United States Department of Agriculture

National Agricultural Statistics Service

September Crop Production

Executive Summary

Lance Honig, Chief
Crops Branch

September 12, 2019

12:00 P.M.

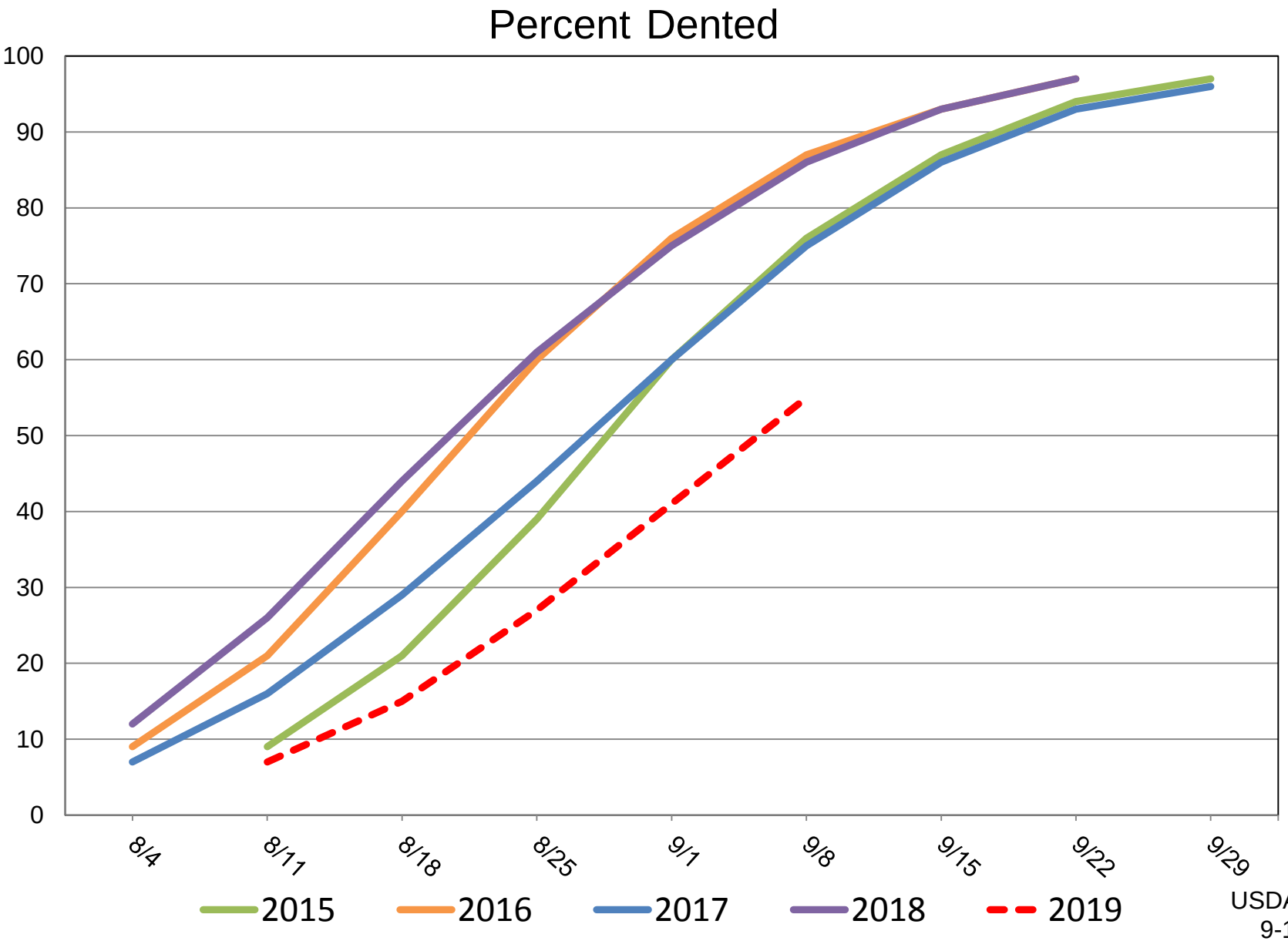
Contents

Field Crops	Fruit & Nuts	Specialty Crops
Corn	Navel Oranges (CA)	Tobacco
Soybeans	Hazelnuts	Sugarbeets
Cotton	Walnuts	Sugarcane
Rice		Dry Edible Peas
Peanuts		Lentils
Sorghum		Chickpeas

Survey Overview

	Ag Yield	Objective Yield
Survey Type	Farmer Reported	Field Measurement
Crops Included	Field Crops	Corn, Cotton, and Soybeans
Sample Size	9,624	2,905
Collection Period	Aug 30 – Sept 6	Aug 24 – Sept 1

U.S. Corn Progress



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September 2019 Crop Production

Crop	Unit	September 2019	% Change From Previous Forecast	% Change From Previous Season
Corn				
Planted	Mil Ac	90.0	NC	+1.0
Harvested	Mil Ac	82.0	NC	+0.3
Yield	Bu/Ac	168.2	-0.8	-4.6
Production	Bil Bu	13.8	-0.7	-4.3

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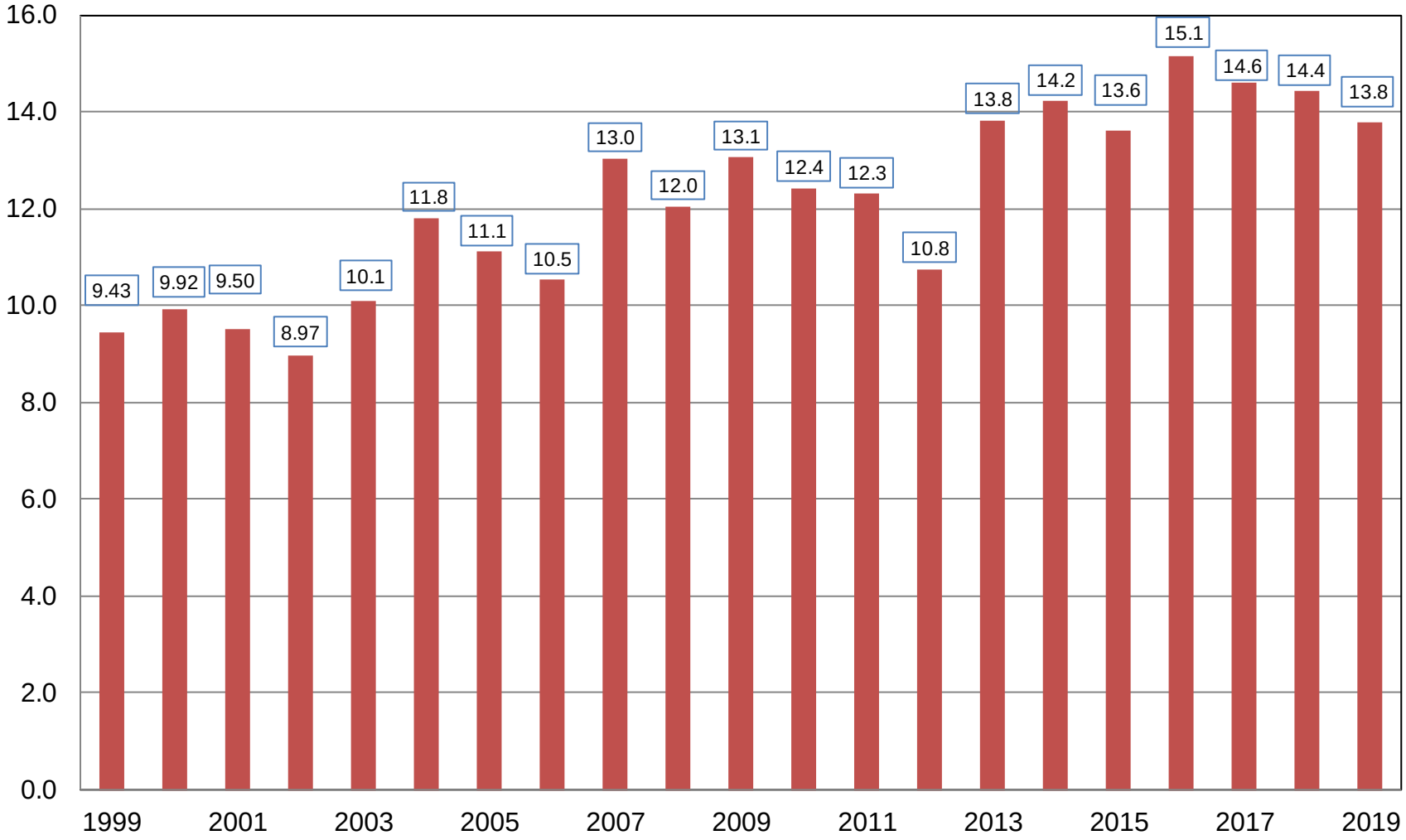
Corn for Grain Production

