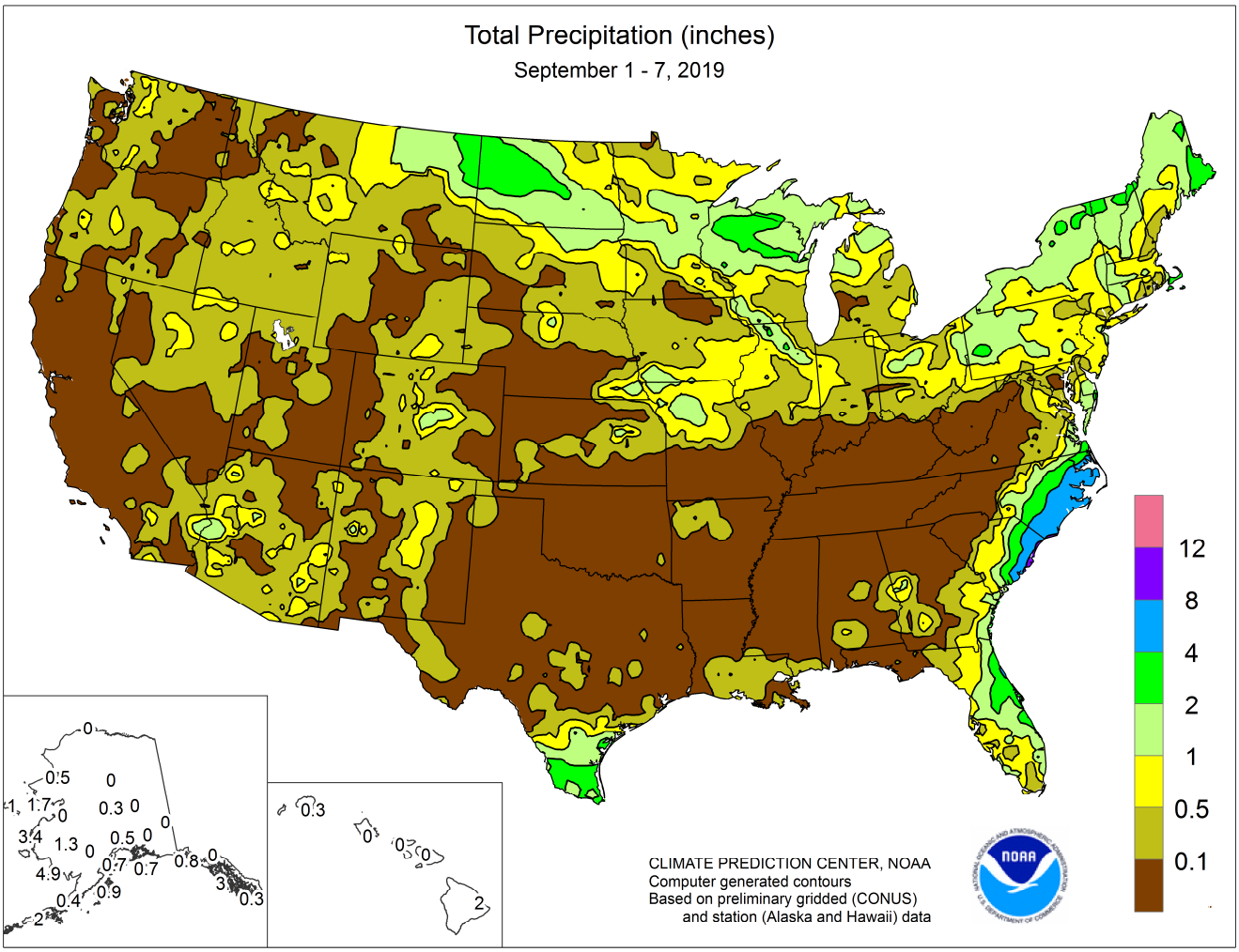
Volume 106, No. 37 http://www.usda.gov/oce/weather September 10, 2019

WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service

U.S. DEPARTMENT OF AGRICULTURE
National Agricultural Statistics Service
and World Agricultural Outlook Board



HIGHLIGHTS
September 1 – 7, 2019

Highlights provided by USDA/WAOB

Hurricane Dorian threatened **Florida's east coast** before veering northward, eventually grazing the **Carolinas** and making landfall on **Cape Hatteras**. The storm, a Category 1 shadow of the Category 5 hurricane that had devastated the **northern Bahamas**, crossed **Cape Hatteras** on the morning of September 6 with maximum sustained winds of 90 mph, down from 185 mph on September 1. Rainfall totals of 4 to 8 inches or more and hurricane-force wind gusts (74 mph or greater) were generally confined to the **coastal Carolinas**, although locally heavy showers and

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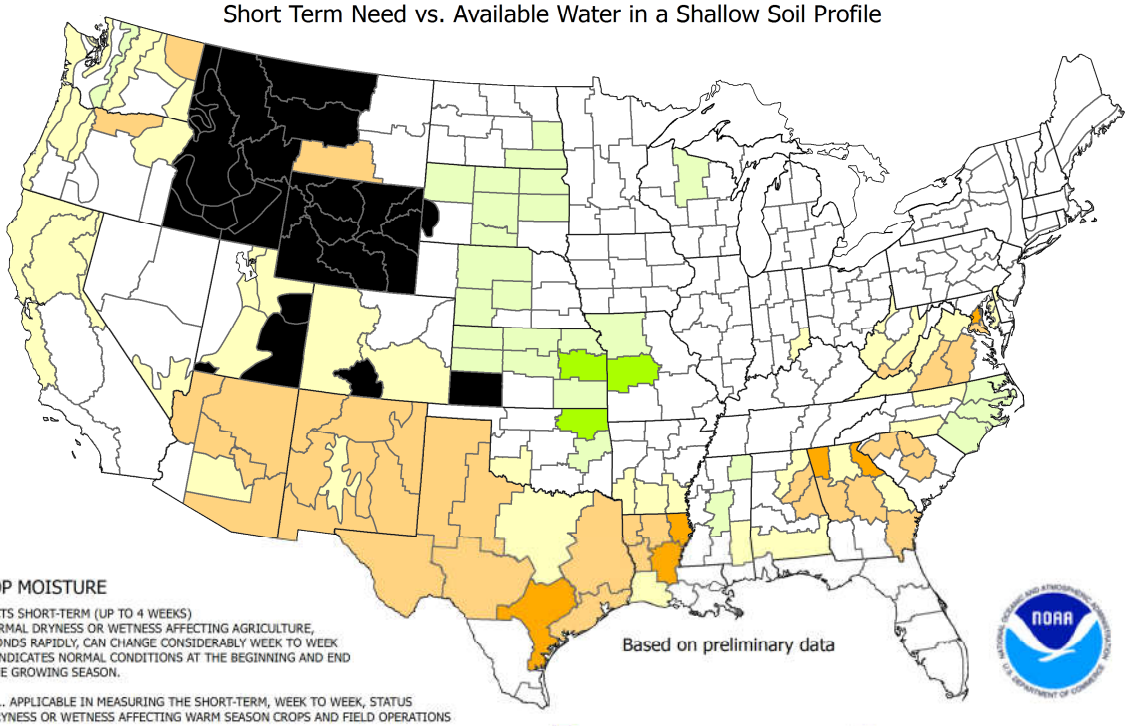
Weekly Value for Period Ending Sep 07, 2019
Short Term Need vs. Available Water in a Shallow Soil Profile



CROP MOISTURE

DEPICTS SHORT-TERM (UP TO 4 WEEKS) ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE, RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK AND INDICATES NORMAL CONDITIONS AT THE BEGINNING AND END OF THE GROWING SEASON.

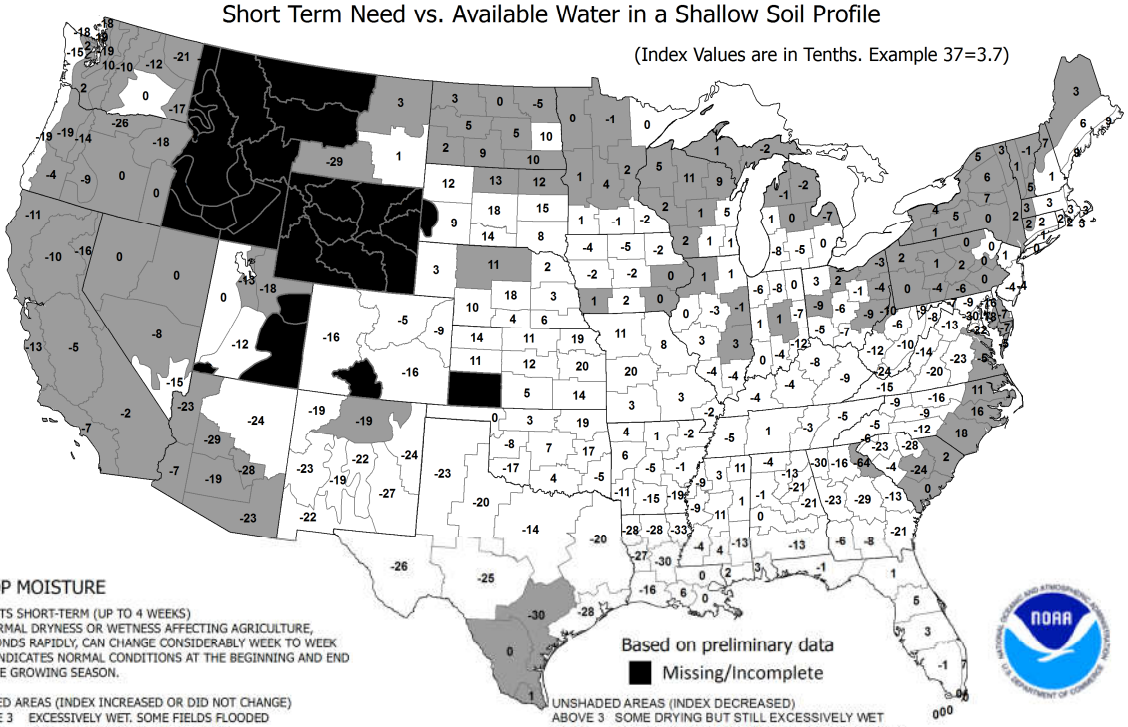
USES... APPLICABLE IN MEASURING THE SHORT-TERM, WEEK TO WEEK, STATUS OF DRYNESS OR WETNESS AFFECTING WARM SEASON CROPS AND FIELD OPERATIONS

