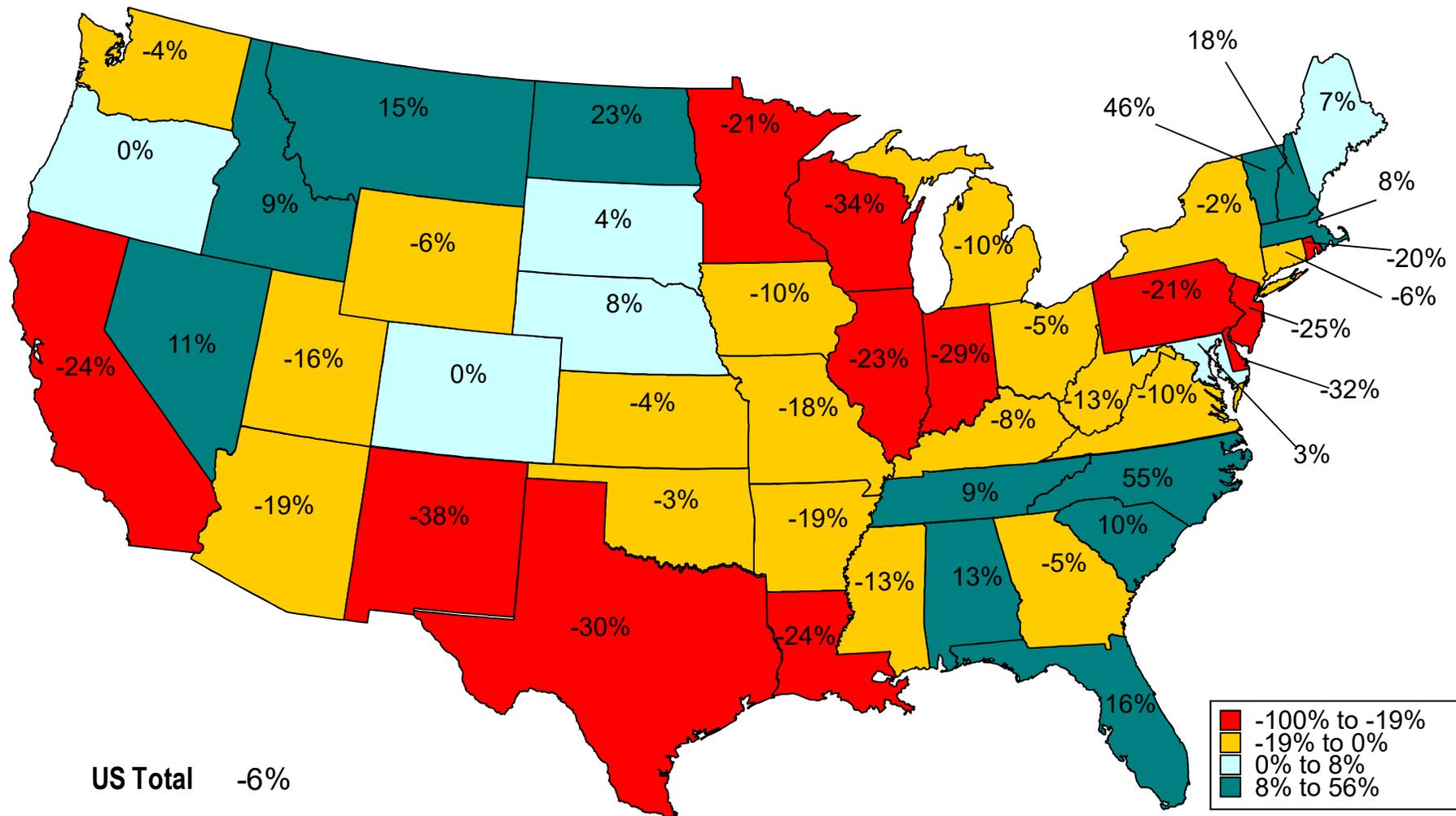
Alfalfa in the Deep South



2018 DECEMBER 1 HAY STOCKS (1000 Tons)

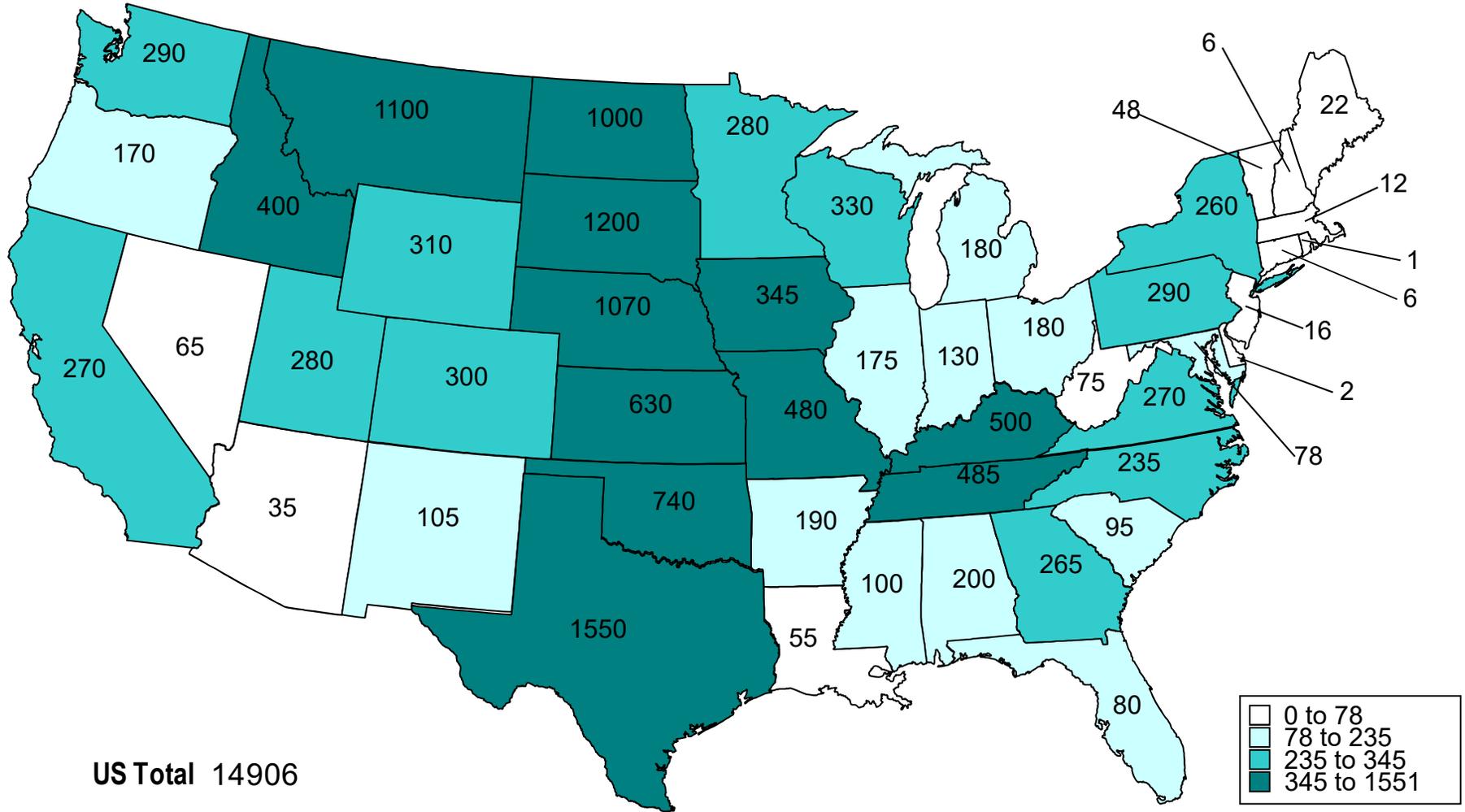


PERCENT CHANGE DECEMBER 1 HAY STOCKS (2017-2018)