United States

Billion Bushels



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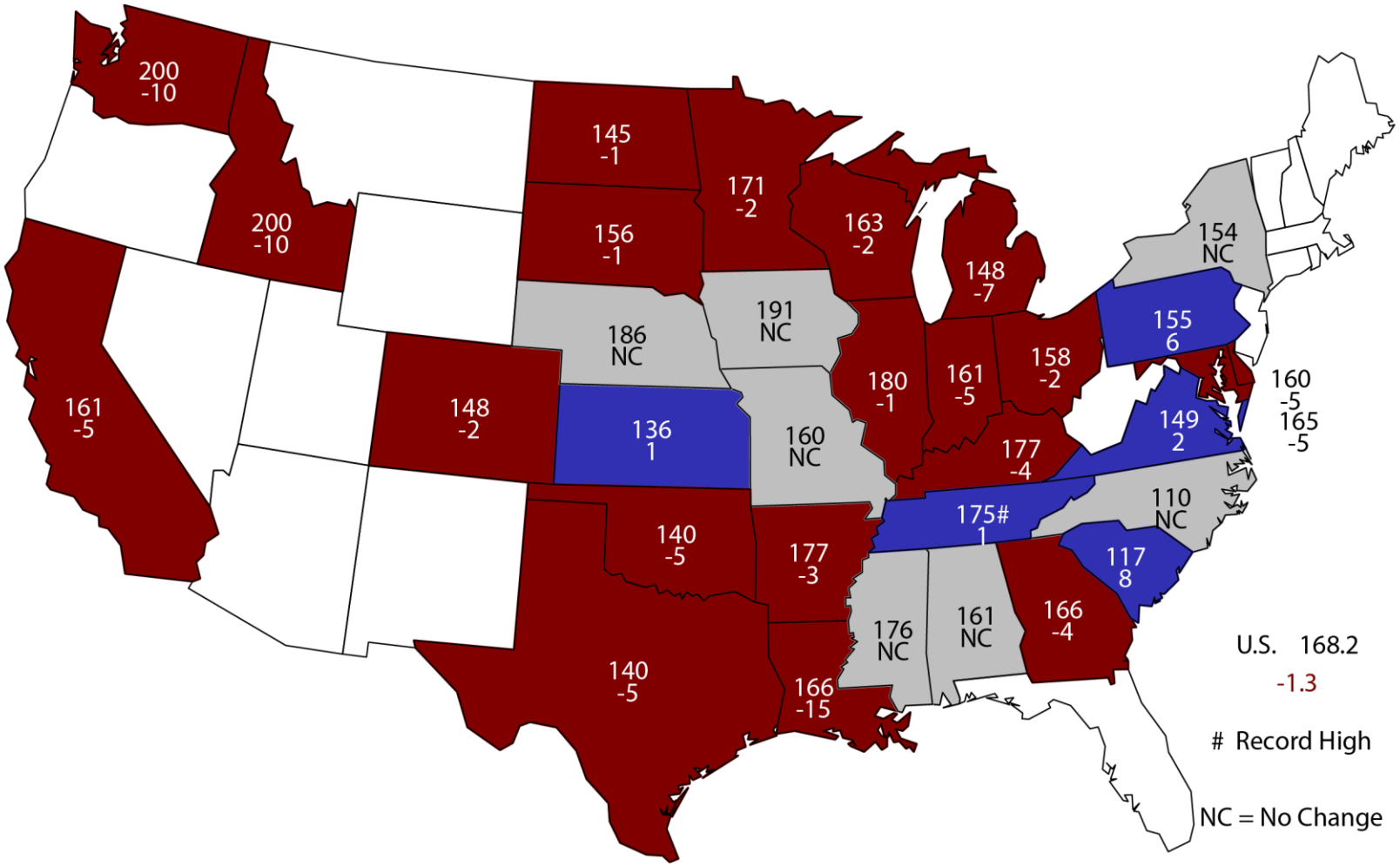
September 1, 2019 Corn Yield

Bushels and Change From Previous Forecast



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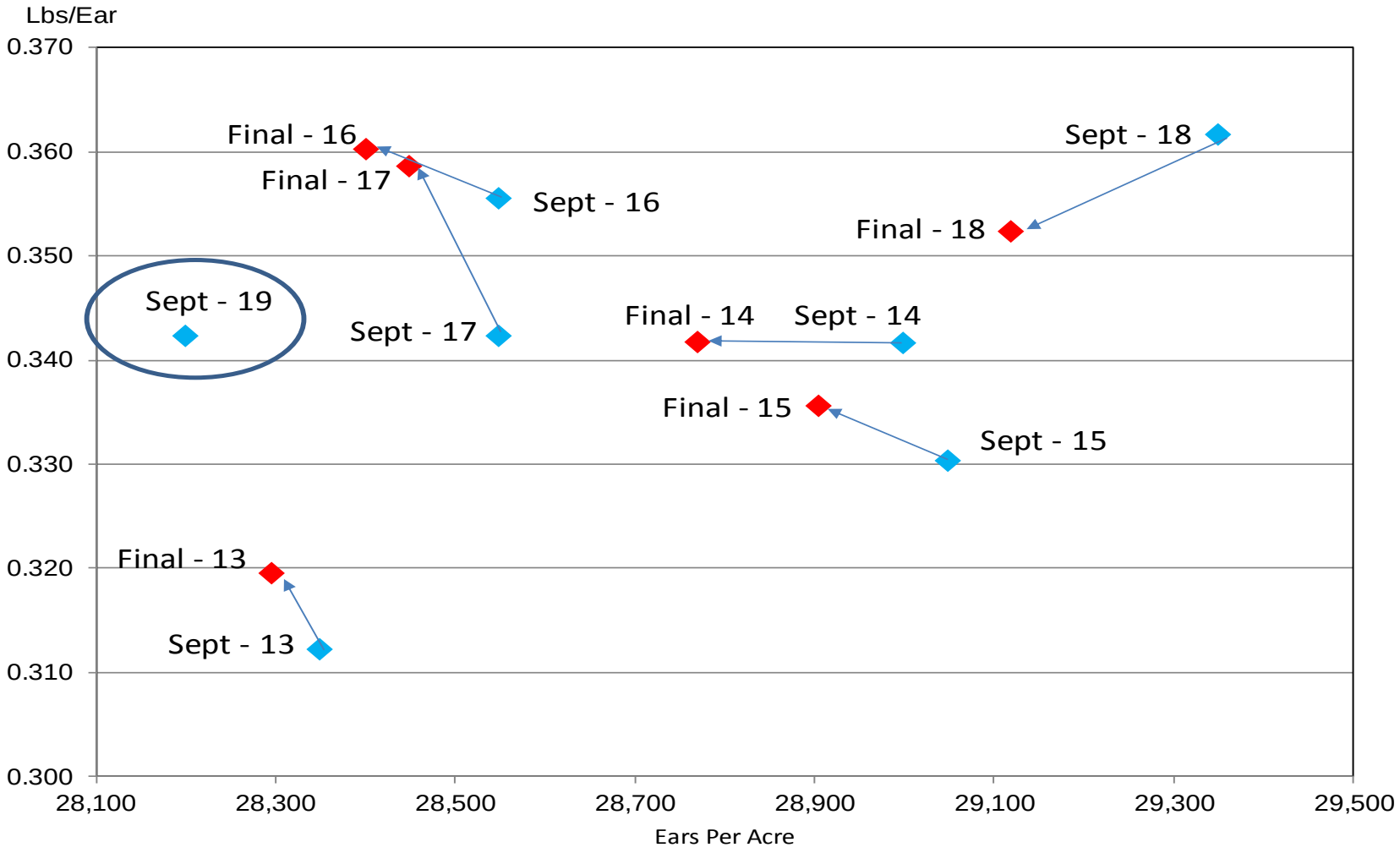
Corn Objective Yield Region

Ears Per Acre vs. Implied Ear Weight



Implied Ear Weight = (Published Yield * 56) / Ears

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Corn Objective Yield Procedures Reference Sheet

Corn Objective Yield Procedures
Reference Sheet

Maturity Code 1 - No Ear Shoots
No ears or ear shoots are present.

Number of Ears per Acre		Average Ear Weight	
Field Counts	Model(s)	Field/Lab Measurements	Model(s)
Stalks	Model 1: Stalks Model 2: Stalks with Ears		5-Year Average Historical Average Weight per Ear

Maturity Code 2 - Pre-blister
Shoot has some silks showing. Little or no watery, clear liquid present in "spikelets."

Number of Ears per Acre		Average Ear Weight	
Field Counts	Model(s)	Field/Lab Measurements	Model(s)
Stalks Stalks with Ears Ears and Silked Ear Shoots Ears with Evidence of Kernel Formation	Model 1: Stalks Model 2: Stalks with Ears or Ear Shoots		5-Year Average Historical Average Weight per Ear

Maturity Code 3 - Blister
Most "spikelets" liquid. Most silks protruding from husks are beginning to turn color.

Number of Ears per Acre		Average Ear Weight	
Field Counts	Model(s)	Field/Lab Measurements	Model(s)
Stalks Stalks with Ears Ears and Silked Ear Shoots Ears with Evidence of Kernel Formation	Model 1: Stalks Model 2: Stalks with Ears or Ear Shoots	Length of Kernel Row Diameter of Ear	Model 1: Kernel Row Length Model 2: Ear Volume

Maturity Code 4 - Milk
Plant or shuck is green. Ears are erect. Little or no denting. Most kernels are full of milk-like substance, but kernels not fully grown. Silks protruding from husks have turned brown and dry.

Number of Ears per Acre		Average Ear Weight	
Field Counts	Model(s)	Field/Lab Measurements	Model(s)
Stalks Stalks with Ears Ears and Silked Ear Shoots Ears with Evidence of Kernel Formation	Model 1: Stalks Model 2: Stalks with Ears or Ear Shoots	Length of Kernel Row Diameter of Ear	Model 1: Kernel Row Length Model 2: Ear Volume

Maturity Code 5 - Dough
About one-half of kernels showing dent with some milk or dough-like substance in all kernels. Kernels full grown. Maturity line has not moved halfway to the cob on majority of kernels. Shucks taking on a light rust-colored appearance. Ears beginning to lean away from stalks.

Number of Ears per Acre		Average Ear Weight	
Field Counts	Model(s)	Field/Lab Measurements	Model(s)
Stalks Stalks with Ears Ears and Silked Ear Shoots Ears with Evidence of Kernel Formation	Actual Ears with Evidence of Kernel Formation	Length of Kernel Row Diameter of Ear Weight of Ears	Model 1: Kernel Row Length Model 2: Ear Volume

Maturity Code 6 - Dent
Ears are firm and solid. Kernels fully dented with no milk present in most kernels. Shucks are about dry but not beginning to open up. Kernels may be hard to scratch at surface, but still soft near the cob. Maturity line on the kernels has not reached the cob.

Number of Ears per Acre		Average Ear Weight	
Field Counts	Model(s)	Field/Lab Measurements	Model(s)
Stalks Stalks with Ears Ears and Silked Ear Shoots Ears with Evidence of Kernel Formation	Actual Ears with Evidence of Kernel Formation	Length of Kernel Row Diameter of Ear Weight of Ears	Model 1: Kernel Row Length Model 2: Ear Volume Model 3: Maturity 6 Ear Weights

Maturity Code 7 - Mature
Corn is about ready or ready for harvest. The maturity line on the kernels extends inward to the cob. No milk can be squeezed from the top of the kernels next to the cob when punctured with a thumbnail. Kernels shell off the cob fairly easily. When you pick a kernel from the cob, there may be a dark spot on the cob where the kernel was attached. Shucks are dry and are beginning to open up. No green foliage is present.