LIMITATIONS... MAY NOT BE APPLICABLE TO GERMINATING AND SHALLOW ROOTED CROPS WHICH ARE UNABLE TO EXTRACT THE DEEP OR SUBSOIL MOISTURE FROM A SHALLOW SOIL PROFILE,OR FOR COOL SEASON CROPS GROWING WHEN TEMPERATURES ARE AVERAGING BELOW ABOUT 55F.IT IS NOT GENERALLY INDICATIVE OF THE LONG-TERM (MONTHS, YEARS) DROUGHT OR WET SPELLS WHICH ARE DEPICTED BY THE DROUGHT SEVERITY INDEX.

- -3.0 or less (Severly Dry)
- -2.0 to -2.9 (Excessively Dry)
- -1.0 to -1.9 (Abnormally Dry)
- -0.9 to +0.9 (Slightly Dry/Favorably Moist)
- +1.0 to +1.9 (Abnormally Moist)
- +2.0 to +3.0 (Wet)
- 3.0 and above (Excessively Wet)
- Missing/Incomplete

Crop Moisture Index by Division
Weekly Value for Period Ending Sep 07, 2019
Short Term Need vs. Available Water in a Shallow Soil Profile

(Index Values are in Tenths. Example 37=3.7)



CROP MOISTURE

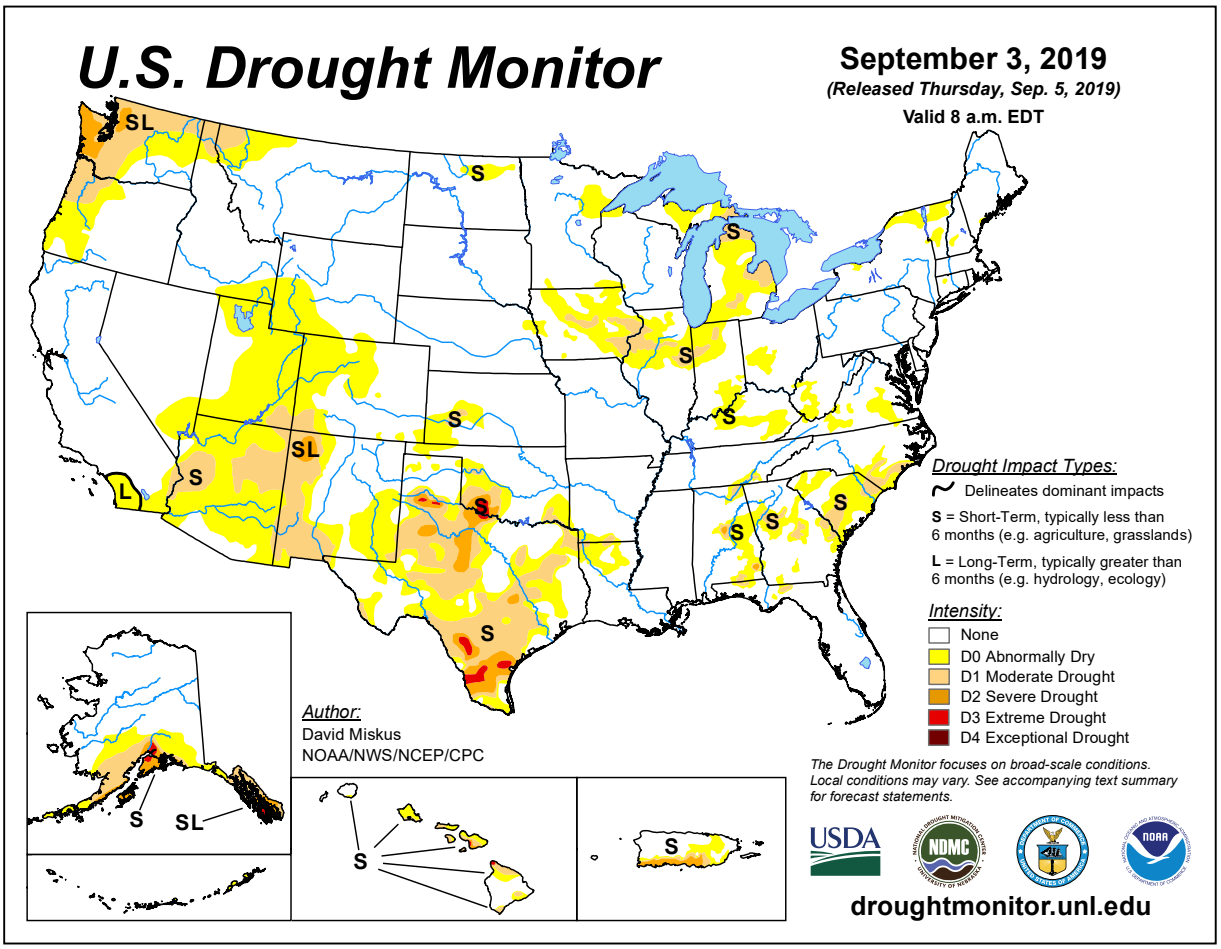
DEPICTS SHORT-TERM (UP TO 4 WEEKS) ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE, RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK AND INDICATES NORMAL CONDITIONS AT THE BEGINNING AND END OF THE GROWING SEASON.

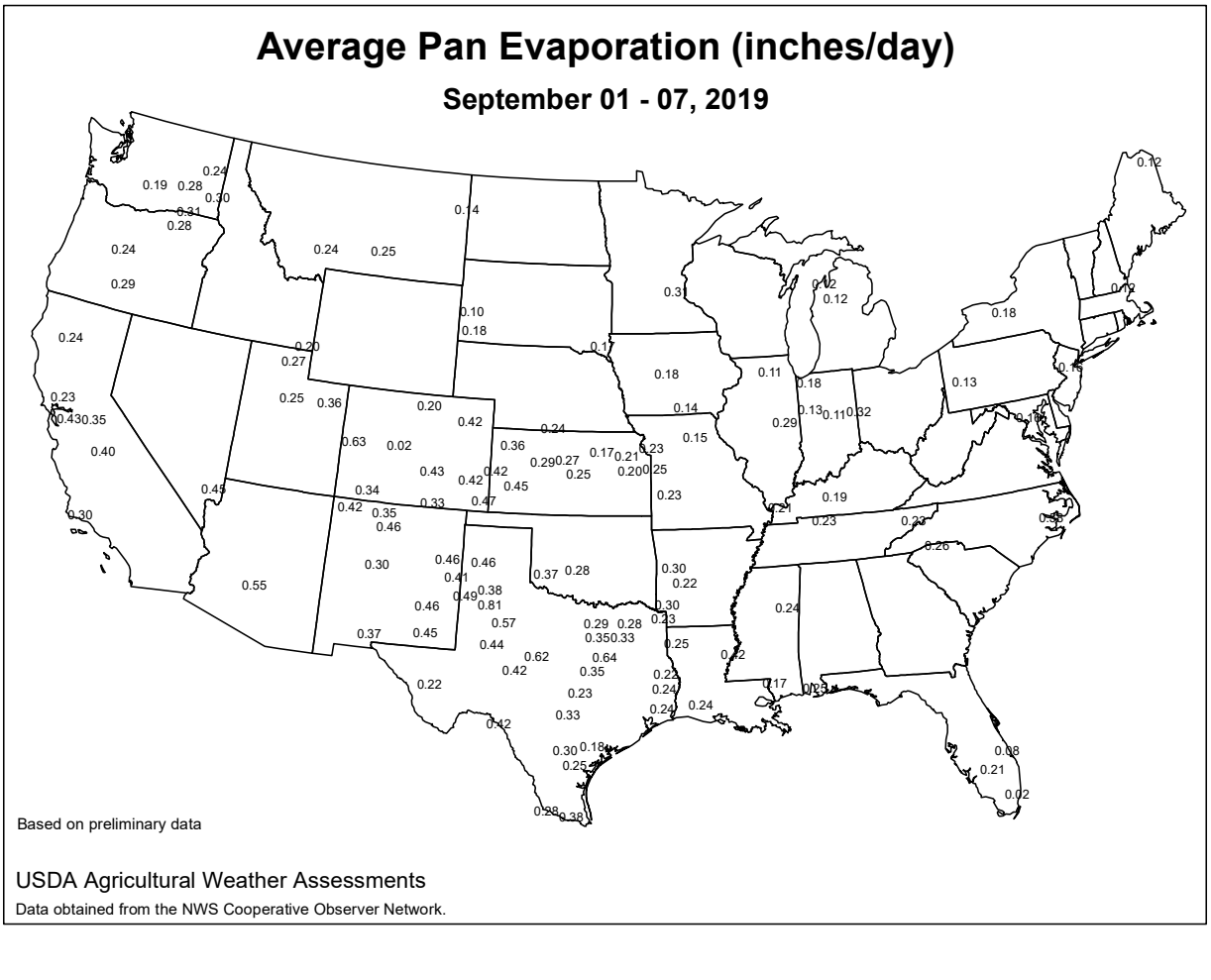
SHADED AREAS (INDEX INCREASED OR DID NOT CHANGE)