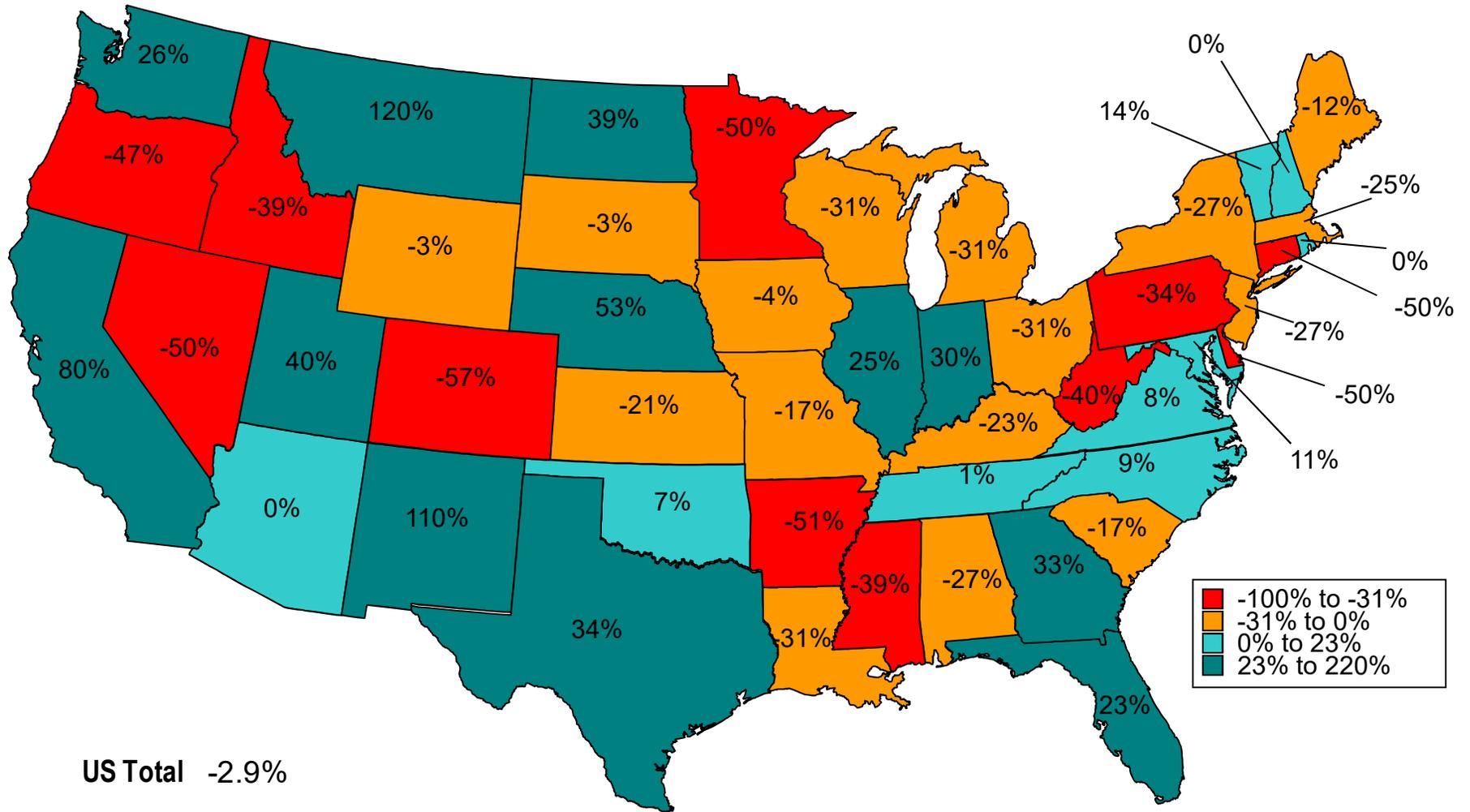


2019 MAY 1 HAY STOCKS

(1000 Tons)



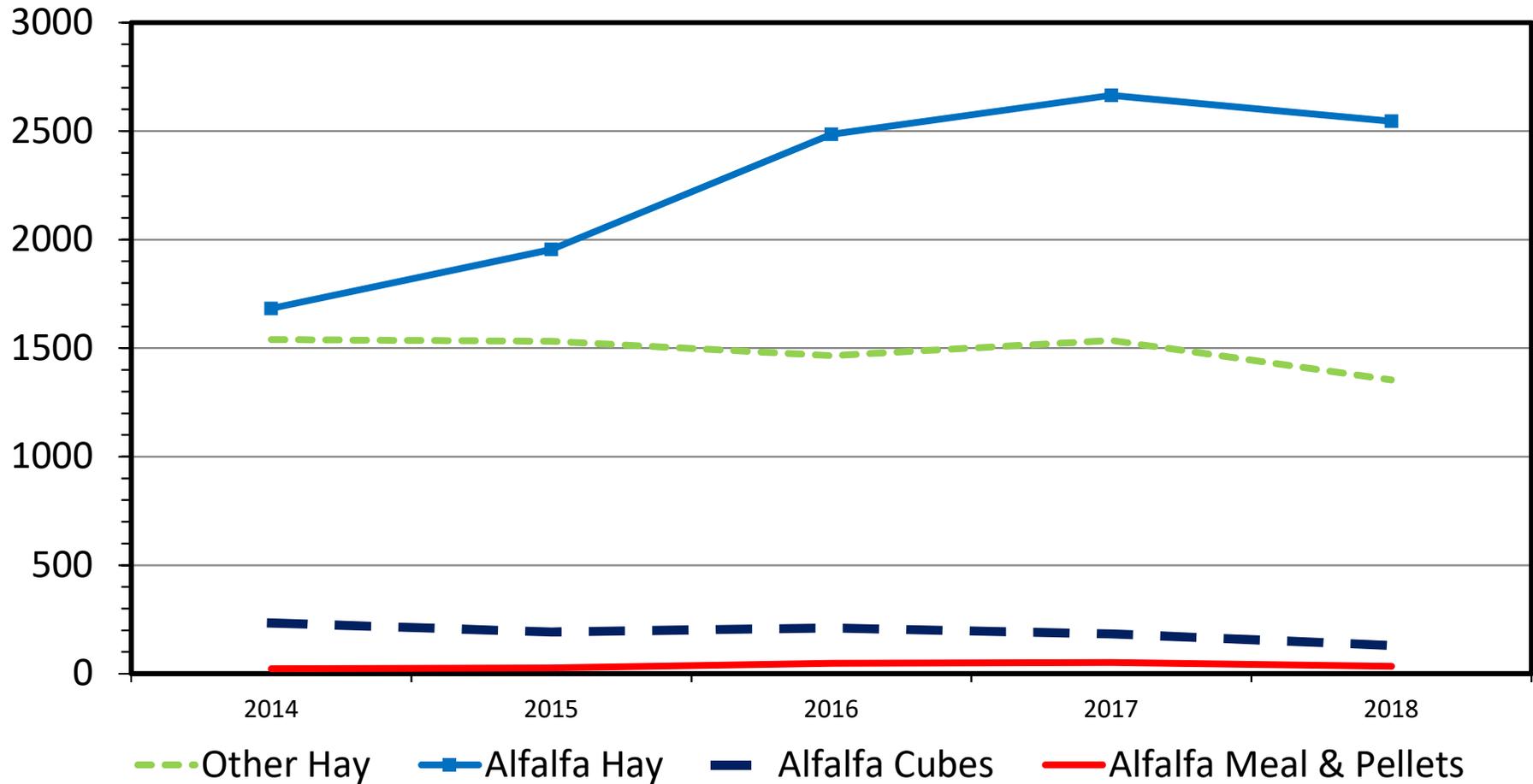
PERCENT CHANGE MAY 1 HAY STOCKS (2018-2019)