Number of Ears per Acre		Average Ear Weight	
Field Counts	Model(s)	Field/Lab Measurements	Model(s)
Stalks Stalks with Ears Ears and Silked Ear Shoots Ears with Evidence of Kernel Formation	Actual Ears with Evidence of Kernel Formation	Length of Kernel Row Diameter of Ear Weight of Ears	Actual Weight of Ears

Ear Model 1: Uses five years of historic data to estimate the relationship between final ears per sample and the historic stalk count from the same month.

Ear Model 2: Uses five years of historic data to estimate the relationship between final ears per sample and the ratio of stalks with ears to total stalk counts per sample.

Weight Model 1: Kernel row measurements, collected over a series of years, are utilized to forecast future sample grain weights.

Weight Model 2: Ear volume measures are calculated by combining kernel row length measures with cob diameter measurements. These are historically related to final grain

Weight Model 3: Harvested ears are laboratory weighed and adjusted to 15.5 percent moisture. These MC6 weights are related to final grain weights by means of regression.

This document is intended only as a quick reference guide. For full details, please reference "The Yield Forecasting Program at NASS" at
https://www.nass.usda.gov/Education_and_Outreach/Understanding_Statistics/Yield_Forecasting_Program.pdf

https://www.nass.usda.gov/Education_and_Outreach/Understanding_Statistics/Corn%20Objective%20Yield%20Reference.pdf

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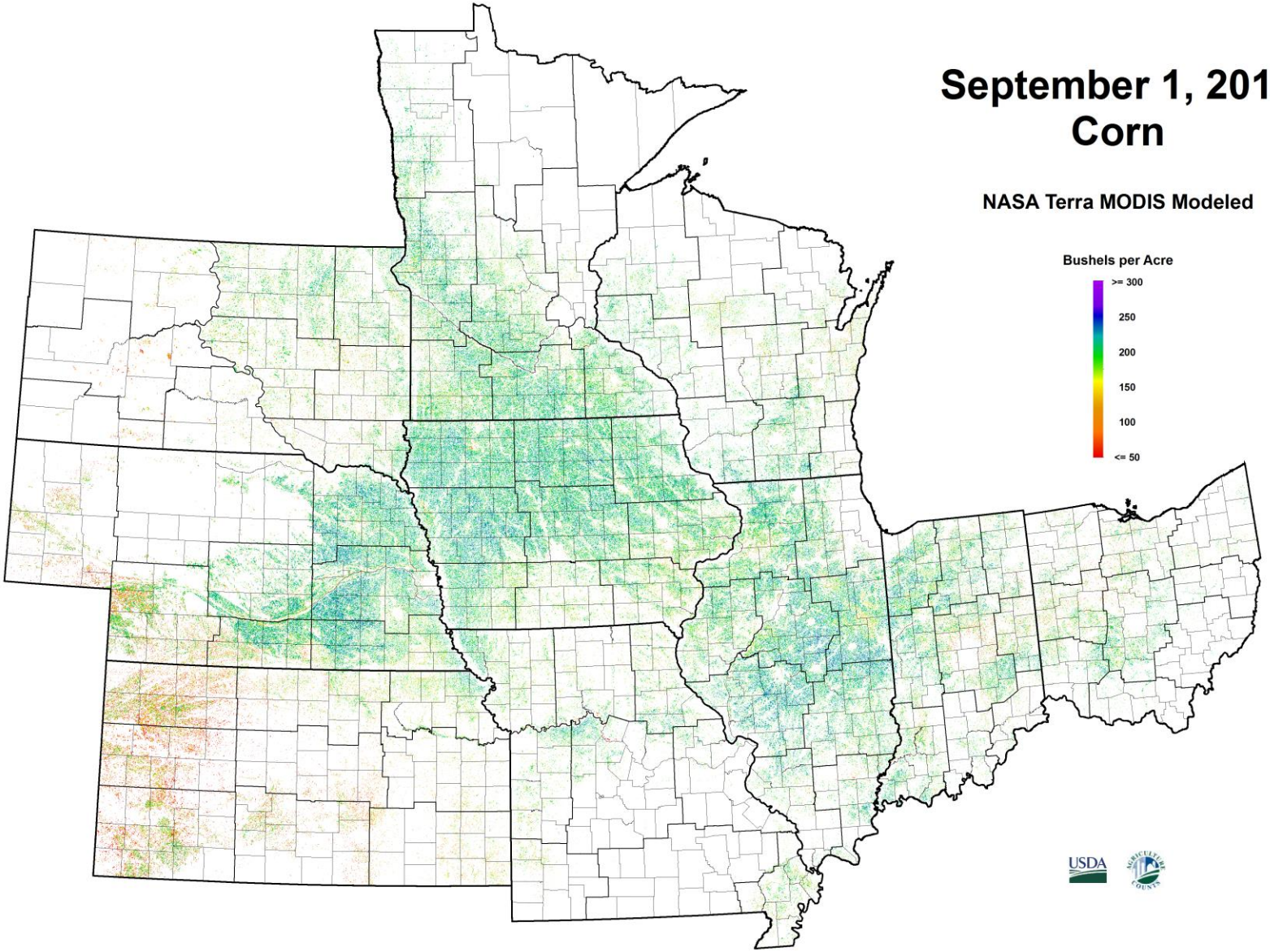
September 1, 2019
Corn

NASA Terra MODIS Modeled



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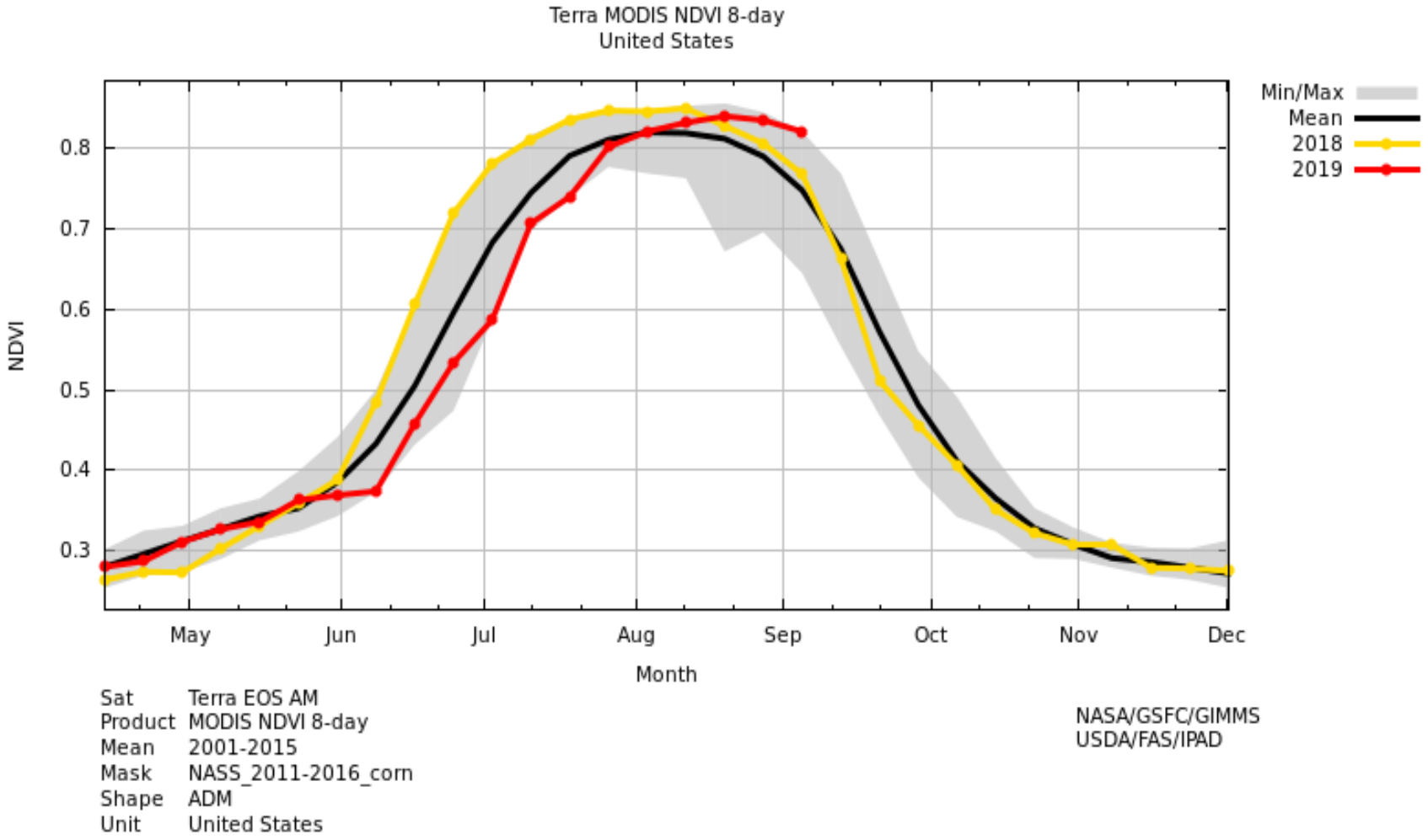
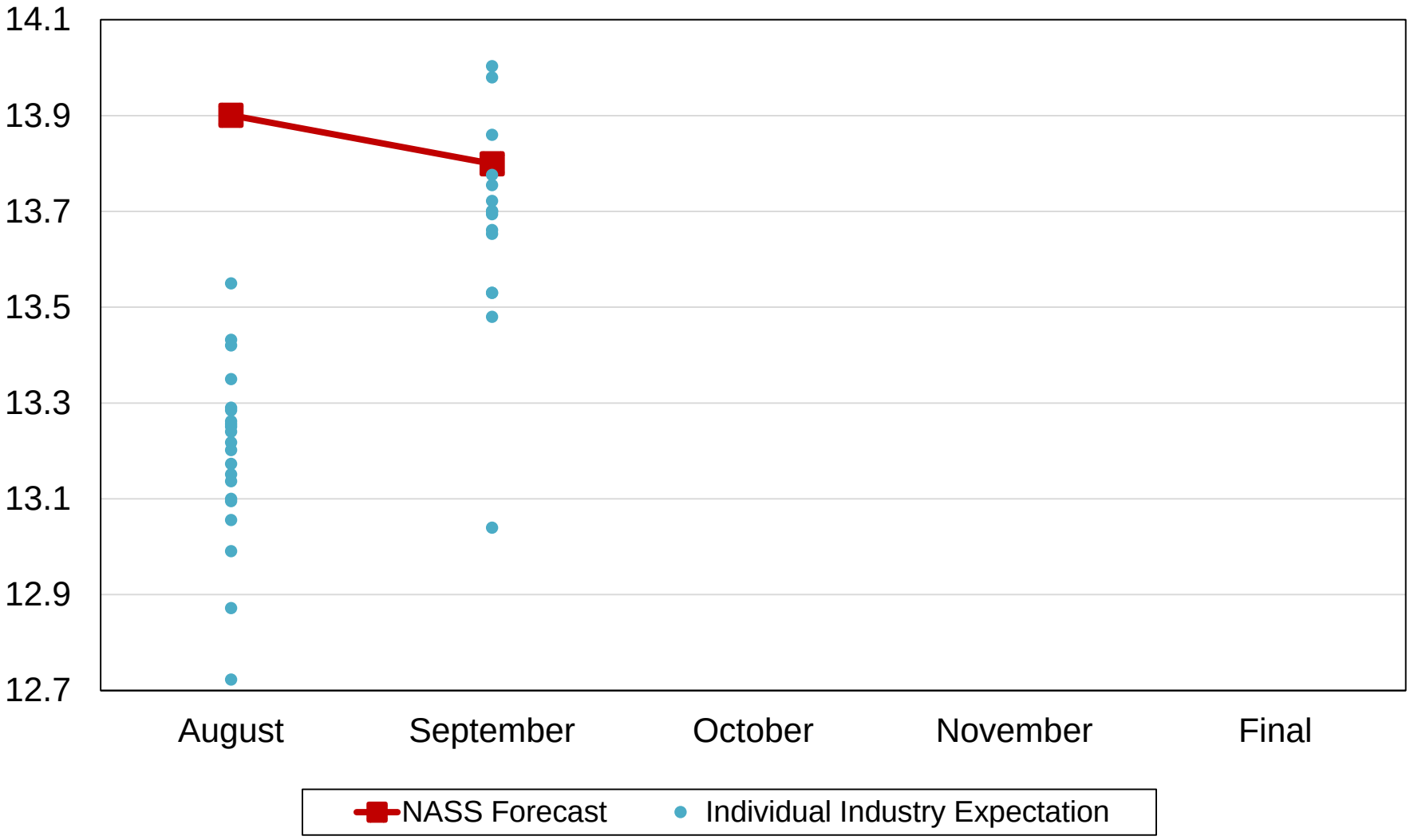