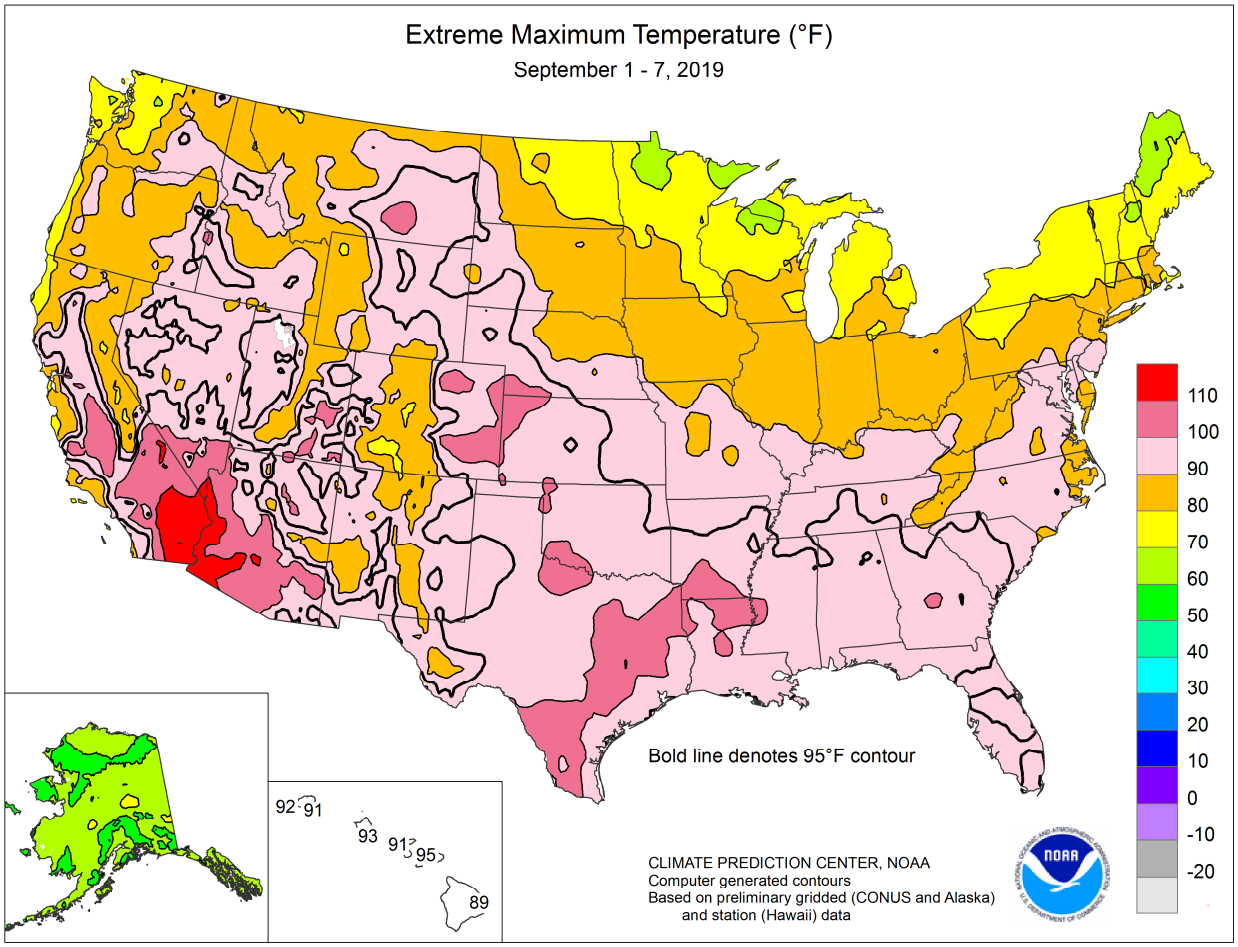
ABOVE 3	EXCESSIVELY WET. SOME FIELDS FLOODED
2 TO 3	TOO WET. SOME STANDING WATER
1 TO 2	SOME FIELDS TOO WET, PROSPECTS ABOVE NORMAL
0 TO 1	MOISTURE ADEQUATE FOR PRESENT CROP NEEDS
0 TO -1	PROSPECTS IMPROVED BUT RAIN STILL NEEDED
-1 TO -2	SOME IMPROVEMENT BUT STILL ABNORMALLY DRY
-2 TO -3	DRYNESS EASED BUT FIELDS STILL EXCESSIVELY DRY
-3 TO -4	SEVERE DRYNESS CONTINUES, MORE RAIN URGENTLY NEEDED
BELOW -4	NOT ENOUGH RAIN. EXTREMELY DRY

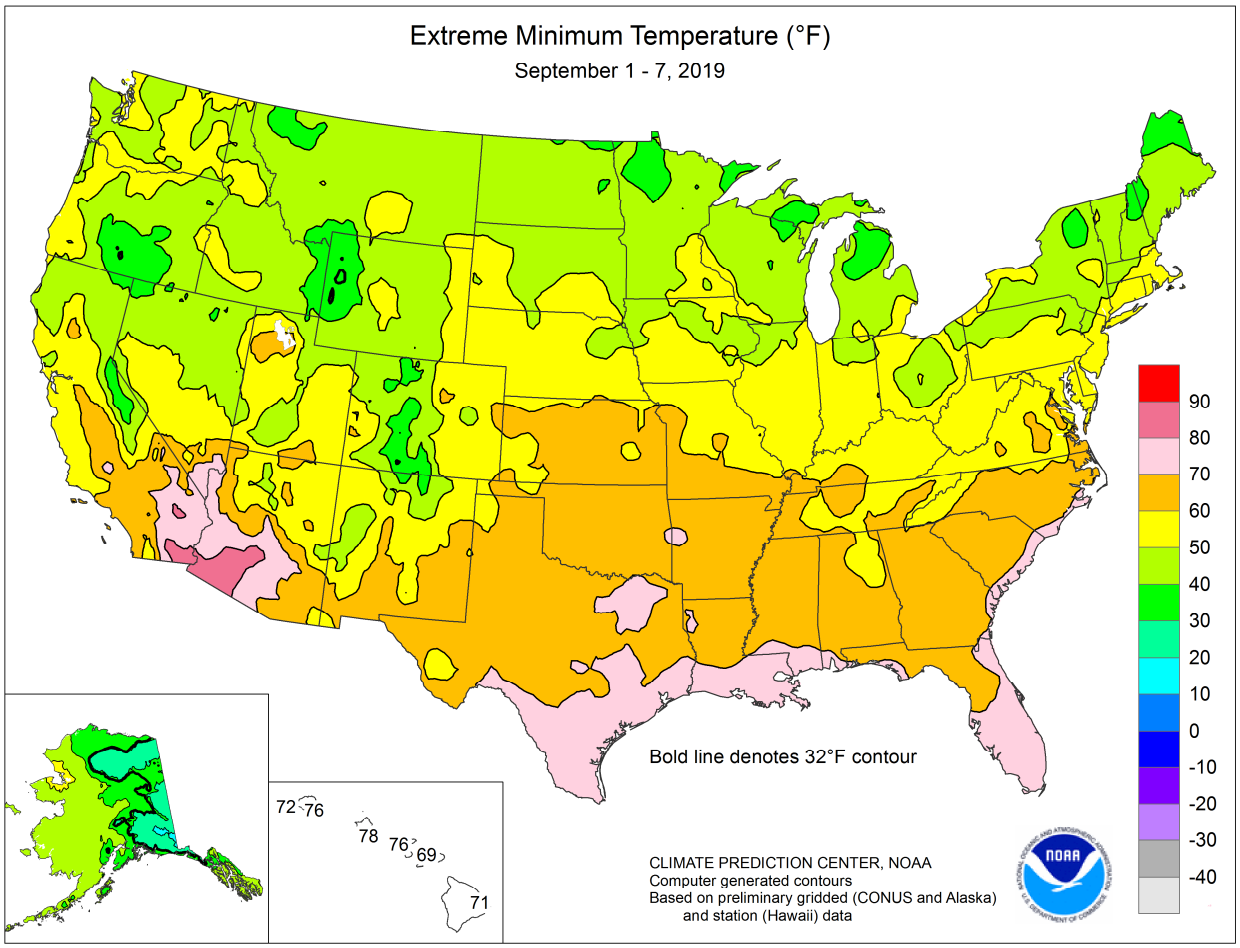
UNSHADED AREAS (INDEX DECREASED)