U.S. HAY & HAY PRODUCT EXPORTS

Thous. Metric Tons

Annual



Data Source: USDA-FAS, Compiled & Analysis by LMIC

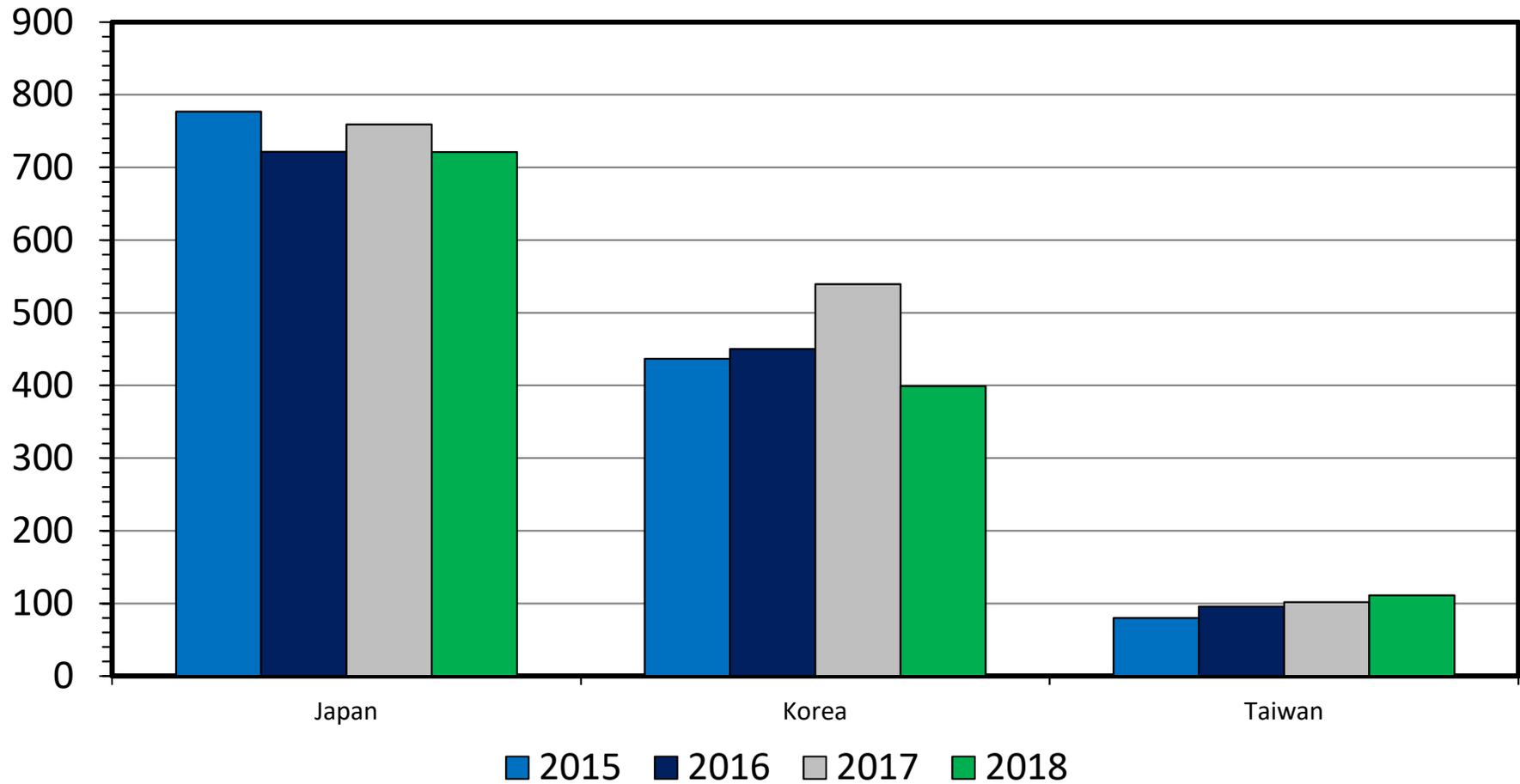
Livestock Marketing Information Center

03/07/19

OTHER HAY EXPORTS

Thous. Metric Tons

Annual



Data Source: USDA-FAS, Compiled & Analysis by LMIC

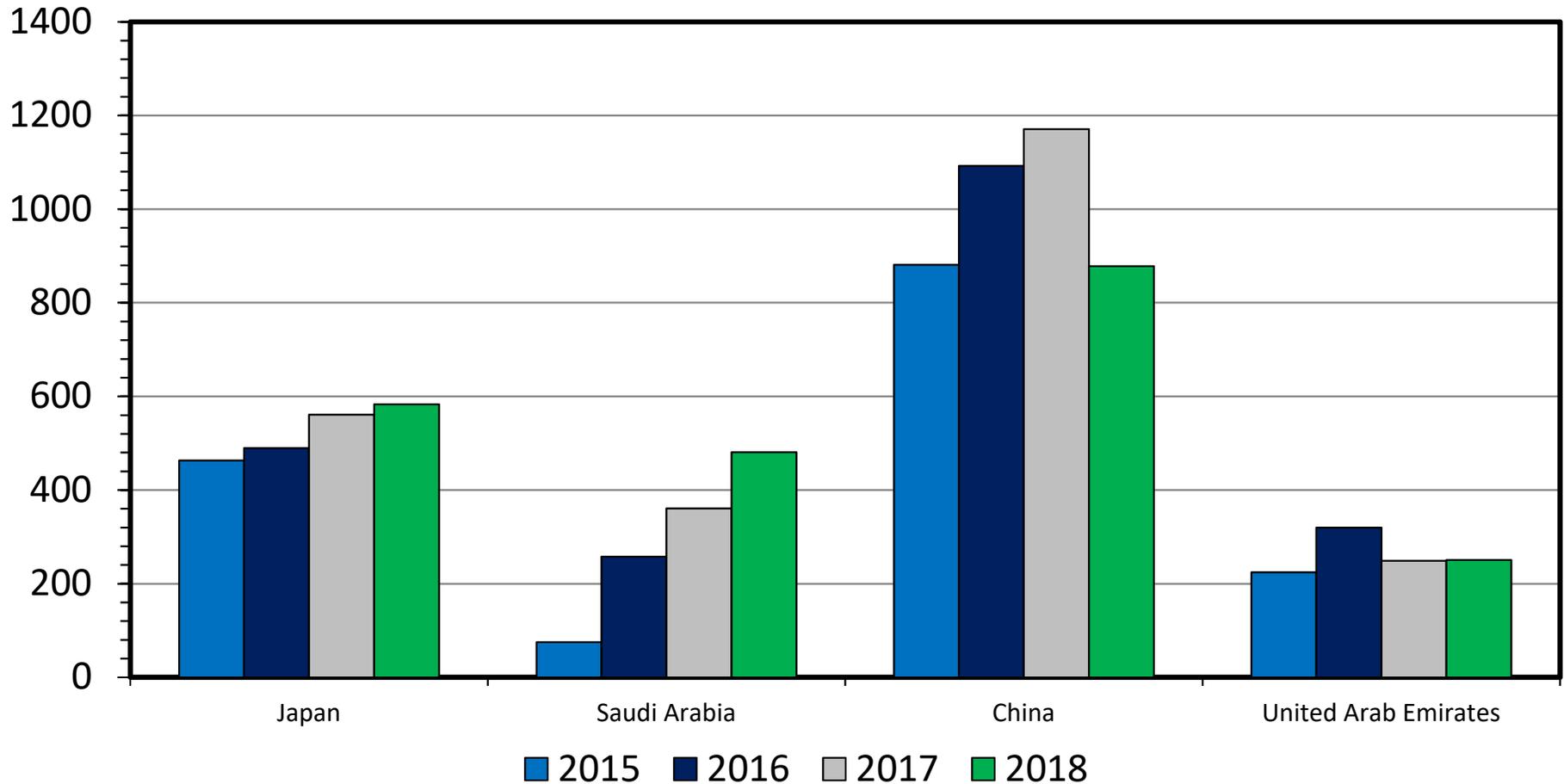
Livestock Marketing Information Center

03/07/19

ALFALFA HAY EXPORTS

Thous. Metric Tons

Annual



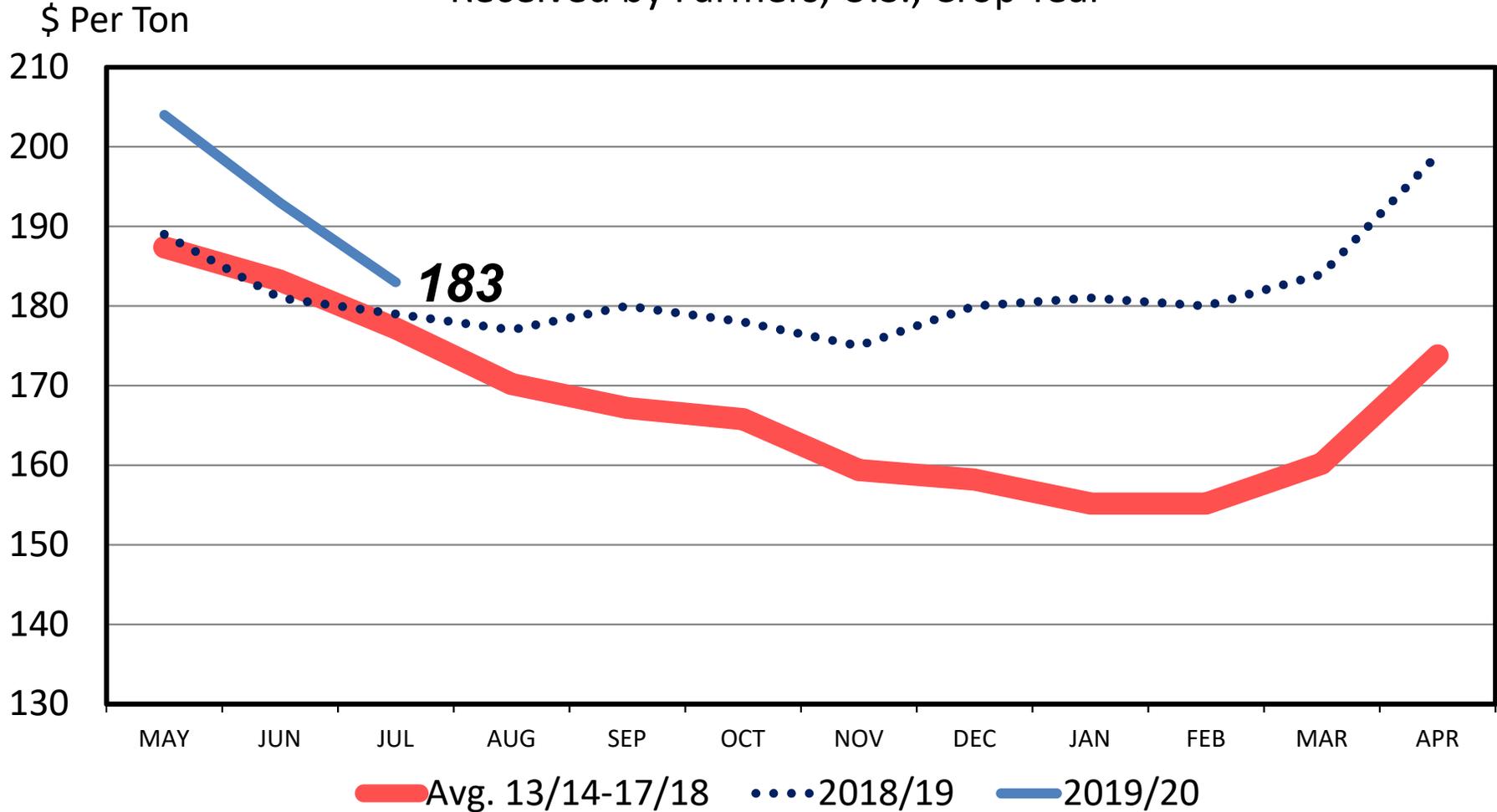
Data Source: USDA-FAS, Compiled & Analysis by LMIC

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ALFALFA HAY – MONTHLY AVERAGE PRICE