USDA-NASS
9-12-19

2019 United States Corn Production
Industry Expectations vs NASS

Billion Bushels



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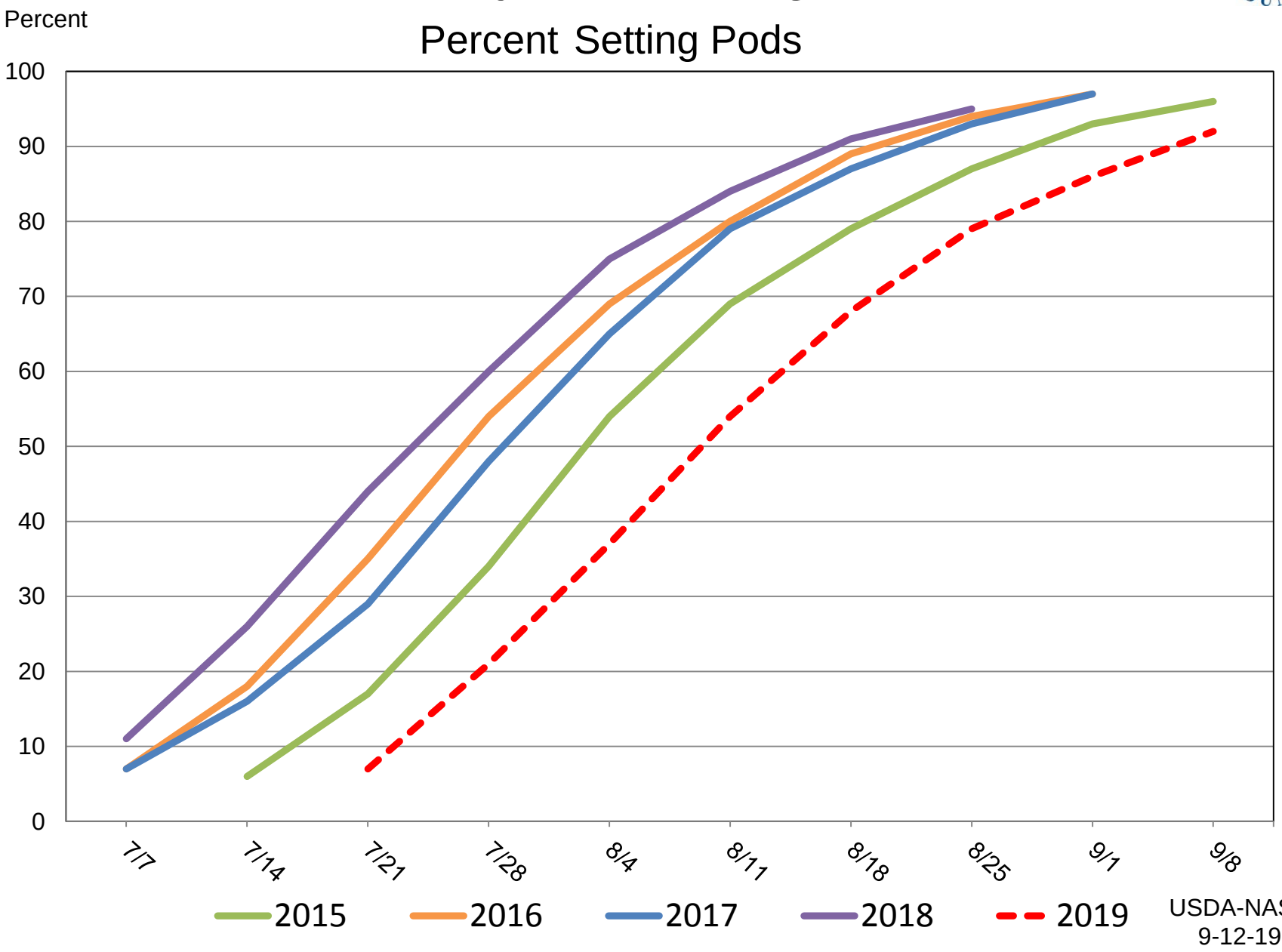
9-12-19

U.S. Soybeans Progress



September 2019 Crop Production

Crop	Unit	September 2019	% Change From Previous Forecast	% Change From Previous Season
Soybeans				
Planted	Mil Ac	76.7	NC	-14.0
Harvested	Mil Ac	75.9	NC	-13.9
Yield	Bu/Ac	47.9	-1.2	-7.2
Production	Bil Bu	3.63	-1.3	-20.1

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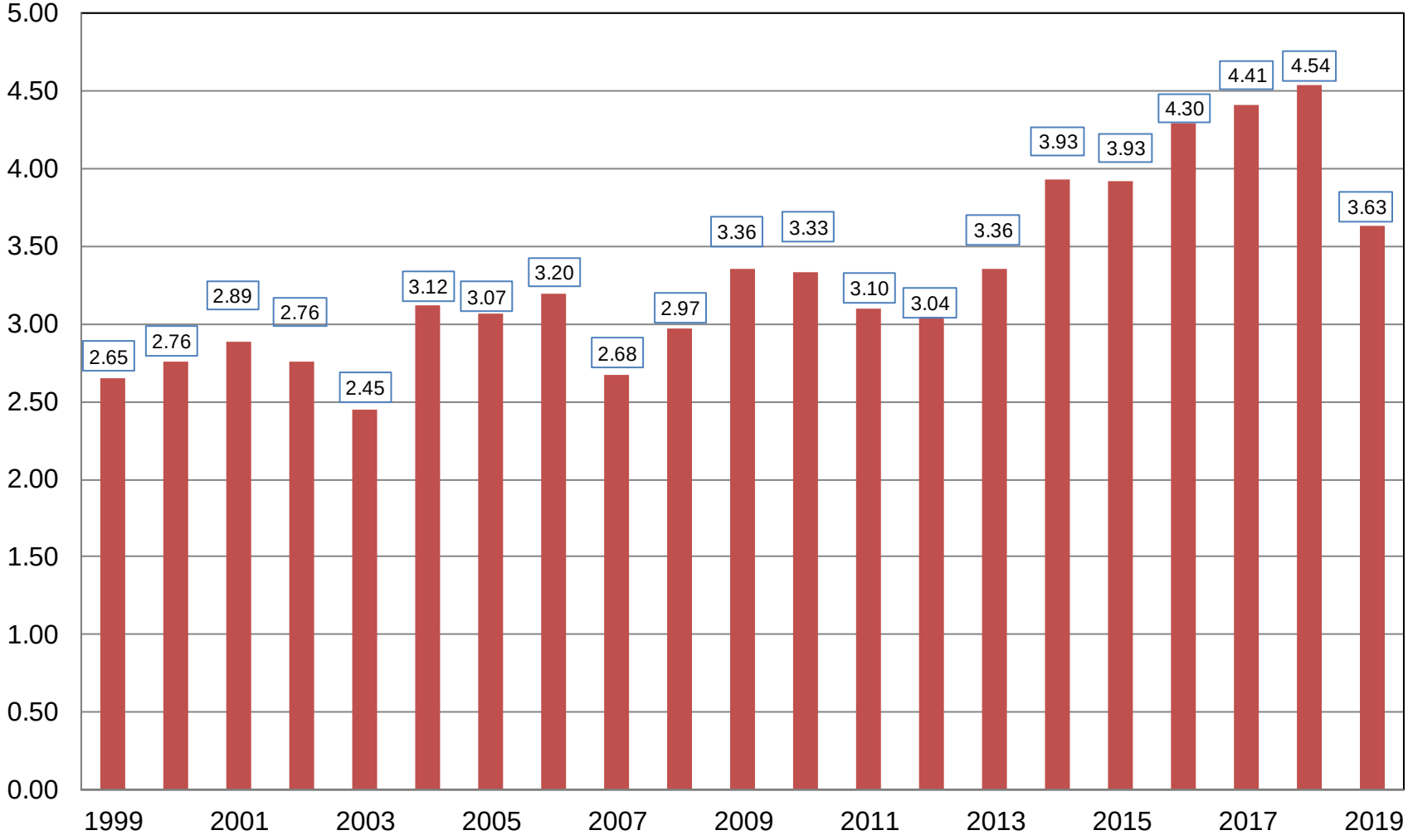
9-12-19