ABOVE 3	SOME DRYING BUT STILL EXCESSIVELY WET
2 TO 3	MORE DRY WEATHER NEEDED. WORK DELAYED
1 TO 2	FAVORABLE EXCEPT STILL TOO WET IN SPOTS
0 TO 1	FAVORABLE FOR NORMAL GROWTH AND FIELDWORK
0 TO -1	TOPSOIL MOISTURE SHORT, GERMINATION SLOW
-1 TO -2	ABNORMALLY DRY. PROSPECTS DETERIORATING
-2 TO -3	EXCESSIVELY DRY. YIELD PROSPECTS REDUCED
-3 TO -4	POTENTIAL YIELDS SEVERELY CUT BY DRYNESS
BELOW -4	EXTREMELY DRY. CROPS RUINED


U.S. Drought Monitor
September 3, 2019
(Released Thursday, Sep. 5, 2019)
Valid 8 a.m. EDT
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
Author:
David Miskus
NOAA/NWS/NCEP/CPC
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
USDA
NDMC
droughtmonitor.unl.edu

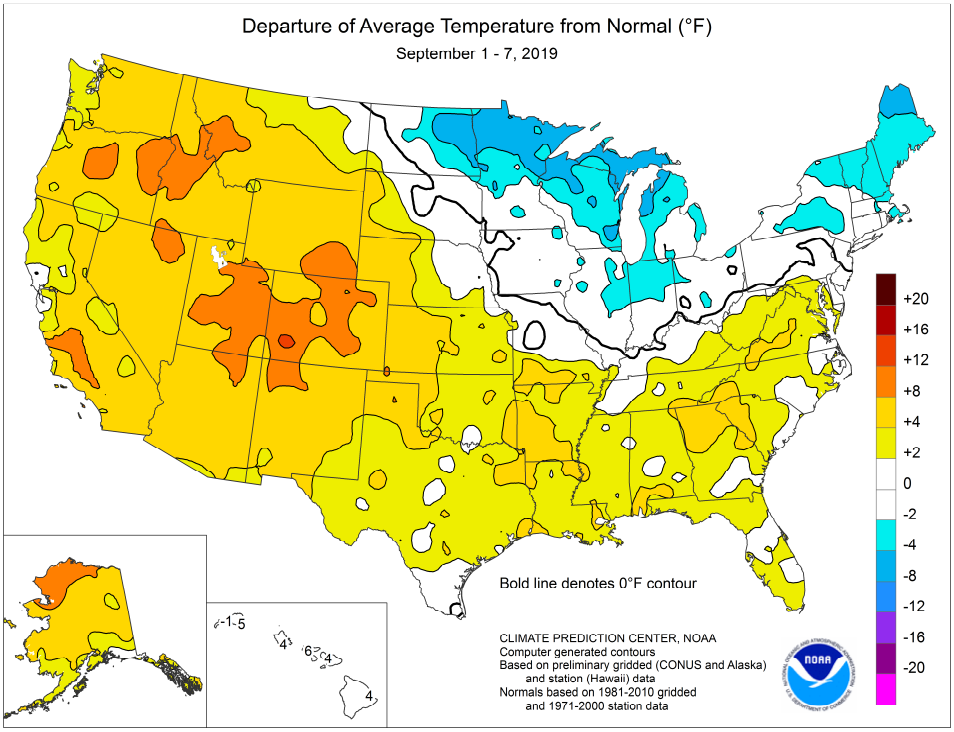

Average Pan Evaporation (inches/day)
September 01 - 07, 2019
Based on preliminary data
USDA Agricultural Weather Assessments
Data obtained from the NWS Cooperative Observer Network.


Extreme Maximum Temperature (°F)
September 1 - 7, 2019
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
92
91
93
91
95
89
Bold line denotes 95°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
NOAA


Extreme Minimum Temperature (°F)
September 1 - 7, 2019
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
72
76
78
76
69
71
Bold line denotes 32°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
NOAA

(Continued from front cover)

tropical storm-force winds (39 to 73 mph) were observed across a broader coastal area of the **middle and southern Atlantic States**. A storm surge also occurred on September 6 at some coastal sites, with water-level rises of more than 7 feet observed on the **Pamlico Sound** side of **Cape Hatteras** in a 2-hour period. The hurricane also skirted **coastal New England**. However, agricultural impacts from Dorian were overall relatively minor. In parts of **Virginia** and **North Carolina**, some open-boll cotton may have been vulnerable to wind- and rain-related impacts. Outside of Dorian's sphere of influence, spotty showers were generally confined to the **North**, **West**, and **southern Texas**. The rainfall in **Texas** was related to short-lived Tropical Storm Fernand, which made landfall in **northeastern Mexico** on September 4 with maximum sustained winds near 45 mph. Farther north, cool, showery weather prevailed in the **Great Lakes and Northeastern States**. Weekly temperatures averaged as much as 5°F below normal from **eastern North Dakota to Maine**. A broader area covering the **Midwest** experienced near- or below-normal temperatures for the seventh week in a row, maintaining a slower-than-normal pace of corn and soybean development. Elsewhere, late-season heat fostered summer crop maturation. Weekly temperatures averaged more than 10°F above normal in parts of the **West** and were at least 5°F above normal in many locations from the **central and southern Plains into the Southeast**. From the **southern Plains to the southern Appalachians**, dry weather accompanying the heat favored fieldwork, including winter wheat planting preparations and corn and rice harvesting.



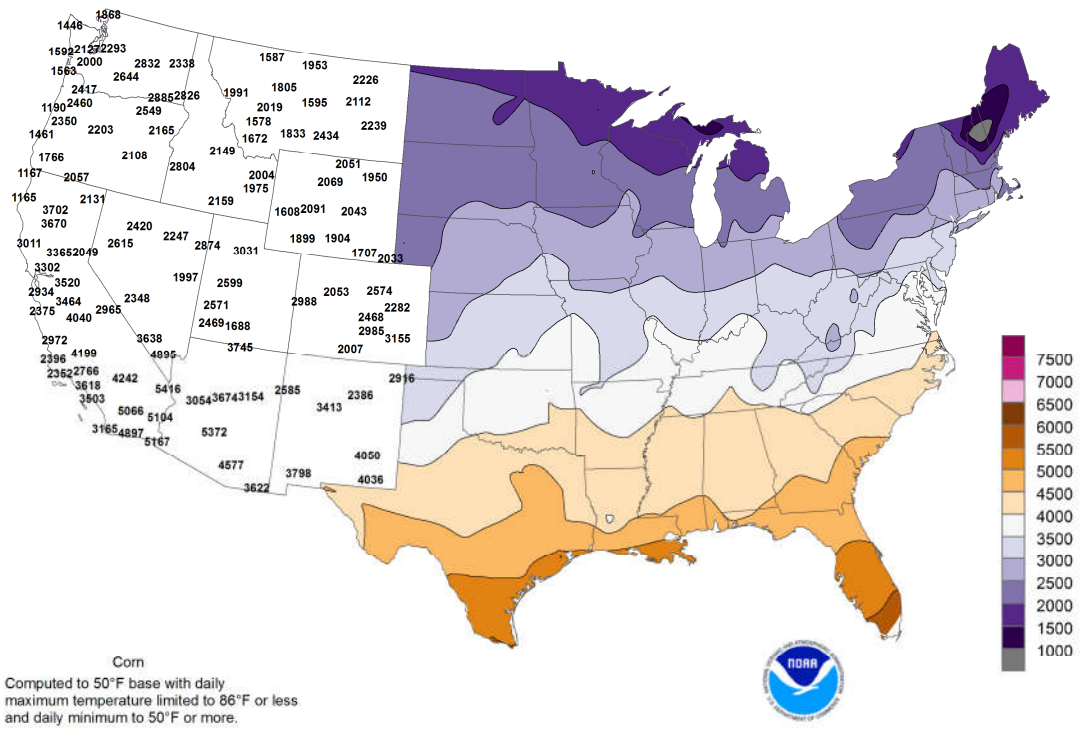
A record-setting heat wave gripped the **West** in early September. In fact, September 1 featured monthly record-tying highs in **Salt Lake City, UT** (100°F), and **Alamosa, CO** (87°F). On September 2, monthly record highs were established in locations such as **Pueblo, CO** (102°F); **Denver, CO** (100°F); and **Casper, WY** (98°F). Previous records in **Pueblo** and **Casper**, 101 and 97°F, respectively, had been originally set in September 1995. Prior to this year, **Denver's** highest September reading had been 97°F, set on September 3, 2017, and several earlier dates. In addition, **Denver's** previous latest triple-digit reading had occurred on August 16, 2002. Similarly, **Billings, MT**, experienced its latest triple-digit heat with a high of 101°F on September 4. Later, record-setting heat expanded into the **East**, where **Vero Beach, FL**, tied a monthly record with highs of 97°F on September 5 and 6. By September 7, daily-record, triple-digit highs affected a large area of the **South**, with temperatures rising to 103°F in **Austin, TX**, and 102°F in **Vicksburg, MS**, and **Monroe, LA**.