Received by Farmers, U.S., Crop Year



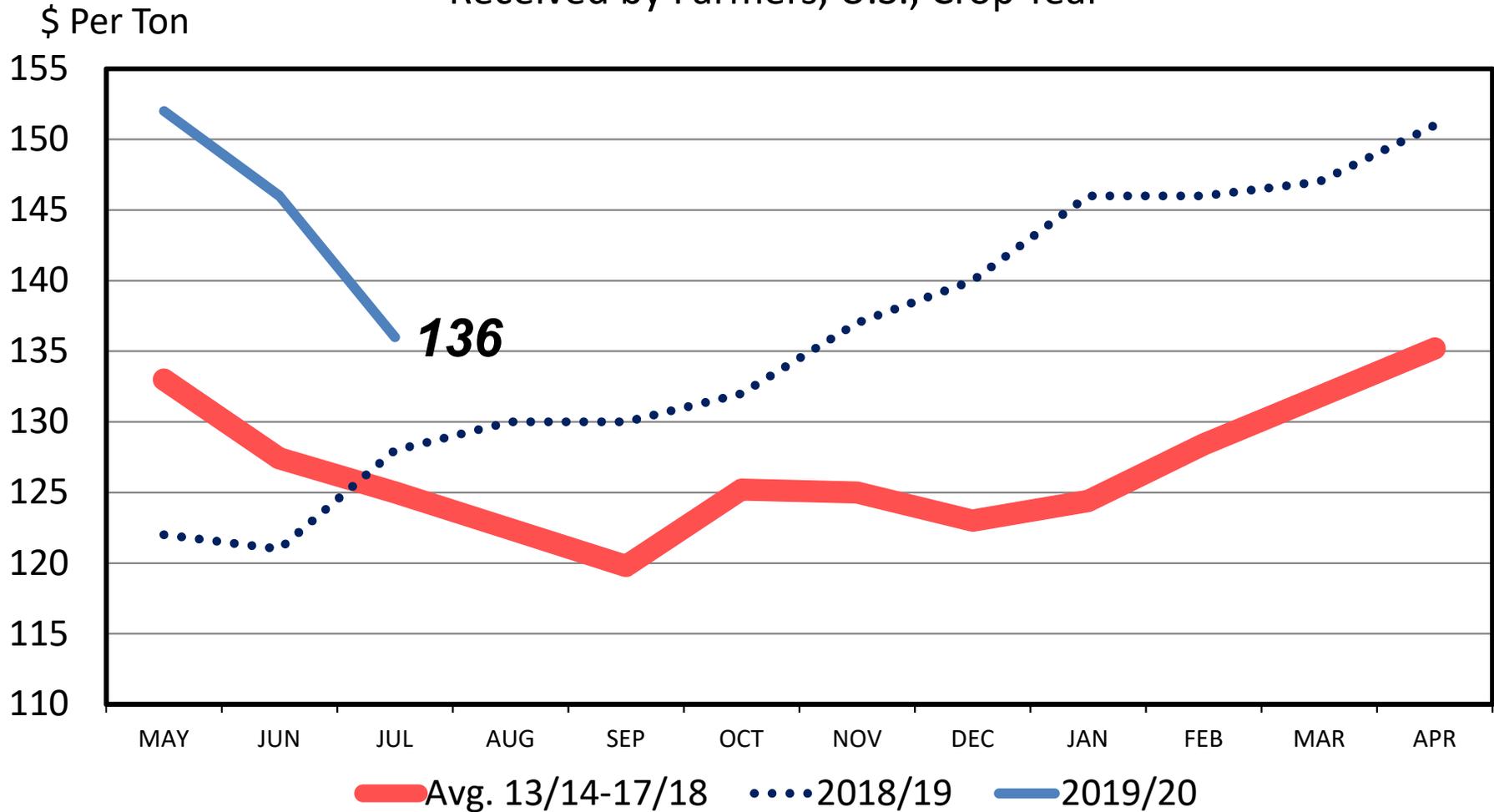
Data Source: USDA-NASS

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G-P-12
08/30/19

OTHER HAY – MONTHLY AVERAGE PRICE

Received by Farmers, U.S., Crop Year



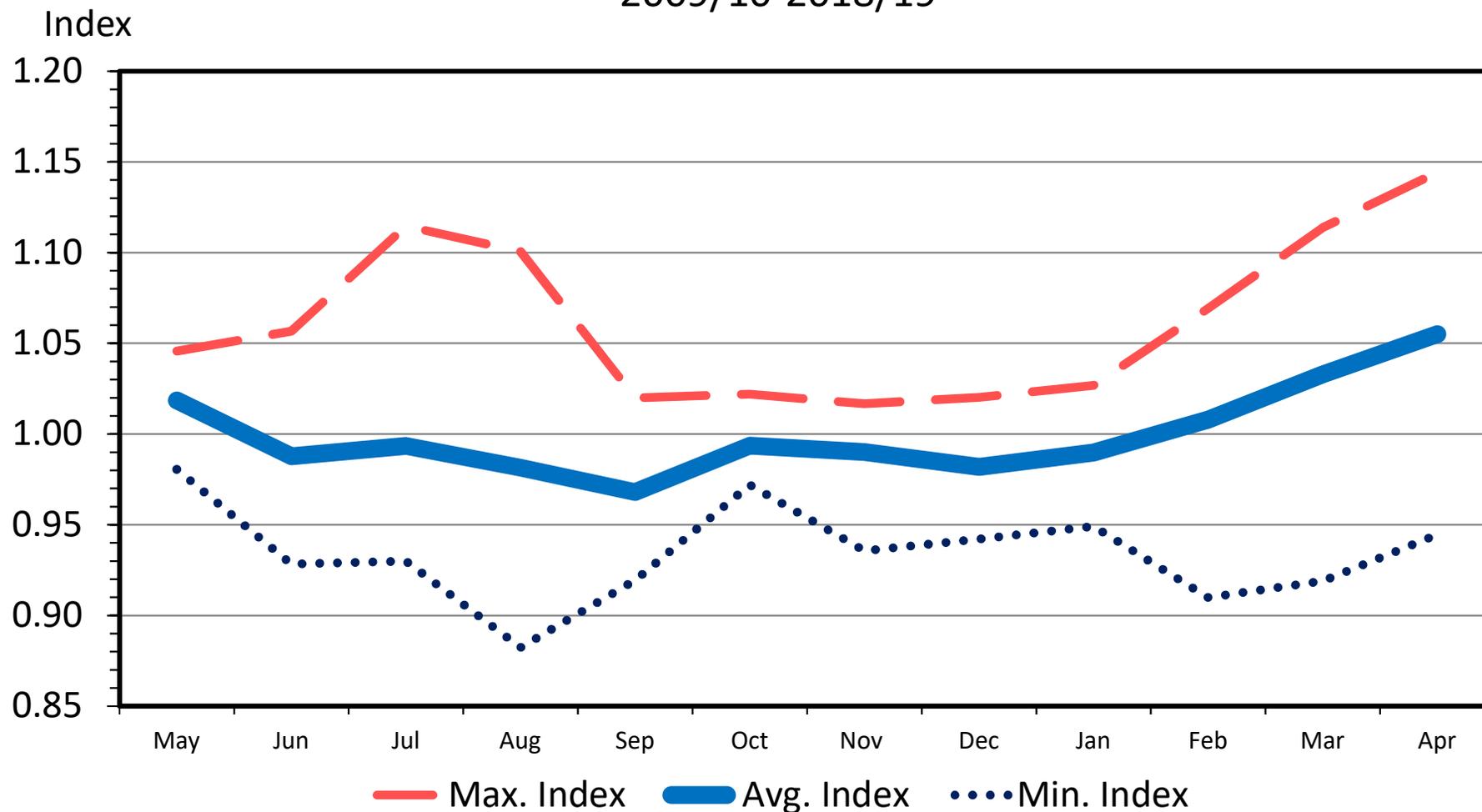
Data Source: USDA-NASS

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G-P-13
08/30/19

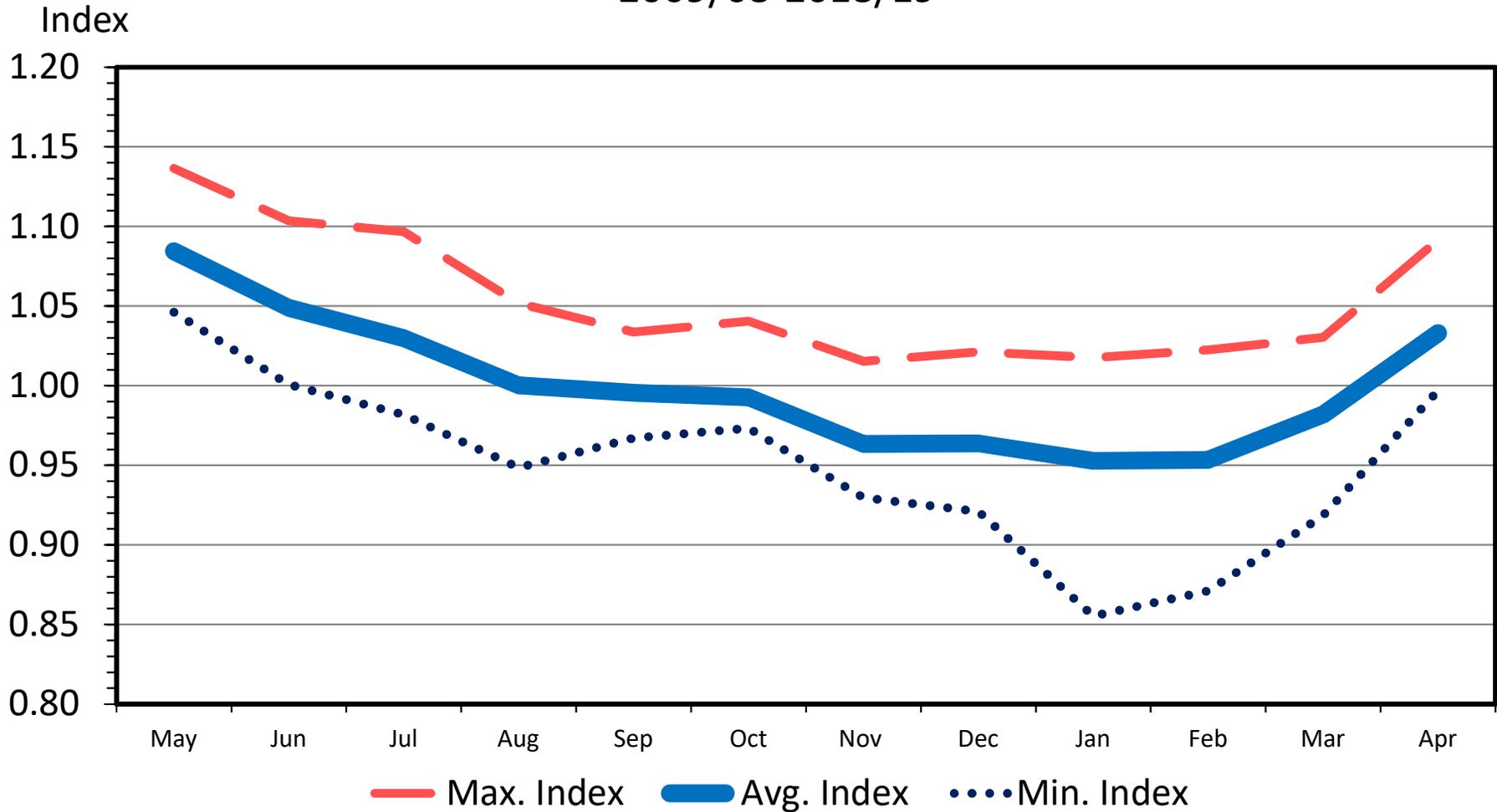
SEASONAL PRICE INDEX – OTHER HAY

2009/10-2018/19



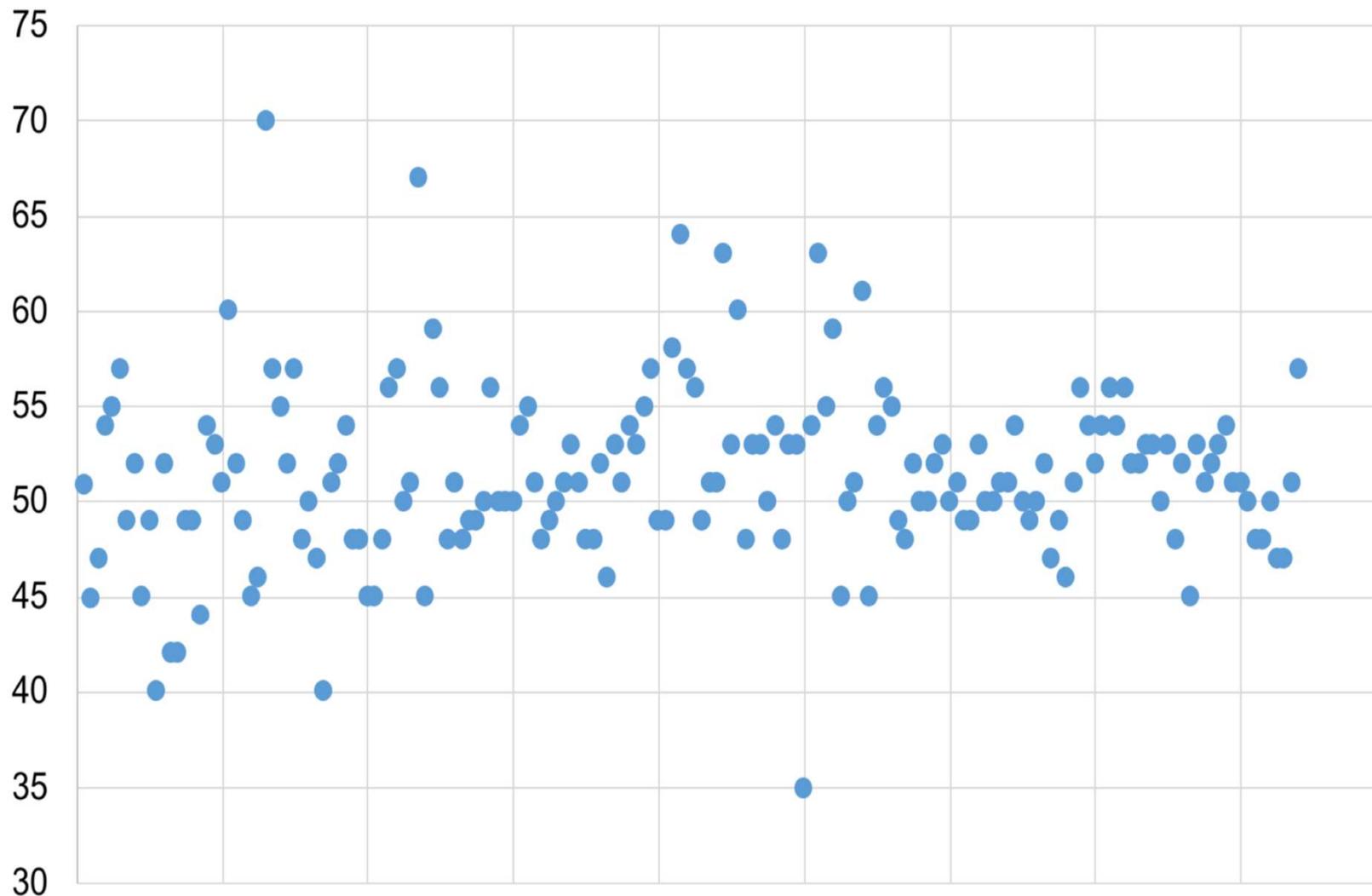