Soybean Production

United States

Billion Bushels



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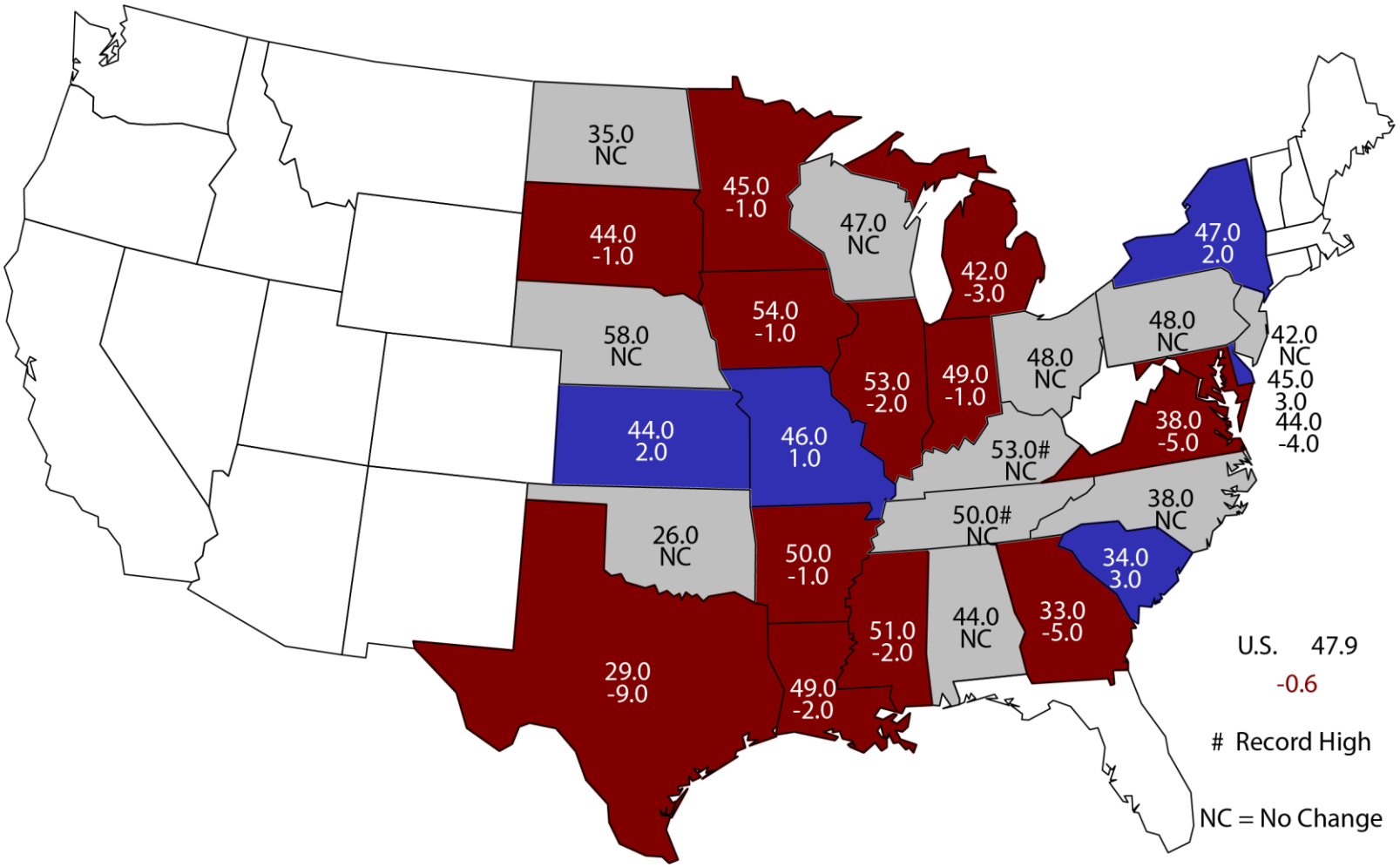
September 1, 2019 Soybean Yield

Bushels and Change From Previous Forecast



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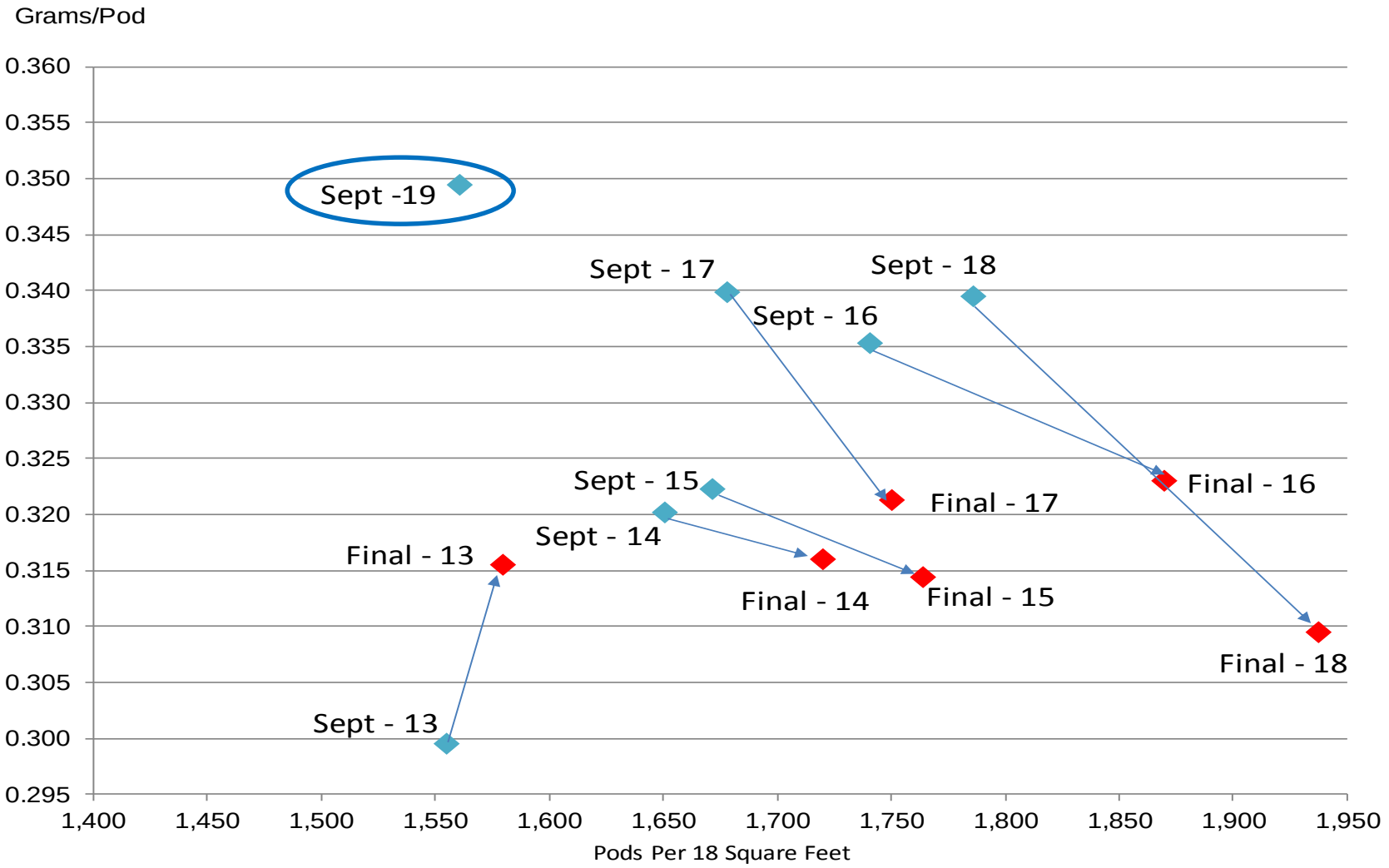
Soybean Objective Yield Region

Pods Per 18 Square Feet vs. Implied Pod Weight



Implied Pod Weight = (Published Yield / Pods) /0.0889

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Soybean Objective Yield Procedures Reference Sheet

Soybean Objective Yield Procedures
Reference Sheet

Maturity Code 2 - Pods Set, Leaves Still Green, or Earlier

This covers all plant growth stages until the pods are full. All leaves will still be green. Flowers may or may not be present.

Number of Pods per Acre		Average Pod Weight	
Field Counts	Model(s)	Field/Lab Measurements	Model(s)
Plants Nodes Lateral Branches w/ Dried Blooms, Flowers, Pods Blooms, Dried Flowers, & Pods Pods with Beans	Plants: Model 1 Pods per Plant: Model 2	None	5-Year Average Historical Average Weight per Pod

Maturity Code 3 - Pods Filled, Leaves Turning Yellow

Leaves will be yellowing on nearly all plants, but green leaves may still be more numerous on the plants than yellow or partially yellow leaves. Almost all the pods will be filled and some will be ripening.

Number of Pods per Acre		Average Pod Weight	
Field Counts	Model(s)	Field/Lab Measurements	Model(s)
Plants Pods with Beans	Plants: Actual Count Pods per Plant: Model 2	None	5-Year Average Historical Average Weight per Pod

Maturity Code 4 - Pods Turning Color, Leaves Shedding

All leaves will have turned yellow and some will have fallen. The pods will have their full size. Pods will be changing color from green to brown, but most pods will still be green. The beans are not firm and they have not completely shrunk inside the pods.

Number of Pods per Acre		Average Pod Weight	
Field Counts	Model(s)	Field/Lab Measurements	Model(s)
Plants Pods with Beans	Plants: Actual Count Pods per Plant: Model 2	None	5-Year Average Historical Average Weight per Pod

Maturity Code 5 - Pods Brown, Almost Mature or Mature

Virtually all pods will be brown and easily opened so the beans can be removed. The beans are brown and have shrunk inside the pod. Most or all of the leaves have been shed by the plants.