For much of the week, spotty precipitation was primarily confined to the **North**. **Pittsburgh, PA**, opened the month with a daily-record rainfall of 3.38 inches on September 1. The following day in **Minnesota**, **Rochester** netted a daily-record sum of 1.69 inches. **Wausau, WI**, received a daily-record total (1.94 inches) on September 3. By September 4, tropical storm-force winds associated with Hurricane Dorian grazed parts of **Florida's east coast**, with a gust to 70 mph reported on **Cape Canaveral**. On September 5, a few hurricane-force gusts occurred in **coastal South Carolina**, with **Fort Sumter** recording 80 mph. Daily-record rainfall totals for September 5 reached 10.39 inches in **North Myrtle Beach, SC**, and 8.58 inches in **Wilmington, NC**. By the morning of September 6, when Dorian crossed **Cape Hatteras**, winds gusted to 70 mph in **Elizabeth City, NC**, and on **Cape Henry, VA**. **Elizabeth City** also collected a daily-record rainfall (6.56 inches) for September 6. Elsewhere, late-week showers spread from the **Pacific Northwest to the northern Plains**. Daily-record amounts included 0.48 inch (on September 5) in **Redmond, OR**; 0.62 inch (on September 6) in **Glasgow, MT**; and 2.32 inches (on September 7) in **Williston, ND**.

Warmth prevailed throughout **Alaska**, with weekly temperatures averaging more than 10°F above normal in a few northern locations. **Utqiagvik**, previously known as **Barrow**, posted daily-record highs of 61°F on September 5 and 6. Elsewhere in **northern Alaska**, a monthly record was set in **Deadhorse** with a high of 70°F on September 3. Meanwhile, some beneficial precipitation fell across **southern Alaska**, where Sitka netted a daily-record rainfall (2.44 inches) on September 2. Farther south, stunning heat persisted in **Hawaii**. **Lihue, Kauai**, tied an all-time record high by attaining 91°F each day from September 4-8. **Honolulu, Oahu**, posted a daily-record high of 93°F on September 3, and **Kahului, Maui**, logged a daily-record high of 95°F on September 1. Through September 7, month-to-date rainfall at the state's major airport observation sites ranged from 0.01 inch in **Kahului** to 2.05 inches in **Hilo**, on the **Big Island**.

Total Growing Degree Days

Mar 1 - Sep 7, 2019

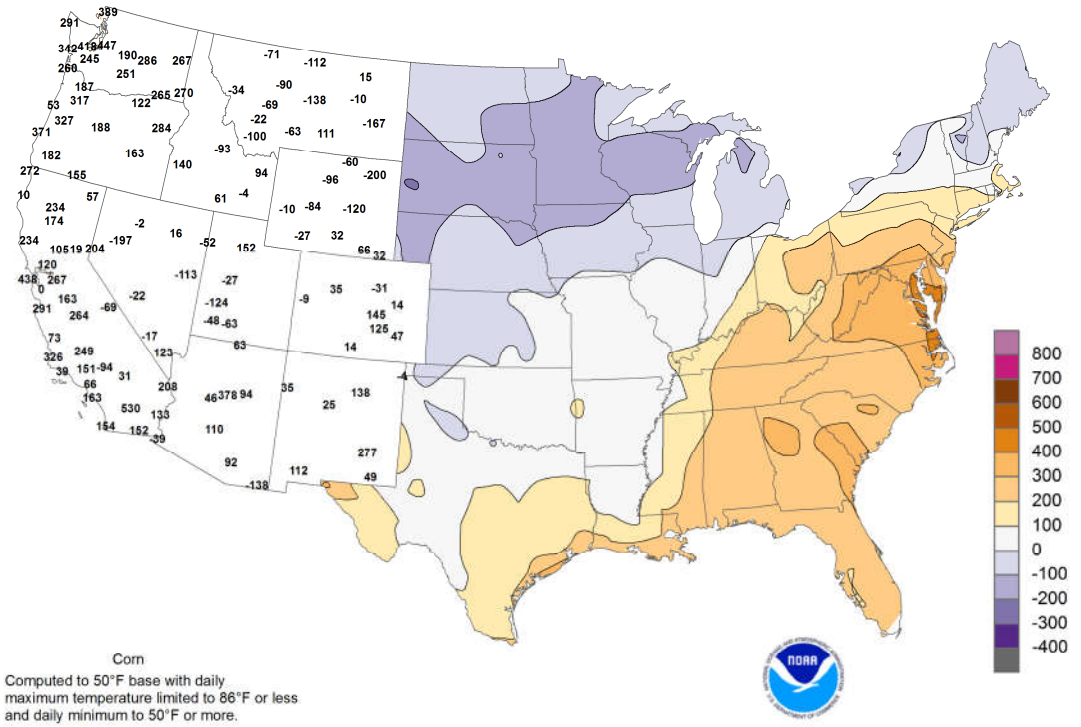


Corn

Computed to 50°F base with daily maximum temperature limited to 86°F or less and daily minimum to 50°F or more.

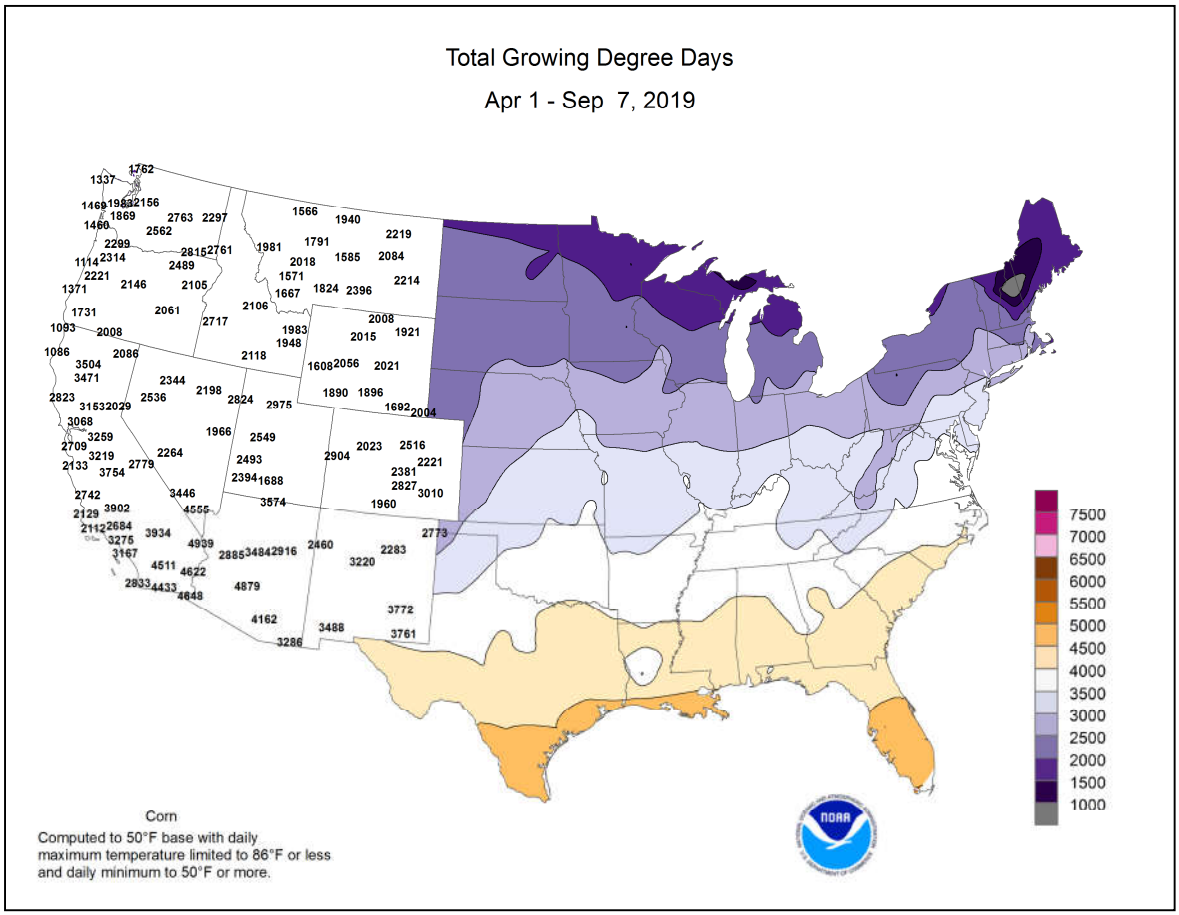
Departure from Normal Growing Degree Days