SEASONAL PRICE INDEX – ALFALFA HAY

2009/08-2018/19



2017 Bahiagrass Forage Samples

TDN %

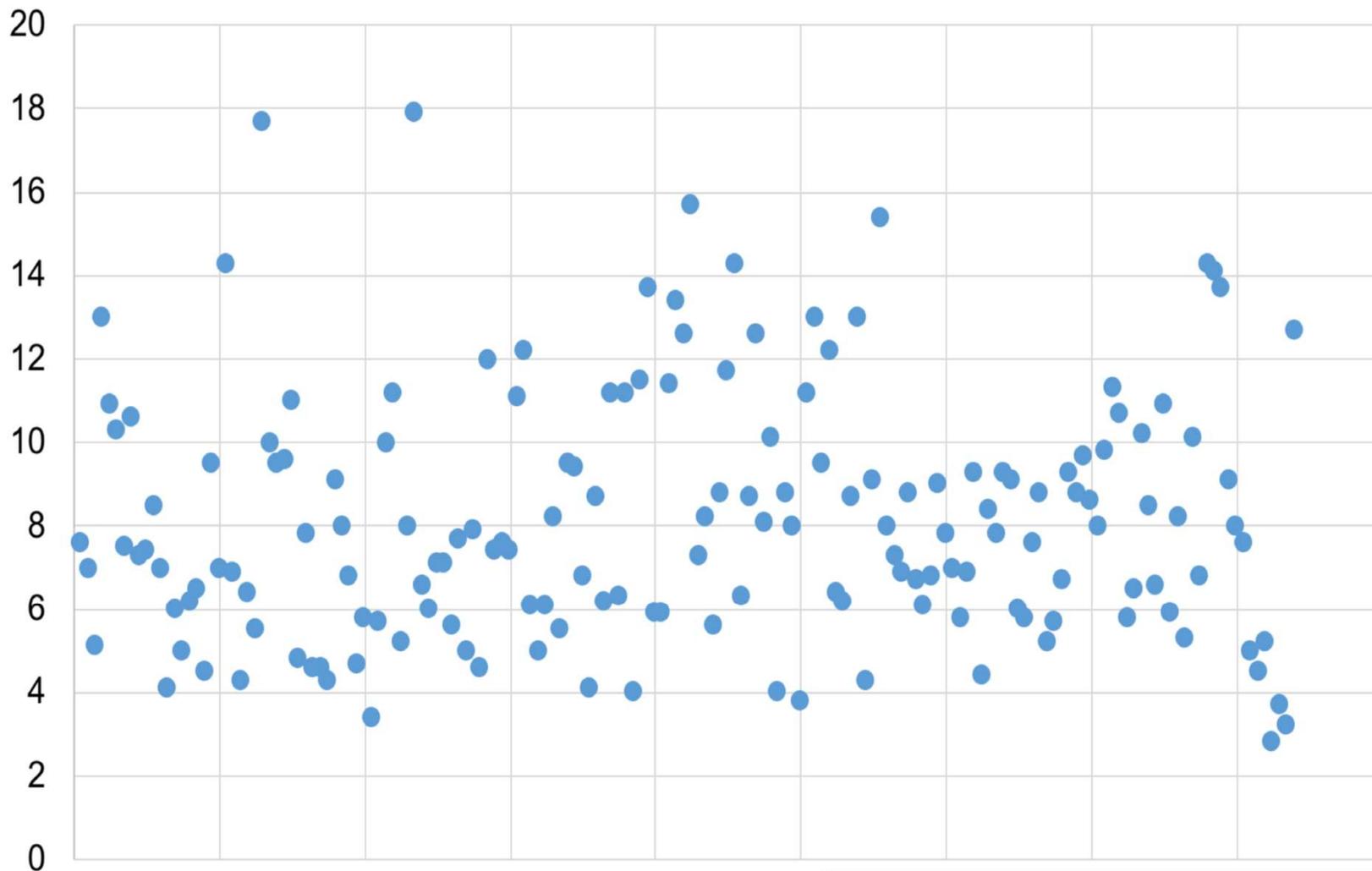


Source: Vendramini and Prevatt, 2017

168 Samples, Avg. 51.39% TDN

2017 Bahiagrass Forage Samples

CP %



Source: Vendramini and Prevatt, 2017

168 Samples, Avg. 8.11% CP

***Fall - Winter 2018 Stockpiled
Bahagrass Forage Samples***

<i>Date</i>	<i>TDN</i>	<i>CP</i>
<i>15-Oct</i>	<i>50</i>	<i>11</i>
<i>15-Nov</i>	<i>48</i>	<i>9</i>
<i>15-Dec</i>	<i>47</i>	<i>8</i>
<i>15-Jan</i>	<i>44</i>	<i>6</i>

Dead Grass??