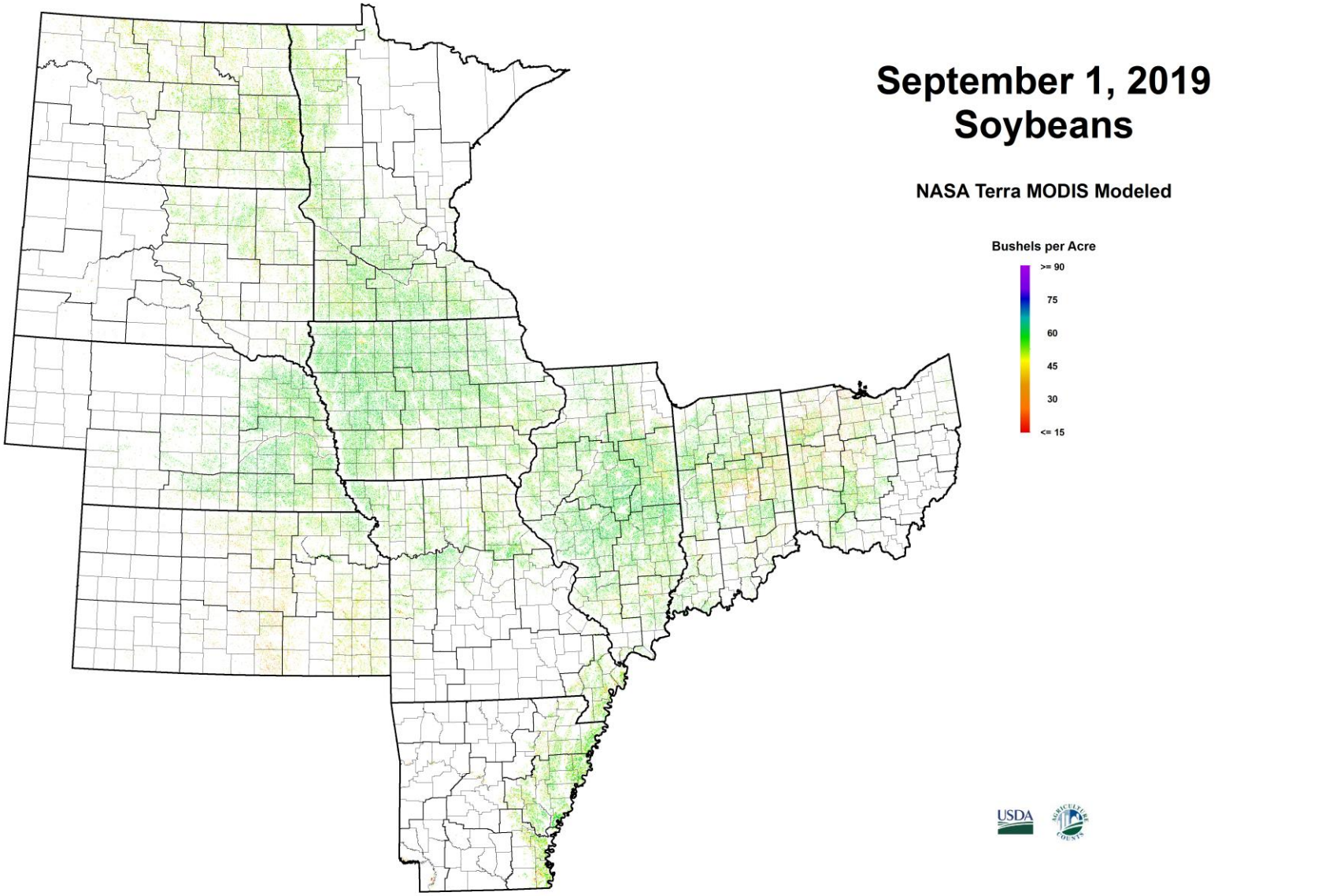
Number of Pods per Acre		Average Pod Weight	
Field Counts	Model(s)	Field/Lab Measurements	Model(s)
Plants Pods with Beans	Plants: Actual Count Pods per Plant: Actual Count	Weight of Pods	Actual Weight of Pods

Model 1: Uses five years of historic data to estimate the relationship between final number of plants per sample and the historic plant count from the same month.

Model 2: Uses five years of historic data to estimate the relationship between final number of pods per plant and the historic count of nodes, lateral branches, blooms, dried flowers, pods, and/or pods with beans from the same month.

This document is intended only as a quick reference guide. For full details, please reference "The Yield Forecasting Program at NASS" at
https://www.nass.usda.gov/Education_and_Outreach/Understanding_Statistics/Yield_Forecasting_Program.pdf

https://www.nass.usda.gov/Education_and_Outreach/Understanding_Statistics/Soybean%20Objective%20Yield%20Reference.pdf



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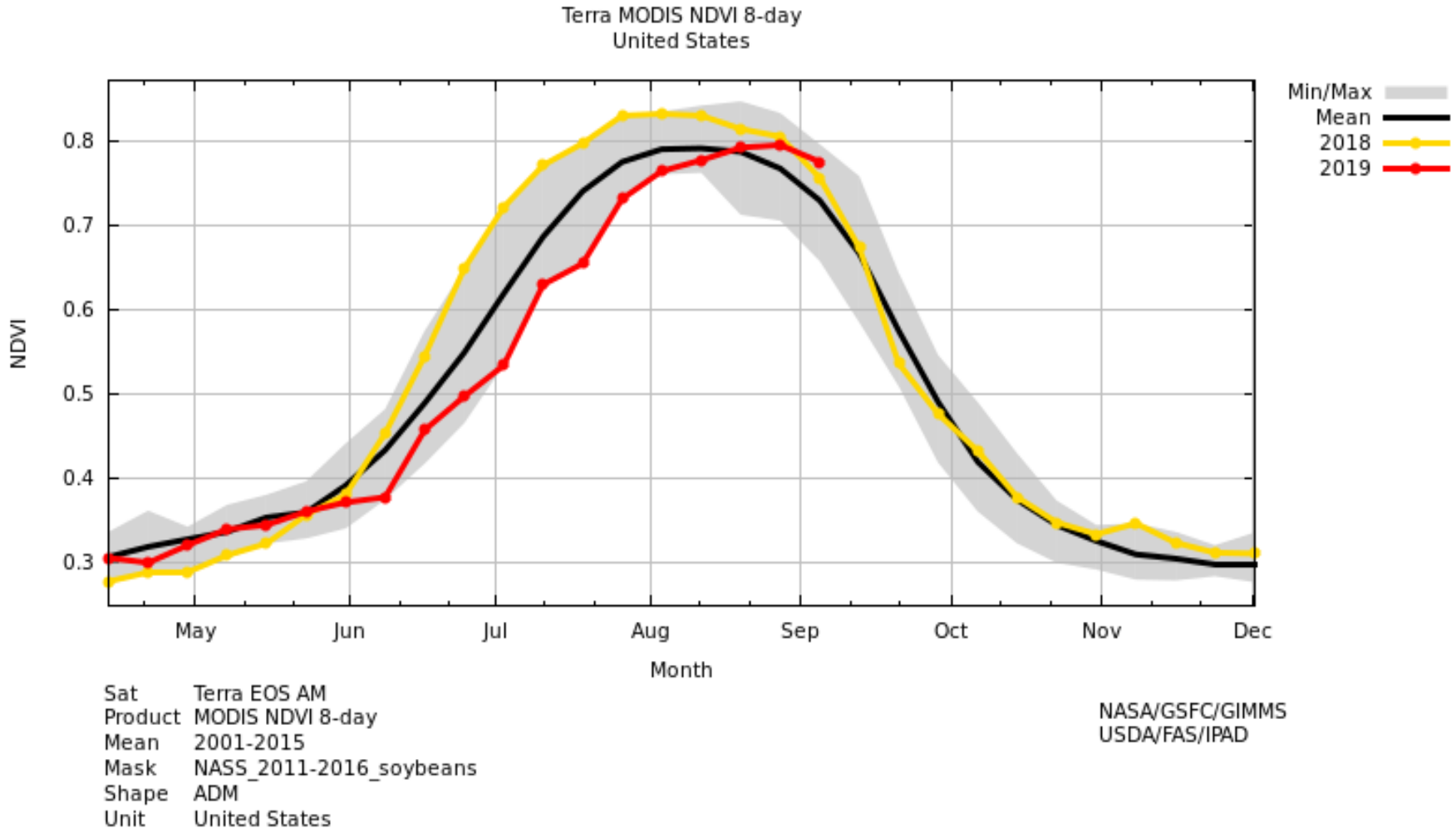

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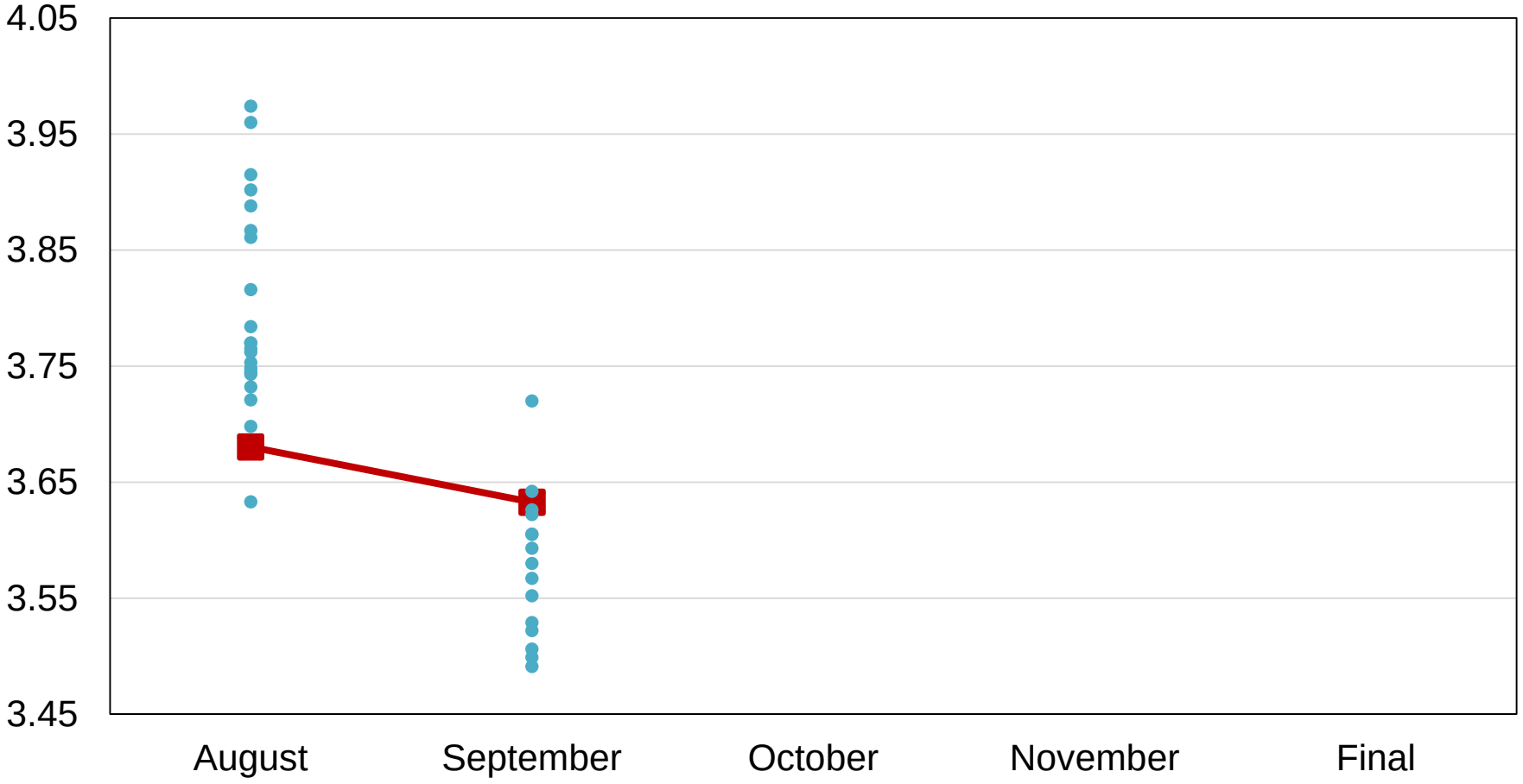
2019 United States Soybean Production
Industry Expectations vs NASS