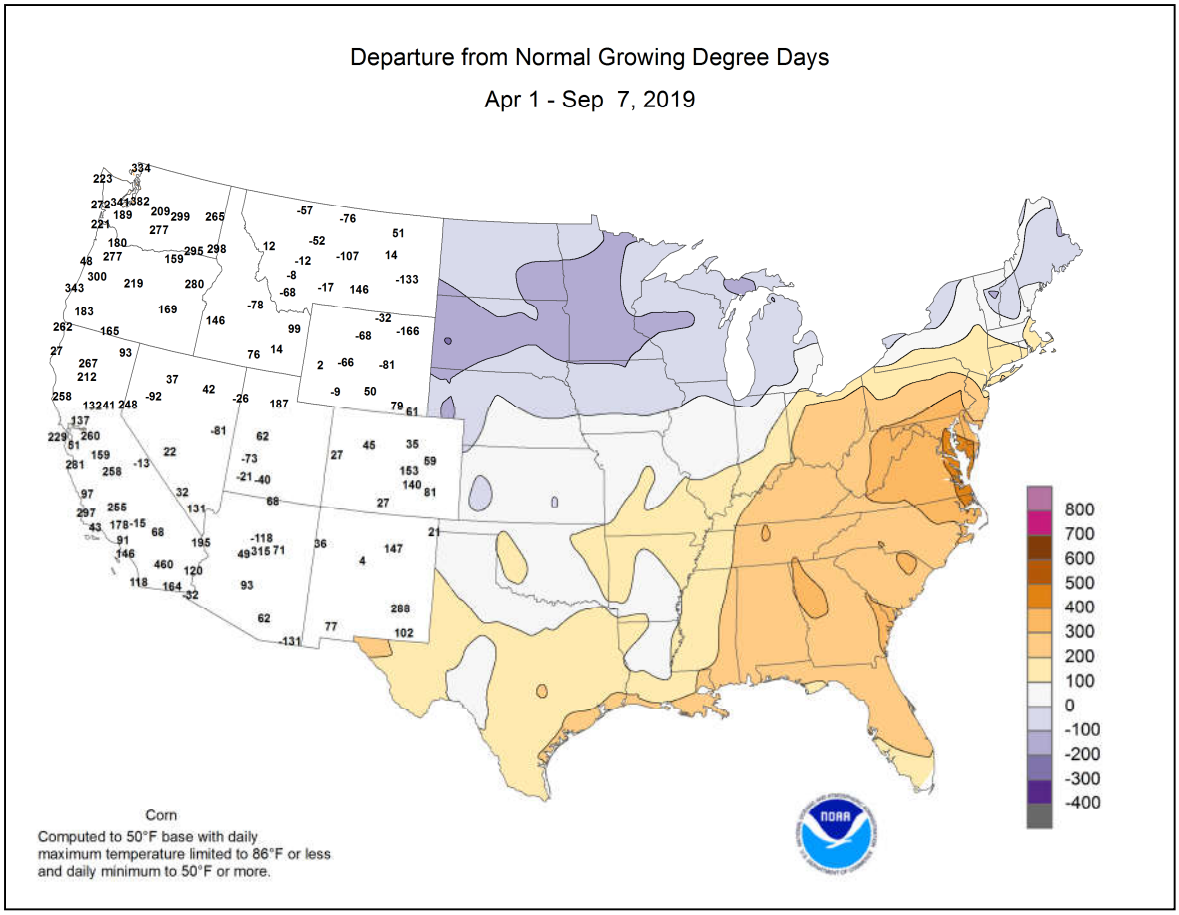
Mar 1 - Sep 7, 2019



Corn

Computed to 50°F base with daily maximum temperature limited to 86°F or less and daily minimum to 50°F or more.


Total Growing Degree Days
Apr 1 - Sep 7, 2019
7500
7000
6500
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
Corn
Computed to 50°F base with daily maximum temperature limited to 86°F or less and daily minimum to 50°F or more.


Departure from Normal Growing Degree Days
Apr 1 - Sep 7, 2019
800
700
600
500
400
300
200
100
0
-100
-200
-300
-400
Corn
Computed to 50°F base with daily maximum temperature limited to 86°F or less and daily minimum to 50°F or more.

National Weather Data for Selected Cities

Weather Data for the Week Ending September 7, 2019

Data Provided by Climate Prediction Center

STATES AND STATIONS		TEMPERATURE ˚F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
																	TEMP. ˚F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE SEP 1	PCT. NORMAL SINCE SEP 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL	BIRMINGHAM	93	68	96	60	81	4	0.00	-0.85	0.00	***	***	36.52	95	89	38	7	0	0	0
	HUNTSVILLE	94	66	98	61	80	4	0.00	-0.90	0.00	***	***	45.04	113	93	51	7	0	0	0
	MOBILE	95	73	97	71	84	4	0.00	-1.53	0.00	***	***	44.87	93	92	53	7	0	0	0
	MONTGOMERY	96	70	99	65	83	3	0.05	-0.88	0.05	***	***	34.02	86	88	41	7	0	1	0
AK	ANCHORAGE	64	52	69	45	58	5	0.49	-0.22	0.41	***	***	6.42	66	84	71	0	0	3	0
	BARROW	51	40	61	35	46	10	0.00	-0.19	0.00	***	***	7.98	268	94	74	0	0	0	0
	FAIRBANKS	67	43	73	39	55	4	0.00	-0.31	0.00	***	***	11.50	160	83	69	0	0	0	0
	JUNEAU	65	47	70	40	56	3	0.66	-0.79	0.43	***	***	28.87	87	95	77	0	0	2	0
	KODIAK	61	50	65	41	56	3	0.93	-0.52	0.78	***	***	36.30	78	83	74	0	0	3	1
	NOME	55	50	59	49	53	5	1.66	0.96	0.44	***	***	18.87	173	98	89	0	0	7	0
AZ	FLAGSTAFF	85	52	89	48	68	7	0.09	-0.45	0.05	***	***	16.39	104	76	21	0	0	3	0
	PHOENIX	109	88	112	85	98	9	0.00	-0.14	0.00	***	***	3.43	65	43	26	7	0	0	0
	PRESCOTT	93	64	96	61	78	9	1.20	0.62	0.99	***	***	11.44	82	71	20	7	0	4	1
	TUCSON	103	75	105	71	89	5	0.02	-0.35	0.02	***	***	7.71	94	61	31	7	0	1	0
AR	FORT SMITH	95	73	97	72	84	6	0.04	-0.68	0.04	***	***	49.79	173	100	51	7	0	1	0
	LITTLE ROCK	94	72	99	70	83	5	0.00	-0.79	0.00	***	***	47.26	142	95	46	7	0	0	0
CA	BAKERSFIELD	100	76	102	73	88	9	0.02	-0.01	0.02	***	***	6.52	138	46	30	7	0	1	0
	FRESNO	100	73	104	68	87	10	0.00	-0.02	0.00	***	***	9.52	121	46	32	7	0	0	0
	LOS ANGELES	85	70	93	68	77	6	0.00	-0.06	0.00	***	***	12.86	133	78	59	1	0	0	0
	REDDING	97	61	100	57	79	3	0.00	-0.06	0.00	***	***	32.09	144	56	28	6	0	0	0
	SACRAMENTO	92	62	98	59	77	4	0.00	-0.06	0.00	***	***	19.36	160	81	26	5	0	0	0
	SAN DIEGO	84	71	86	68	78	6	0.01	-0.02	0.01	***	***	8.43	108	91	72	0	0	1	0
	SAN FRANCISCO	73	60	77	58	67	3	0.00	-0.03	0.00	***	***	18.42	136	86	68	0	0	0	0
	STOCKTON	95	63	101	61	79	4	0.00	-0.04	0.00	***	***	12.48	137	63	37	6	0	0	0
CO	ALAMOSA	85	45	88	39	65	6	0.25	0.02	0.25	***	***	6.50	127	77	28	0	0	1	0
	CO SPRINGS	90	59	96	54	75	11	0.24	-0.27	0.12	***	***	9.98	67	73	19	4	0	4	0
	DENVER INTL	92	64	100	60	78	12	0.14	-0.11	0.14	***	***	12.73	115	66	20	4	0	1	0
	GRAND JUNCTION	97	63	100	56	80	10	0.04	-0.13	0.04	***	***	6.91	115	40	21	7	0	1	0
	PUEBLO	97	61	102	58	79	10	0.51	0.19	0.34	***	***	11.26	110	75	33	6	0	3	0
CT	BRIDGEPORT	75	62	82	56	69	-1	0.70	-0.15	0.33	***	***	36.39	118	83	61	0	0	4	0