***Stockpiled
Bahagrass
can be as
good as Hay
Harvested in
the Fall.***

***Source: Range Cattle REC Forage
Lab. Ona, Florida***

Winter 2019-2020 Hay Feeding Costs

1 Roll of Bahiagrass Hay (850 DM lbs.) @ \$45/Roll

2.35 Rolls of Bahiagrass/DM ton

*2.35 Rolls/DM ton * \$45/Roll = \$106/DM ton*

\$106 / 2,000 lbs. = \$0.053/DM lb.

1,200 lb. Gestating Beef Cow during the Last 1/3 of her pregnancy requires a dry matter intake of 2.0% of her body weight, or 24 DM lbs.

*\$0.053 * 24 DM lbs. = \$1.27/beef cow/day*

(with no hay waste, storage, or feeding costs included, just the cost of the hay)

Winter 2019-2020 Hay Feeding Costs

Assumption 1: There was easily 15% hay waste once they started feeding hay in January. Some rolls there was more, some there was less. This brings the amount of DM Hay required to 27.6 DM lbs.

Assumption 2: Feeding hay using a tractor burns fuel and costs money. Additionally, the barn the hay sits under is nice. We'll add another \$5 per roll to store and get it fed.

Assumption 3: Their time spent feeding hay is part of their labor and management. Additional labor costs were not accounted for in this analysis. If they had used hired labor, that would have been an added expense.

Winter 2019-2020 Hay Feeding Costs

Original Cost: \$106/DM ton

New Cost: \$111/DM ton

Original Dry Matter Intake: 24 DM lbs./beef cow/day

New Dry Matter Intake: 27.6 DM lbs./beef cow/day

*Original Cost: $\$0.053 * 24 \text{ DM lbs.} = \$1.27/\text{beef cow/day}$*

*New Cost: $\$0.055 * 27.6 \text{ DM lbs.} = \$1.53/\text{beef cow/day}$*

Winter 2019-2020 Hay Feeding Costs

Original Cost: \$106/DM ton

New Cost: \$111/DM ton

Original Dry Matter Intake: 24 DM lbs./beef cow/day

New Dry Matter Intake: 27.6 DM lbs./beef cow/day

*Original Cost: $\$0.053 * 24 \text{ DM lbs.} = \$1.27/\text{beef cow/day}$*

For 120 Days: \$152/beef cow

*New Cost: $\$0.055 * 27.6 \text{ DM lbs.} = \$1.53/\text{beef cow/day}$*

For 120 Days: \$183/beef cow

Integrating Cattle and Crops

- *My crop guys think the cattle guys are making all the money*
 - *Grazing Cover Crops, Selling Truckload Units of Weaned Calves*
- *My cattle guys think the crop guys are making all the money*
 - *Revenue/Acre, Government Payments*
- *The truth is neither one of them is making the money \$*



Cool-Season Annual Forage Mix

Forage Cost of Production: \$150 -170/acre



Cool-Season Annual Forage Mix

Forage Cost of Gain (FCOG): \$0.25 - \$0.35

Target Average Daily Gain: 2.0 lbs./head/day



Challenges and Opportunities

*Get it planted, it'll do what it can
Still gonna be better than feeding hay*



Canadian Oats don't make it through a Florida Winter



Warm-Season Annual Forage Mix

Forage Cost of Production: \$150 - \$170/acre

Target Average Daily Gain (ADG): 1.75 lbs./head/day



Warm-Season Annual Forage Mix

Forage Cost of Gain (FCOG): \$0.35 - \$0.40

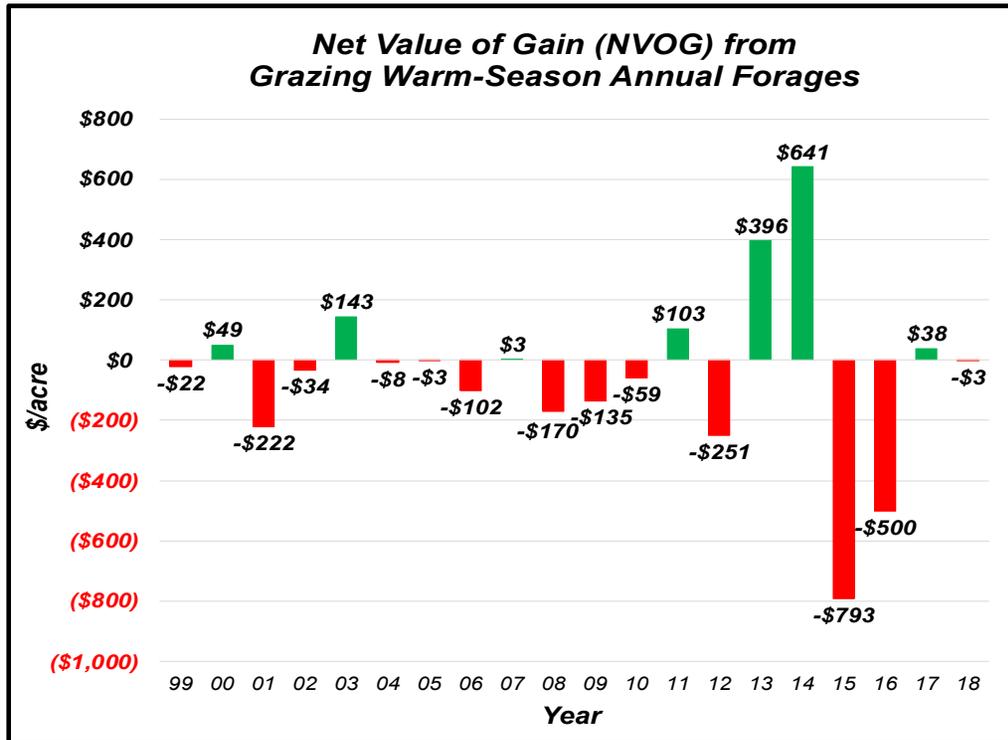


Perennial Mixed Forage Pastures

Target Average Daily Gain (ADG): Get what you can...

Results

Avg. $-\$46/\text{acre}$



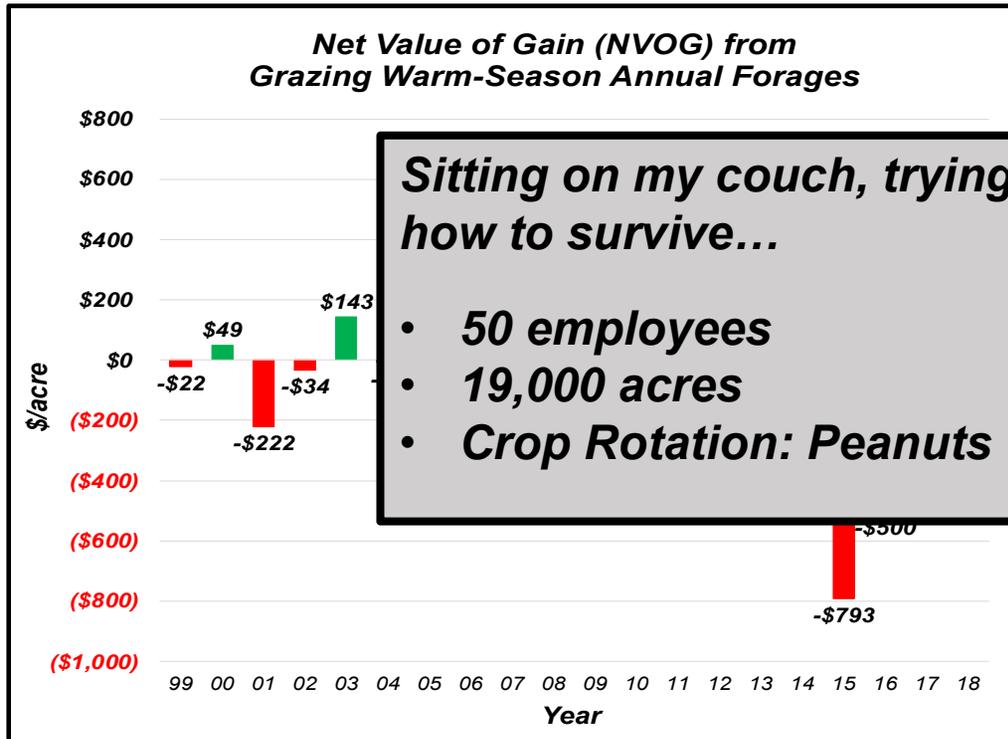
That Time a Beef Cattle and Forage Economist “thought” he could help fix a Crop Economics Problem....