Billion Bushels



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9-12-19

September 2019 Crop Production

Crop	Unit	September 2019	% Change From Previous Forecast	% Change From Previous Season
All Cotton				
Planted	Mil Ac	13.8	-1.0	-2.4
Harvested	Mil Ac	12.5	-1.0	+22.6
Yield	Lb/Ac	839	-1.9	-2.9
Production	Mil Bls	21.9	-2.9	+19.0

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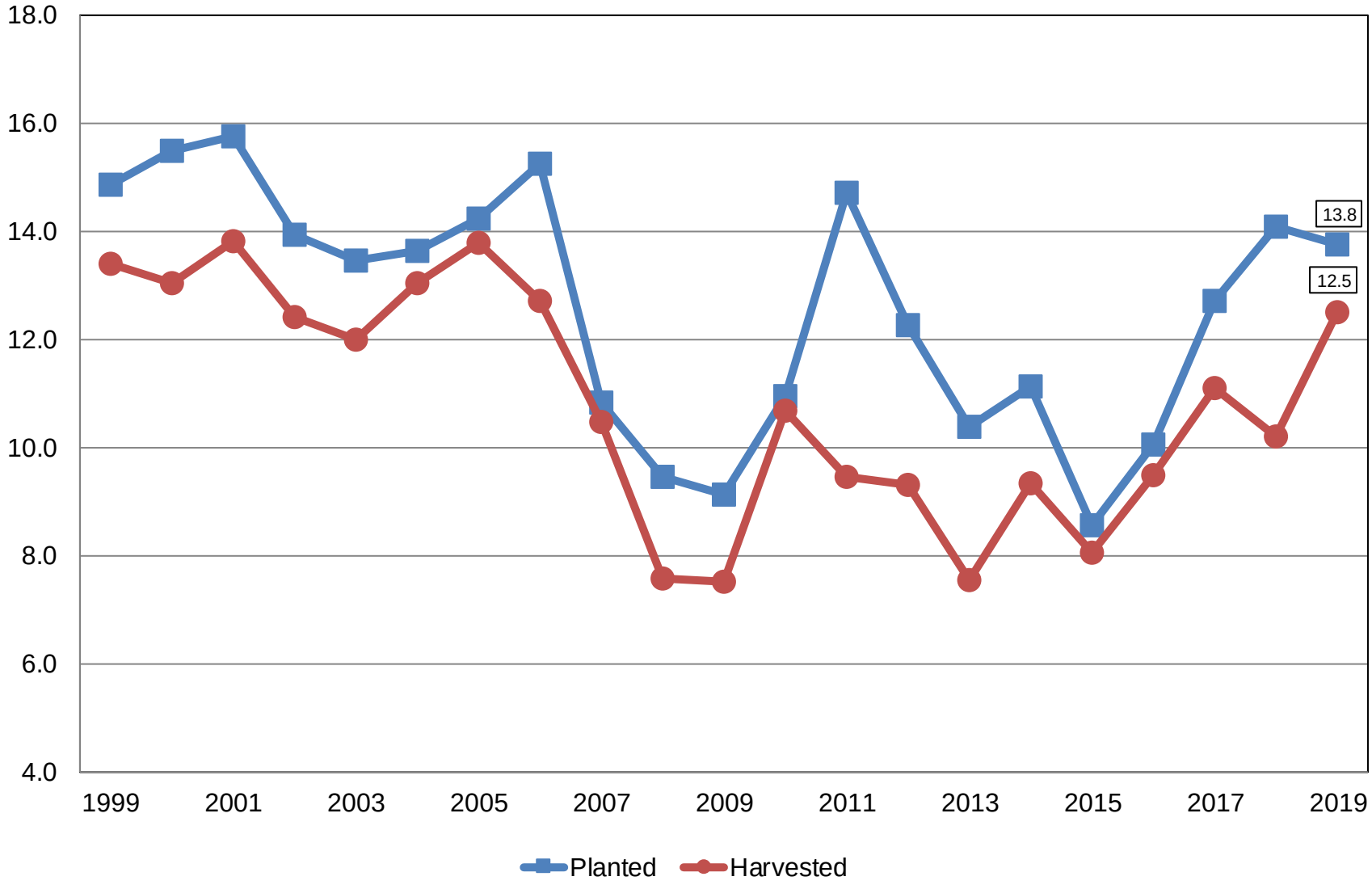
9-12-19

All Cotton Acres

United States



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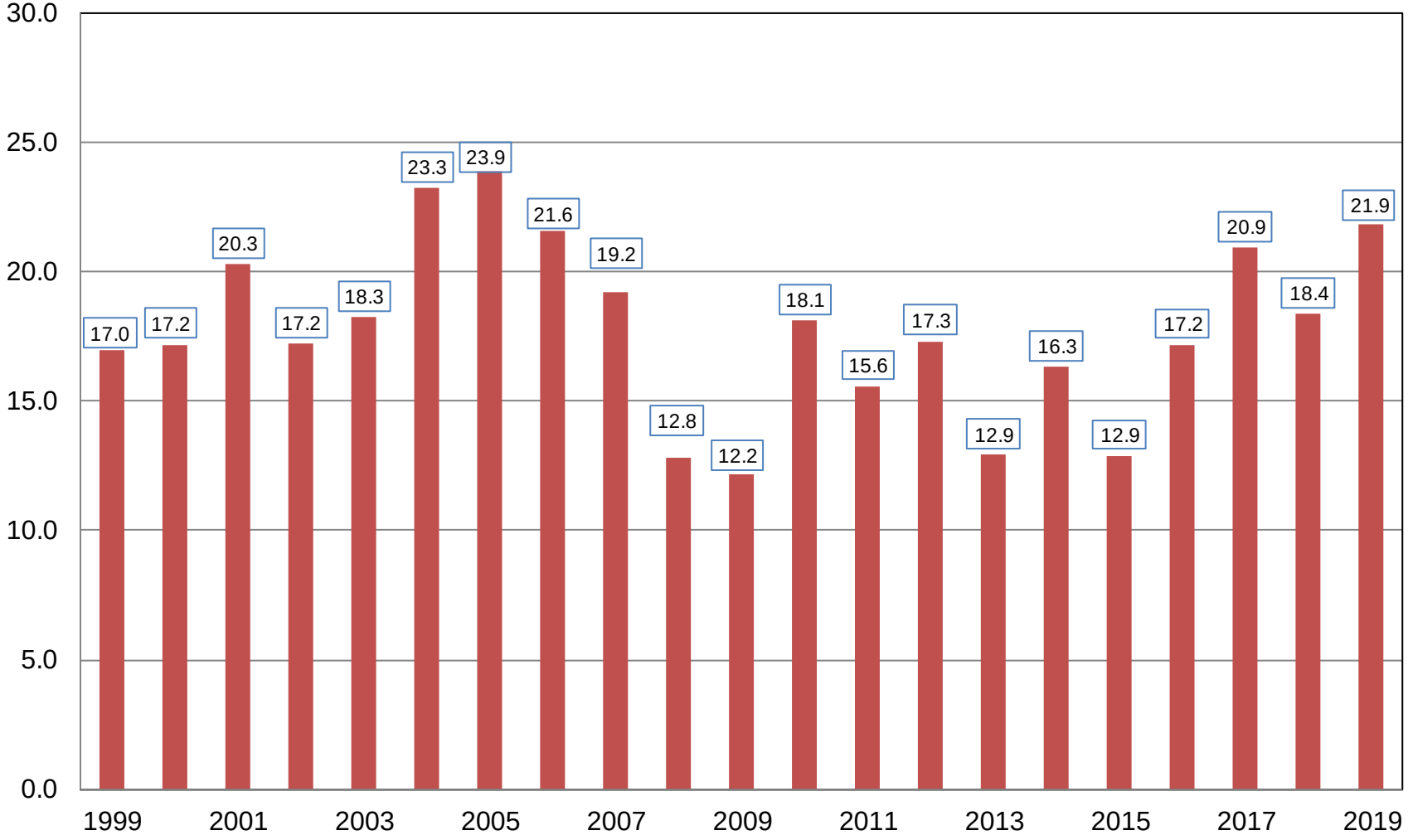
All Cotton Production