	HARTFORD	77	56	84	53	66	-2	1.06	0.10	0.97	***	***	34.53	110	87	55	0	0	4	1
DC	WASHINGTON	86	70	96	63	78	3	0.07	-0.75	0.05	***	***	30.84	114	82	50	1	0	2	0
DE	WILMINGTON	83	64	92	54	73	1	0.11	-0.75	0.11	***	***	37.02	123	93	51	1	0	1	0
FL	DAYTONA BEACH	89	76	94	71	83	2	2.58	0.97	1.32	***	***	38.41	113	93	60	3	0	4	2
	JACKSONVILLE	92	75	97	70	83	3	1.44	-0.48	0.59	***	***	33.10	88	92	55	5	0	5	1
	KEY WEST	90	81	92	78	85	1	1.66	0.27	0.64	***	***	20.51	80	81	68	3	0	4	1
	MIAMI	93	80	96	79	87	4	1.14	-1.06	0.68	***	***	52.84	130	83	56	7	0	2	1
	ORLANDO	91	75	95	69	83	1	1.73	0.22	0.97	***	***	35.66	97	90	62	4	0	4	2
	PENSACOLA	95	75	99	72	85	4	0.00	-1.47	0.00	***	***	39.63	84	85	48	7	0	0	0
	TALLAHASSEE	95	73	99	66	84	3	0.00	-1.40	0.00	***	***	30.37	63	89	54	7	0	0	0
	TAMPA	91	78	93	75	85	2	0.43	-1.38	0.26	***	***	47.54	141	86	64	6	0	2	0
	WEST PALM BEACH	90	77	93	75	84	2	0.09	-1.88	0.09	***	***	42.82	104	89	69	5	0	1	0
GA	ATHENS	93	69	96	67	81	5	0.00	-0.81	0.00	***	***	33.81	99	83	48	6	0	0	0
	ATLANTA	94	73	97	69	83	6	0.00	-0.89	0.00	***	***	31.57	88	73	42	6	0	0	0
	AUGUSTA	93	71	96	64	82	5	0.27	-0.67	0.27	***	***	37.51	114	88	51	7	0	1	0
	COLUMBUS	95	72	98	67	84	4	0.42	-0.34	0.42	***	***	31.86	90	81	39	6	0	1	0
	MACON	95	68	99	63	82	4	0.00	-0.83	0.00	***	***	27.30	83	89	39	7	0	0	0
	SAVANNAH	91	74	97	71	82	3	0.71	-0.80	0.41	***	***	30.51	81	95	65	4	0	3	0
HI	HILO	87	73	89	71	80	4	2.02	-0.28	0.89	***	***	59.99	72	83	70	0	0	7	1
	HONOLULU	92	80	93	78	86	4	0.04	-0.02	0.03	***	***	9.12	88	67	61	7	0	2	0
	KAHULUI	92	75	95	69	84	5	0.00	-0.08	0.00	***	***	9.76	80	75	65	7	0	0	0
	LIHUE	90	79	91	76	85	5	0.28	-0.18	0.08	***	***	18.27	77	78	71	5	0	5	0
ID	BOISE	93	64	99	58	78	9	0.14	0.01	0.14	***	***	12.35	154	50	35	5	0	1	0
	LEWISTON	90	63	95	58	77	8	0.04	-0.13	0.04	***	***	9.32	105	54	36	5	0	1	0
	POCATELLO	89	51	96	45	70	6	0.20	0.03	0.15	***	***	9.52	110	67	32	5	0	2	0
IL	CHICAGO/O'HARE	75	60	82	56	68	0	0.56	-0.41	0.34	***	***	32.40	125	86	61	0	0	2	0
	MOLINE	81	59	89	49	70	1	0.05	-0.85	0.02	***	***	34.85	124	87	58	0	0	3	0
	PEORIA	79	60	87	54	69	-1	0.70	0.00	0.62	***	***	35.92	141	90	59	0	0	2	1
	ROCKFORD	77	57	84	50	67	0	1.07	0.13	0.89	***	***	34.99	130	96	72	0	0	2	1
	SPRINGFIELD	81	59	87	52	70	-1	1.77	1.06	1.75	***	***	36.87	145	97	60	0	0	2	1
IN	EVANSVILLE	86	63	91	59	74	1	0.00	-0.72	0.00	***	***	46.01	146	90	54	1	0	0	0
	FORT WAYNE	75	56	81	49	66	-2	0.11	-0.64	0.06	***	***	29.37	112	95	64	0	0	2	0
	INDIANAPOLIS	80	61	85	56	70	-1	0.00	-0.75	0.00	***	***	37.68	128	93	56	0	0	0	0
	SOUTH BEND	75	55	80	47	65	-3	0.49	-0.45	0.32	***	***	31.08	115	95	66	0	0	3	0
IA	BURLINGTON	81	60	90	53	70	-1	0.06	-0.79	0.06	***	***	31.98	116	91	57	1	0	1	0
	CEDAR RAPIDS	78	54	82	49	66	-2	0.33	-0.59	0.32	***	***	30.19	120	99	60	0	0	2	0
	DES MOINES	82	60	87	55	71	1	0.09	-0.81	0.09	***	***	34.56	131	88	62	0	0	1	0
	DUBUQUE	75	54	82	47	65	-1	0.39	-0.62	0.35	***	***	32.02	122	97	73	0	0	2	0
	SIOUX CITY	82	59	88	50	70	2	0.11	-0.49	0.06	***	***	25.36	126	95	70	0	0	2	0
	WATERLOO	80	55	85	49	67	0	0.03	-0.80	0.03	***	***	29.74	117	90	59	0	0	1	0
KS	CONCORDIA	88	67	95	62	77	4	0.00	-0.61	0.00	***	***	29.35	131	87	63	3	0	0	0
	DODGE CITY	96	65	99	60	80	6	0.00	-0.47	0.00	***	***	19.74	110	88	31	6	0	0	0
	GOODLAND	***	***	***	***	***	***	***	***	***	***	***	21.00	127	***	***	***	***	***	***
	TOPEKA	88	66	94	60	77	4	0.02	-0.89	0.02	***	***	41.00	157	86	56	3	0	1	0