Outlaw – Texas A&M

- I am not going to say that all farmers are broke and we are headed for a 1980s type crash
- What I think is true is that for the 300,000 to 400,000 real farmers in the U.S., the likelihood of failure is equal to the likelihood of staying in business – some just don't realize it
- Across the country the record yields experienced over the last few years temporarily changed the outlook and put off a disaster—for now

Results

Avg. $-\$46/\text{acre}$



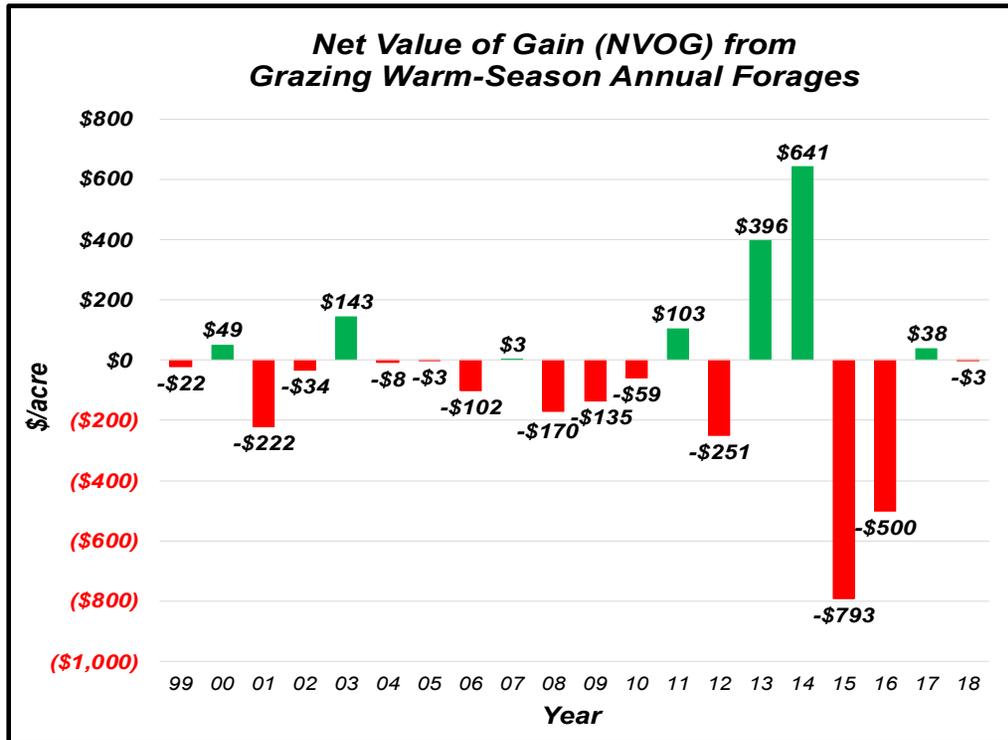
**Sitting on my couch, trying to figure out
how to survive...**

- 50 employees
- 19,000 acres
- Crop Rotation: Peanuts & Something...

**That Time a Beef Cattle and Forage
Economist “thought” he could help fix
a Crop Economics Problem....**

Results

Avg. $-\$46/\text{acre}$



Grazing Warm-Season Annual Forage Cash Crop produced a positive net value of gain in 7 out of 20 years evaluated.

Note: *production expectations were based on elite producers with a high level of management*

Results

Avg. -\$46/acre

*Net Value of Gain (NVOG) from
Grazing Warm-Season Annual Forages*

Things I remembered:

- 1) I can't pay cropland cash rents grazing cattle (WSAFM)*
- 2) I definitely can't cover the fixed costs of row crop machinery and equipment that isn't being used on this rented ground...*

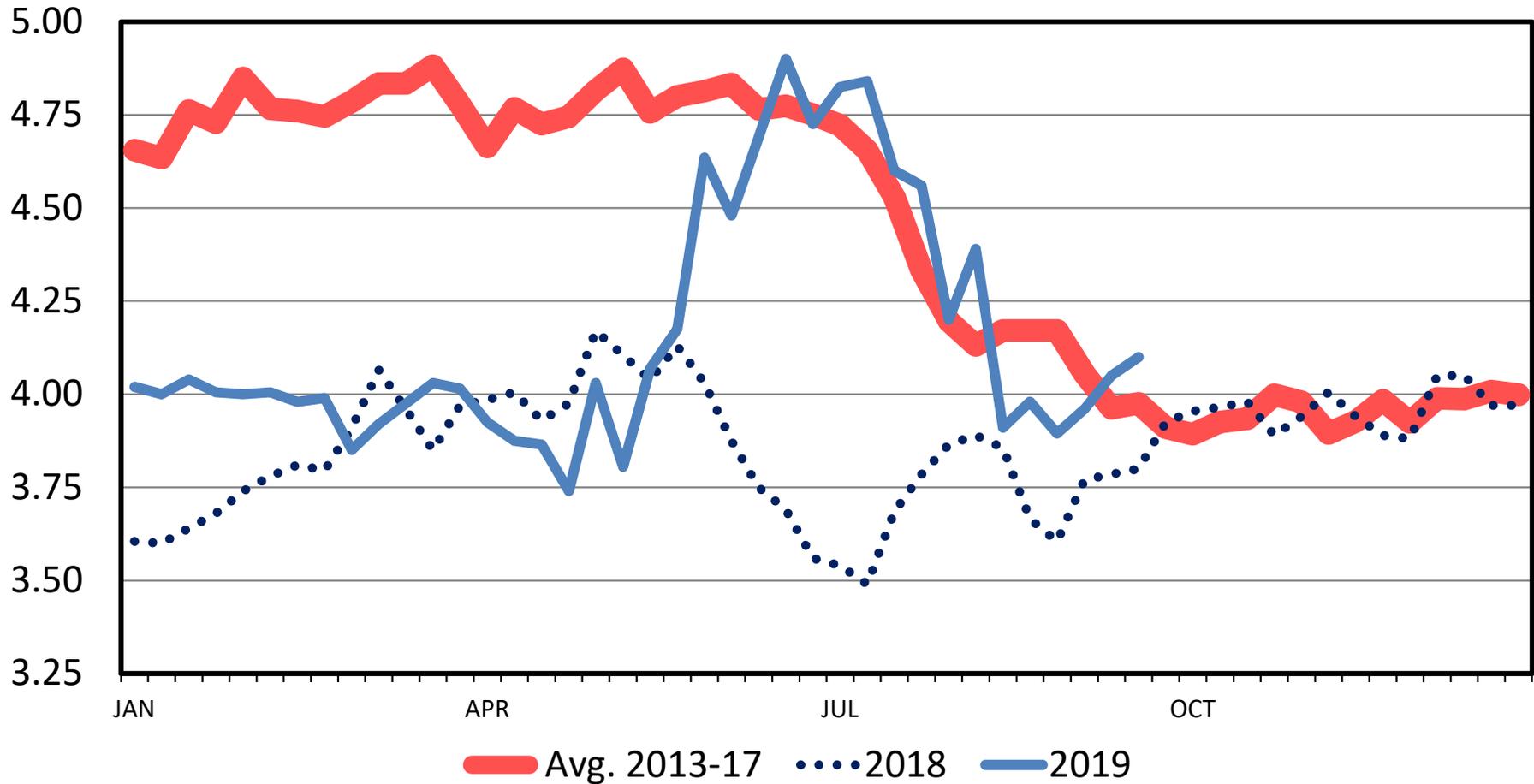
Grazing Warm-Season Annual Forage Cash Crop produced a positive net value of gain in 7 out of 20 years evaluated.

Note: *production expectations were based on elite producers with a high level of management*

SOUTHERN PLAINS CORN PRICES

Weekly

\$ Per Bu.