United States

Million Bales



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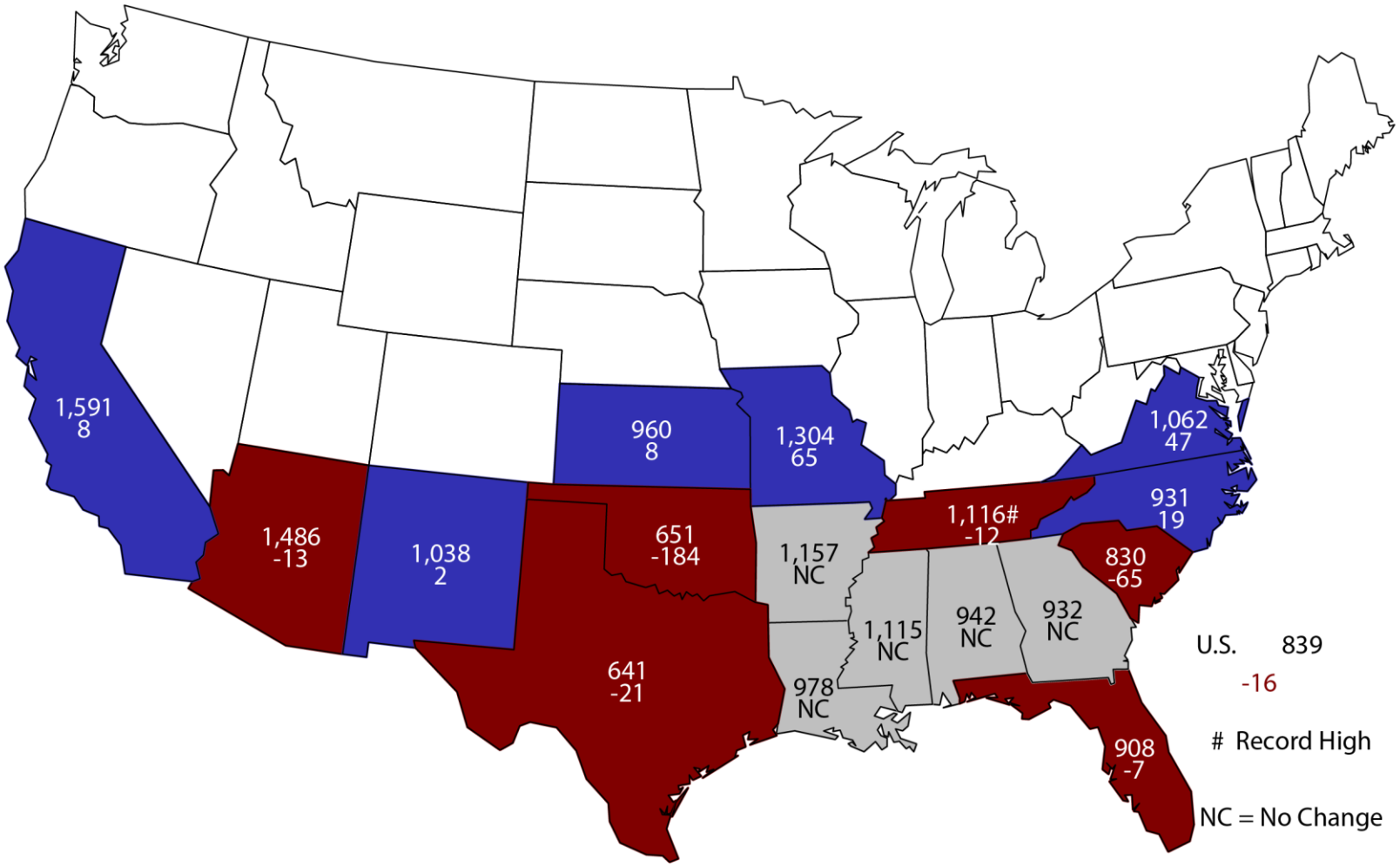
September 1, 2019 All Cotton Yield

Pounds and Change From Previous Forecast



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September 2019 Crop Production

Crop	Unit	September 2019	% Change From Previous Forecast	% Change From Previous Season
Rice				
Planted	Mil Ac	2.54	-7.8	-13.8
Harvested	Mil Ac	2.48	-8.6	-15.0
Yield	Lbs/Ac	7,563	-0.2	-1.7
Production	Mil Cwt	187	-8.8	-16.5

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9-12-19

September 2019 Crop Production

Crop	Unit	September 2019	% Change From Previous Forecast	% Change From Previous Season
Peanuts				
Planted	Mil Ac	1.43	+4.5	-<0.1
Harvested	Mil Ac	1.38	+4.5	+1.1
Yield	Lbs/Ac	4,086	+1.9	+2.4
Production	Bil Lbs	5.65	+6.6	+3.5

September 2019 Crop Production

Crop	Unit	September 2019	% Change From Previous Forecast	% Change From Previous Season
Sorghum	Mil Bu	352	-0.6	-3.7
All Tobacco	Mil Lbs	483	-4.3	-9.5
Sugarbeets	Mil Tons	33.5	-3.5	+1.2
Sugarcane	Mil Tons	34.8	+1.0	+0.6

September 2019 Crop Production

Crop	Unit	September 2019	% Change From Previous Forecast	% Change From Previous Season
Chickpeas	Mil Cwt	7.17	NA	-43.7
Dry Edible Peas	Mil Cwt	22.3	NA	+39.9
Lentils	Mil Cwt	6.55	NA	-22.1

September 2019 Crop Production

Crop	Unit	September 2019	% Change From Previous Forecast	% Change From Previous Season
Navel Oranges (CA)	Mil Tons	1.52	NA	-6.9
Hazelnuts (OR)	Thou Tons	49.0	NA	-3.9
Walnuts (CA)	Thou Tons	630	NA	-6.8

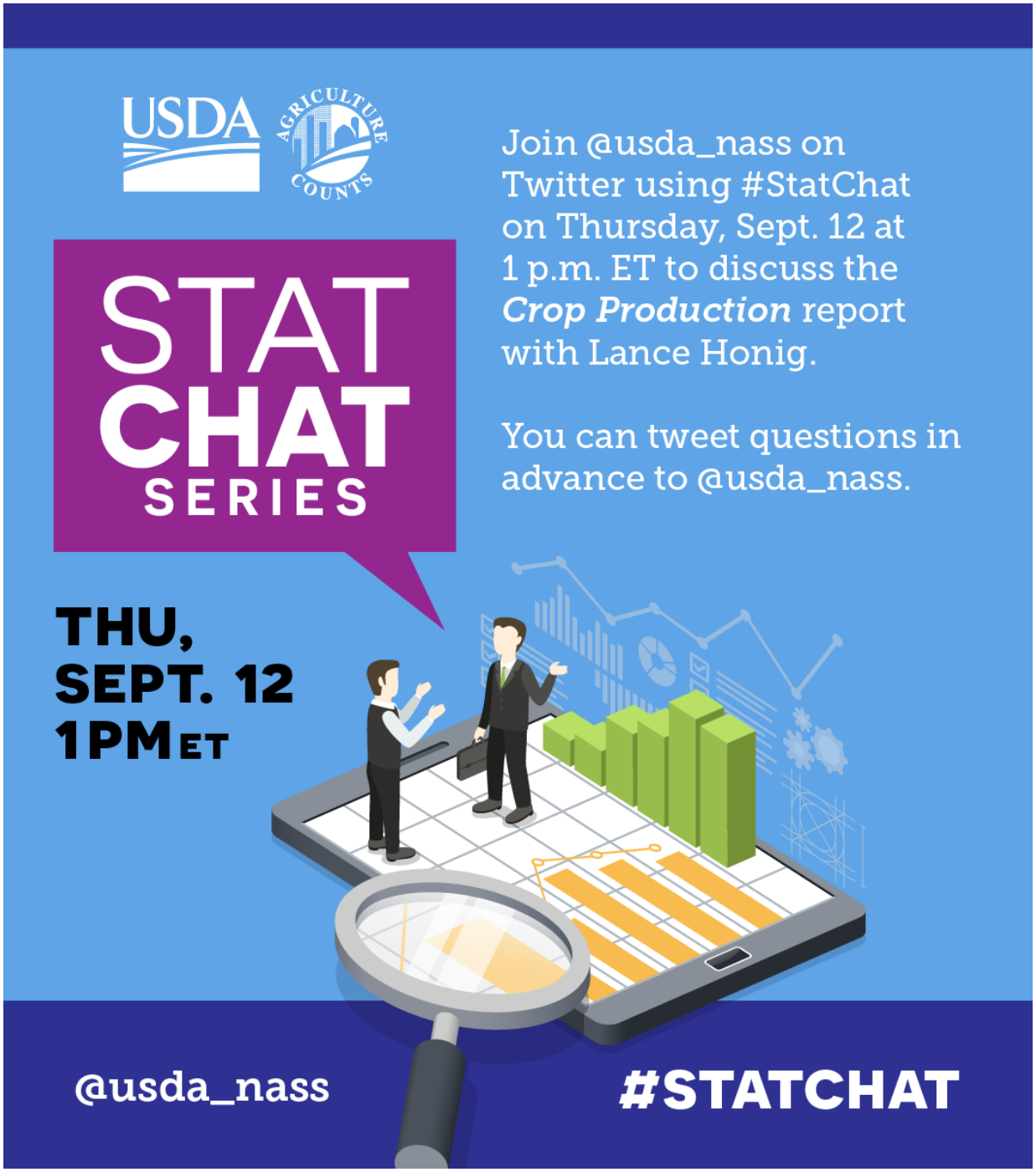
Upcoming Reports

Release Date	Report Title
September 20	Cattle on Feed
September 27	Ag Prices Hogs and Pigs
September 30	Grain Stocks Small Grains Summary
October 1	CAIR: Cotton System, Fats & Oils, and Grain Crushings
October 10	Crop Production Cotton Ginnings

USDA NASS Data Users' Meeting

Tuesday, October 15, 2019

American Farm Bureau Federation
600 Maryland Ave SW #1000w
Washington, DC 20024


USDA
AGRICULTURE COUNTS
STAT CHAT SERIES
Join @usda_nass on Twitter using #StatChat on Thursday, Sept. 12 at 1 p.m. ET to discuss the *Crop Production* report with Lance Honig.
You can tweet questions in advance to @usda_nass.
THU, SEPT. 12 1PM ET
@usda_nass
#STATCHAT

United States Department of Agriculture

National Agricultural Statistics Service

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www.nass.usda.gov

For Questions

202-720-2127
800-727-9540
nass@nass.usda.gov