Data Source: USDA-AMS

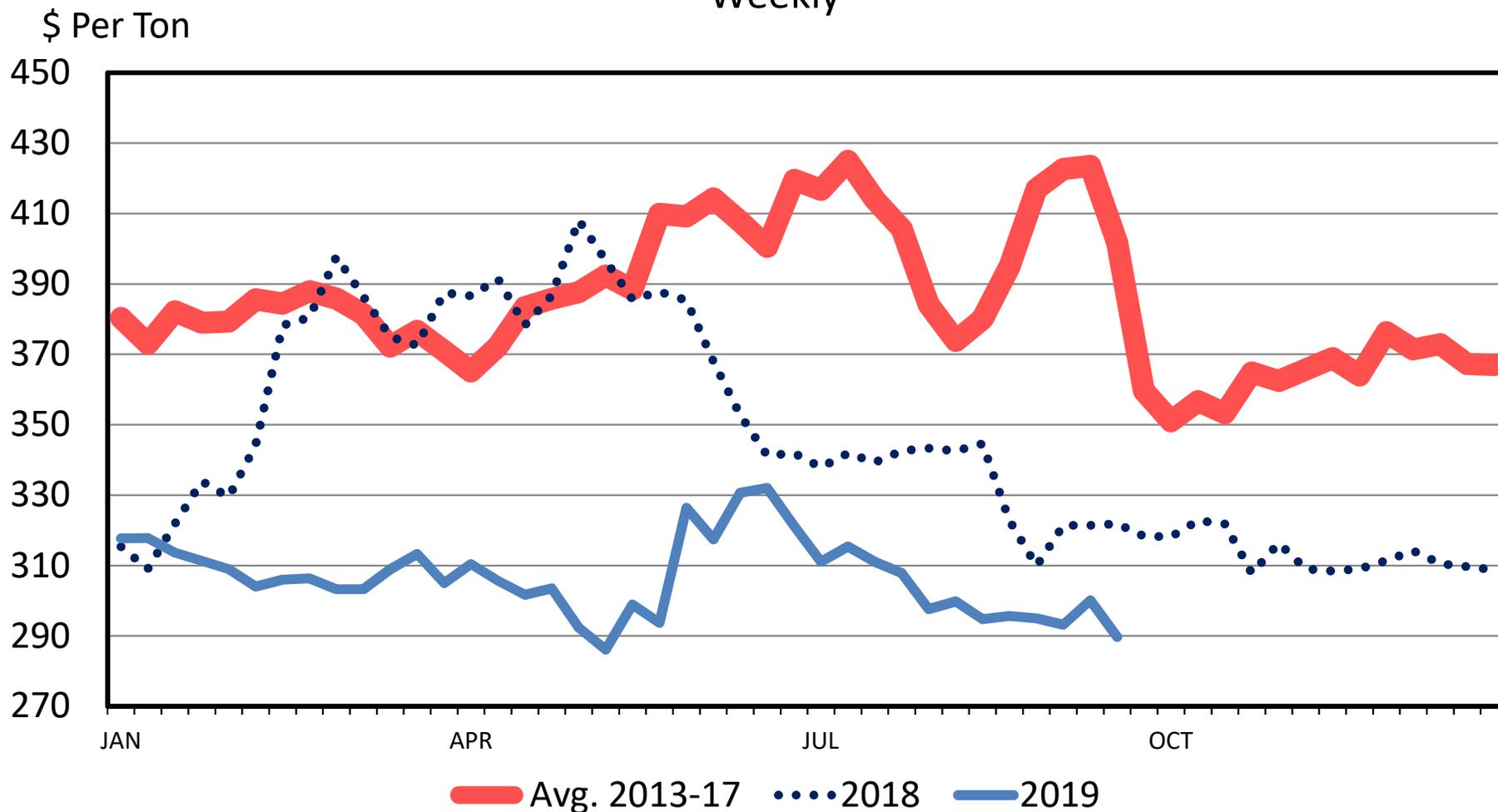
Livestock Marketing Information Center

G-P-04

09/19/19

CENTRAL ILLINOIS SOYBEAN MEAL (48%) PRICES

Weekly



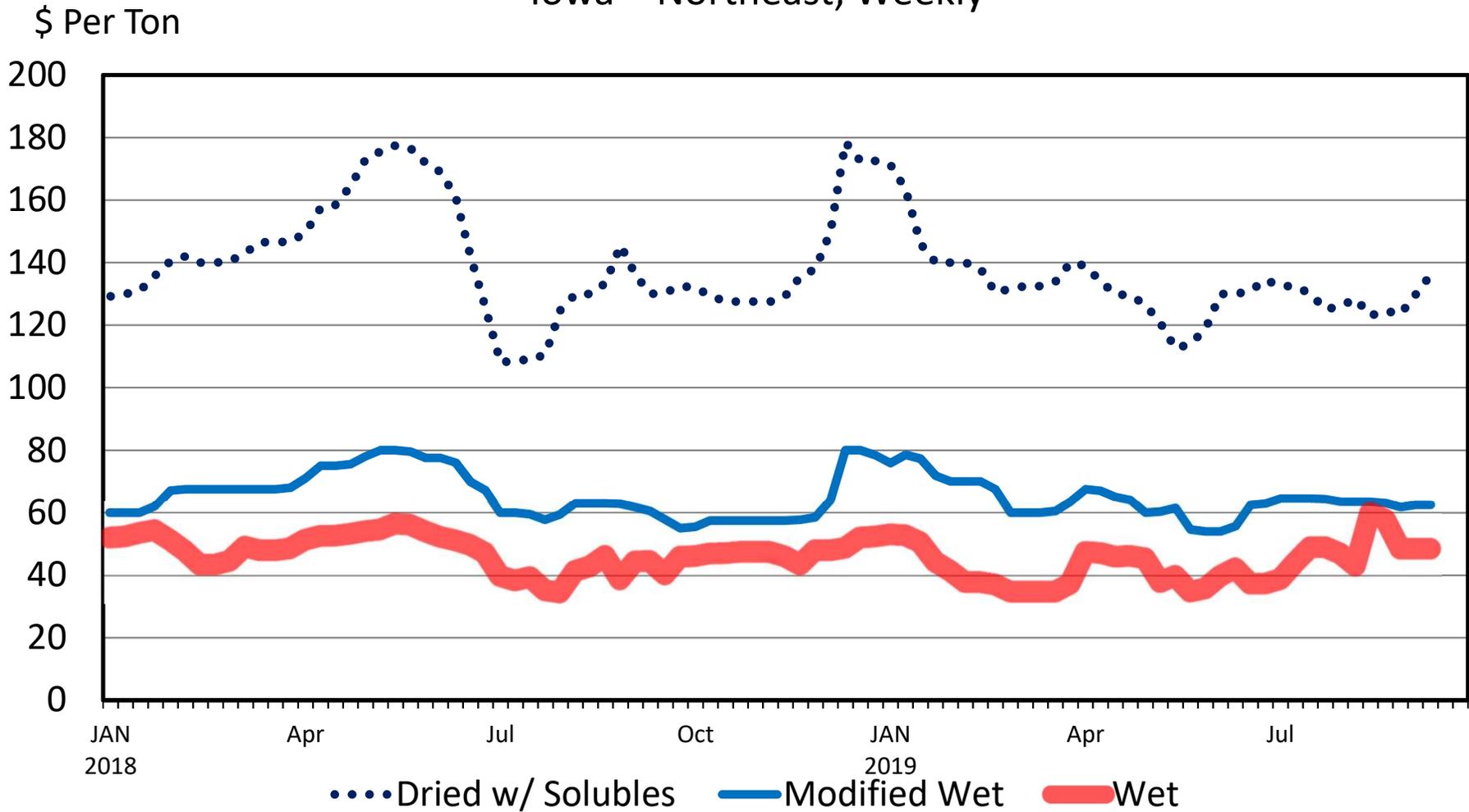
Data Source: USDA-AMS

Livestock Marketing Information Center

G-P-07
09/19/19

DISTILLERS GRAIN PRICES

Iowa – Northeast, Weekly



Data Source: USDA-AMS

09/19/19

Livestock Marketing Information Center

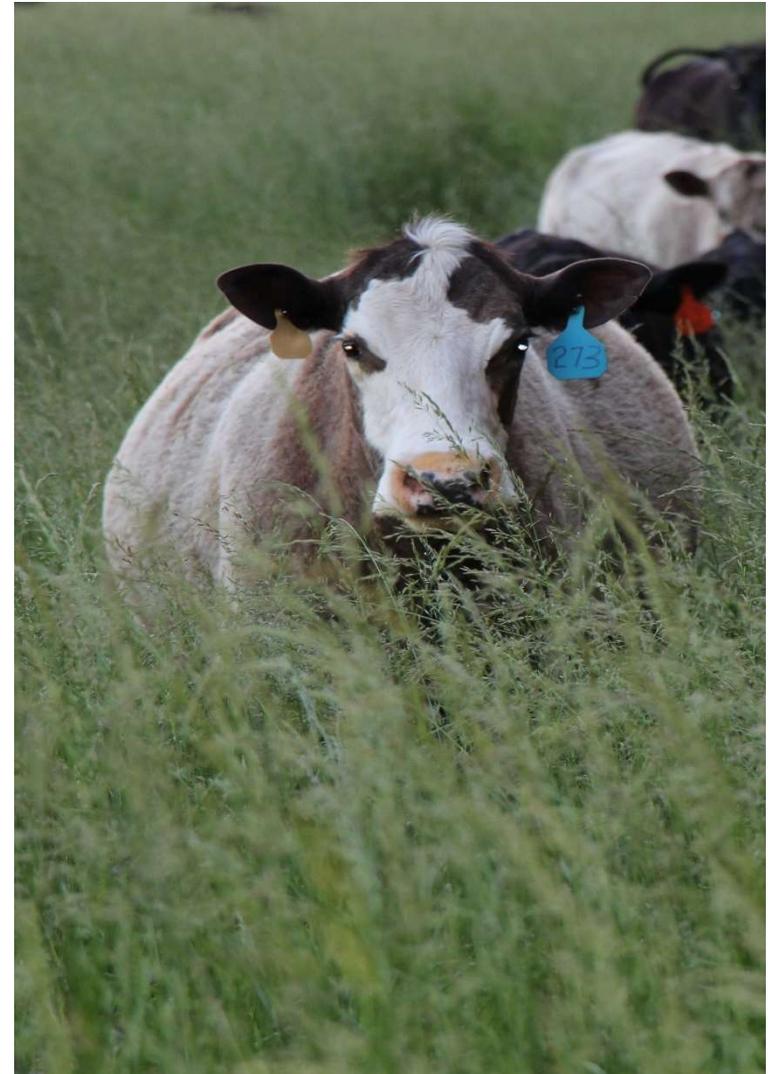
Forage and Hay Outlook

Survival Mode

- *Cool-Season Annual Forages Probably Won't Be All That Great This Year*
 - *It'll do what it does...*
 - *Last year wasn't that great either...*
- *Hay Feeding Costs are High*

Cow-Calf Producers Need to:

- Continue to wage war on forage and feeding costs (focus on mgt. & resources)
- Prepare for the next drought...



Forage and Hay Outlook

Chris Prevatt

**University of Florida, Extension Economist
Range Cattle Research and Education Center
2019 Southern Outlook Conference
September 24, 2019**