Based on 1971-2000 normals

***** Not Available**

Weather Data for the Week Ending September 7, 2019

STATES AND STATIONS		TEMPERATURE ˚F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
																	TEMP. ˚F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE SEP 1	PCT. NORMAL SINCE SEP 1	TOTAL, IN., SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	WICHITA	92	69	95	63	80	4	0.00	-0.69	0.00	***	***	34.76	155	87	59	6	0	0	0
KY	JACKSON	86	63	92	55	75	4	0.00	-0.91	0.00	***	***	39.46	113	97	46	1	0	0	0
	LEXINGTON	88	63	92	54	75	3	0.00	-0.74	0.00	***	***	36.52	109	84	50	3	0	0	0
	LOUISVILLE	88	67	93	63	78	4	0.00	-0.70	0.00	***	***	39.78	125	81	43	4	0	0	0
	PADUCAH	89	64	93	60	76	3	0.00	-0.74	0.00	***	***	55.81	164	93	54	4	0	0	0
LA	BATON ROUGE	96	74	99	72	85	5	0.00	-1.28	0.00	***	***	50.02	109	91	44	7	0	0	0
	LAKE CHARLES	97	76	99	74	86	5	0.00	-1.38	0.00	***	***	52.24	132	91	44	7	0	0	0
	NEW ORLEANS	96	78	99	76	87	5	0.00	-1.55	0.00	***	***	46.77	100	85	52	7	0	0	0
	SHREVEPORT	99	71	101	69	85	4	0.00	-0.61	0.00	***	***	32.39	92	88	34	7	0	0	0
ME	CARIBOU	64	47	69	41	56	-3	1.76	0.91	1.16	***	***	28.28	110	89	56	0	0	3	1
	PORTLAND	70	55	76	50	63	0	0.14	-0.56	0.07	***	***	34.44	116	90	58	0	0	3	0
MD	BALTIMORE	85	66	96	56	75	3	0.00	-0.90	0.00	***	***	27.89	95	86	57	2	0	0	0
MA	BOSTON	75	62	86	56	68	-1	1.47	0.67	1.11	***	***	33.82	119	82	53	0	0	3	1
	WORCESTER	70	55	78	50	63	-2	1.30	0.36	1.26	***	***	36.54	111	94	61	0	0	2	1
MI	ALPENA	72	45	77	38	59	-2	1.25	0.53	1.09	***	***	24.88	124	94	54	0	0	3	1
	GRAND RAPIDS	73	56	80	48	65	-1	0.23	-0.81	0.20	***	***	31.76	127	89	60	0	0	4	0
	HOUGHTON LAKE	71	45	76	35	58	-3	0.87	0.01	0.71	***	***	25.64	128	95	63	0	0	2	1
	LANSING	73	55	81	47	64	-1	0.19	-0.75	0.15	***	***	27.54	126	85	64	0	0	2	0
	MUSKEGON	72	55	78	47	64	-1	0.07	-0.87	0.04	***	***	30.45	141	86	60	0	0	2	0
	TRAVERSE CITY	72	50	79	44	61	-3	0.64	-0.23	0.59	***	***	26.93	120	90	53	0	0	2	1
MN	DULUTH	68	52	77	49	60	1	0.91	-0.15	0.44	***	***	22.78	102	84	63	0	0	3	0
	INT'L FALLS	63	45	71	42	54	-4	0.68	-0.09	0.55	***	***	21.59	122	95	67	0	0	3	1
	MINNEAPOLIS	75	59	79	55	67	1	0.41	-0.39	0.31	***	***	34.31	153	83	60	0	0	3	0
	ROCHESTER	74	53	79	49	64	1	1.82	0.96	1.51	***	***	41.04	172	92	69	0	0	2	1
	ST. CLOUD	71	53	79	46	62	0	0.99	0.13	0.84	***	***	29.65	144	95	61	0	0	4	1
MS	JACKSON	96	70	99	67	83	4	0.00	-0.76	0.00	***	***	42.64	107	89	42	7	0	0	0
	MERIDIAN	96	70	99	66	83	3	0.00	-0.75	0.00	***	***	45.40	108	90	49	7	0	0	0
	TUPELO	93	69	96	65	81	4	0.00	-0.69	0.00	***	***	57.70	149	88	63	7	0	0	0
MO	COLUMBIA	84	63	91	59	74	2	0.00	-0.83	0.00	***	***	38.24	134	92	56	1	0	0	0
	KANSAS CITY	85	65	91	63	75	2	0.33	-0.61	0.33	***	***	43.64	162	91	61	1	0	1	0
	SAINT LOUIS	85	67	91	62	76	1	0.00	-0.67	0.00	***	***	43.07	159	84	57	1	0	0	0
	SPRINGFIELD	90	68	92	65	79	5	0.00	-1.10	0.00	***	***	40.12	133	89	60	5	0	0	0
MT	BILLINGS	87	60	101	55	73	8	0.15	-0.08	0.09	***	***	16.37	149	64	27	5	0	2	0
	BUTTE	82	47	88	42	65	8	0.52	0.24	0.52	***	***	10.58	105	79	20	0	0	1	1
	CUT BANK	76	48	85	39	62	5	0.30	-0.07	0.16	***	***	10.30	98	85	31	0	0	2	0
	GLASGOW	79	55	90	49	67	4	0.99	0.75	0.74	***	***	14.53	161	76	51	1	0	2	1
	GREAT FALLS	81	50	91	43	66	6	0.04	-0.29	0.03	***	***	13.84	117	84	28	2	0	2	0
	HAVRE	81	50	92	42	65	3	0.44	0.19	0.32	***	***	10.04	110	83	42	1	0	2	0
	MISSOULA	86	53	93	46	70	8	0.65	0.37	0.62	***	***	11.00	109	72	40	3	0	2	1
NE	GRAND ISLAND	83	62	93	56	73	4	0.01	-0.65	0.01	***	***	36.42	177	90	61	2	0	1	0
	LINCOLN	85	61	94	54	73	2	0.12	-0.62	0.12	***	***	26.65	122	89	56	2	0	1	0
	NORFOLK	82	58	88	48	70	2	0.17	-0.40	0.16	***	***	26.90	127	92	67	0	0	2	0
	NORTH PLATTE	86	59	96	53	73	5	0.00	-0.32	0.00	***	***	28.67	176	92	48	2	0	0	0
	OMAHA	84	62	92	57	73	3	0.11	-0.63	0.11	***	***	27.32	120	90	63	1	0	1	0
	SCOTTSBLUFF	91	61	98	59	76	10	0.45	0.20	0.45	***	***	27.43	211	89	45	4	0	1	0
	VALENTINE	88	59	92	50	73	6	0.12	-0.25	0.10	***	***	30.64	191	85	49	2	0	2	0
NV	ELY	87	49	92	45	68	7	0.06	-0.13	0.04	***	***	12.13	171	67	24	2	0	2	0
	LAS VEGAS	106	83	110	79	94	8	0.00	-0.06	0.00	***	***	4.64	141	30	19	7	0	0	0
	RENO	93	60	97	56	77	11	0.05	-0.03	0.05	***	***	8.81	176	54	30	6	0	1	0
	WINNEMUCCA	94	52	97	43	73	8	0.15	0.05	0.13	***	***	7.56	134	60	30	7	0	2	0
NH	CONCORD	73	51	79	45	62	-2	0.55	-0.17	0.25	***	***	29.58	118	93	53	0	0	4	0
NJ	NEWARK	78	63	90	57	71	-1	1.51	0.59	1.19	***	***	44.23	136	82	62	1	0	2	1
NM	ALBUQUERQUE	93	68	96	65	81	8	0.00	-0.30	0.00	***	***	5.87	89	44	20	7	0	0	0
NY	ALBANY	75	54	80	51	65	0	1.77	0.94	0.92	***	***	31.85	121	88	54	0	0	3	2
	BINGHAMTON	71	51	77	45	61	-2	1.35	0.51	1.28	***	***	31.54	119	94	65	0	0	3	1
	BUFFALO	74	57	78	53	66	0	1.85	0.87	0.90	***	***	30.23	113	90	56	0	0	4	2
	ROCHESTER	75	55	79	51	65	0	1.12	0.24	0.52	***	***	22.33	96	89	56	0	0	5	1
	SYRACUSE	74	55	78	49	65	-1	1.70	0.76	1.15	***	***	33.64	126	90	53	0	0	4	1
NC	ASHEVILLE	87	62	90	57	75	6	0.00	-0.98	0.00	***	***	41.71	123	85	47	2	0	0	0
	CHARLOTTE	90	67	94	64	79	2	0.00	-0.86	0.00	***	***	39.13	129	84	43	5	0	0	0
	GREENSBORO	87	68	89	65	77	3	0.00	-0.92	0.00	***	***	38.08	125	90	48	0	0	0	0
	HATTERAS	85	76	89	74	80	2	4.71	3.46	2.73	***	***	45.21	117	94	72	0	0	5	2
	RALEIGH	87	67	91	63	77	2	1.04	0.11	0.96	***	***	33.43	109	92	60	3	0	2	1
	WILMINGTON	86	72	92	71	79	1	6.98	5.26	5.81	***	***	33.05	79	98	65	1	0	4	2
ND	BISMARCK	75	53	83	45	64	1	1.15	0.74	1.09	***	***	20.43	155	95	65	0	0	2	1
	DICKINSON	80	51	90	44	65	2	1.02	0.66	0.99	***	***	18.40	144	92	41	1	0	3	1
	FARGO	69	51	77	43	60	-3	0.75	0.23	0.47	***	***	23.72	149	98	66	0	0	2	0
	GRAND FORKS	68	47	75	40	57	-5	0.46	-0.05	0.45	***	***	17.30	116	91	59	0	0	2	0
	JAMESTOWN	70	51	75	41	61	-2	0.47	0.05	0.34	***	***	21.74	149	99	66	0	0	2	0
	WILLISTON	76	50	89	47	63	1	3.08	2.78	2.34	***	***	16.11	146	90	55	0	0	3	2
OH	AKRON-CANTON	80	56	83	52	68	1	0.29	-0.54	0.29	***	***	36.07	132	93	55	0	0	1	0
	CINCINNATI	83	63	87	54	73	1	0.49	-0.27	0.48	***	***	44.79	145	86	56	0	0	2	0
	CLEVELAND	78	58	83	50	68	1	0.24	-0.70	0.21	***	***	32.57	122	91	54	0	0	2	0
	COLUMBUS	80	59	83	52	69	-2	0.55	-0.20	0.55	***	***	36.40	130	92	54	0	0	1	1
	DAYTON	81	59	85	53	70	1	0.01	-0.69	0.01	***	***	35.21	123	91	53	0	0	1	0
	MANSFIELD	77	57	81	49	67	0	1.27	0.28	1.27	***	***	39.90	128	99	55	0	0	1	1

Based on 1971-2000 normals

***** Not Available**

Weather Data for the Week Ending September 7, 2019

STATES AND STATIONS		TEMPERATURE ˚F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS TEMP. ˚F		NUMBER OF DAYS PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE SEP 1	PCT. NORMAL SINCE SEP 1	TOTAL, IN., SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	TOLEDO	77	60	83	52	68	0	0.13	-0.63	0.13	***	***	33.64	144	87	57	0	0	1	0
	YOUNGSTOWN	77	54	82	48	66	0	0.67	-0.23	0.67	***	***	41.30	156	90	58	0	0	1	1
OK	OKLAHOMA CITY	92	67	95	66	80	3	0.00	-0.74	0.00	***	***	38.20	153	96	47	6	0	0	0
	TULSA	94	71	96	69	83	5	0.00	-0.94	0.00	***	***	44.07	154	97	53	7	0	0	0
OR	ASTORIA	71	57	77	50	64	4	0.01	-0.47	0.01	***	***	25.68	67	93	81	0	0	1	0
	BURNS	89	47	92	41	68	9	0.07	-0.01	0.07	***	***	11.48	164	68	36	4	0	1	0
	EUGENE	83	56	93	49	70	5	0.05	-0.30	0.05	***	***	23.25	78	83	61	1	0	1	0
	MEDFORD	90	60	96	58	75	5	0.10	-0.07	0.10	***	***	14.84	140	75	34	3	0	1	0
	PENDLETON	89	58	92	54	74	6	0.02	-0.12	0.02	***	***	9.77	120	64	38	3	0	1	0
	PORTLAND	82	63	88	61	73	6	0.09	-0.24	0.09	***	***	15.50	72	79	66	0	0	1	0
	SALEM	81	58	91	54	70	5	0.01	-0.26	0.01	***	***	19.73	86	83	63	1	0	1	0
PA	ALLENTOWN	80	60	89	51	70	2	0.44	-0.62	0.44	***	***	46.92	149	83	56	0	0	1	0
	ERIE	75	59	83	53	67	-1	1.31	0.16	0.94	***	***	30.18	109	85	63	0	0	4	1
	MIDDLETOWN	82	63	89	58	72	1	1.07	0.26	1.07	***	***	33.92	121	86	50	0	0	1	1
	PHILADELPHIA	82	64	92	58	73	0	0.50	-0.39	0.24	***	***	38.31	128	82	61	1	0	3	0
	PITTSBURGH	78	58	82	54	68	0	3.53	2.73	3.45	***	***	40.28	147	91	54	0	0	2	1
	WILKES-BARRE	78	56	86	50	67	0	0.05	-0.80	0.04	***	***	38.34	148	89	50	0	0	2	0
	WILLIAMSPORT	78	58	87	53	68	0	1.10	0.20	1.10	***	***	37.86	132	90	54	0	0	1	1
RI	PROVIDENCE	76	59	84	56	67	-2	0.06	-0.87	0.05	***	***	34.37	109	91	57	0	0	2	0
SC	CHARLESTON	87	73	95	72	80	1	3.78	2.14	1.84	***	***	33.68	88	96	56	3	0	4	2
	COLUMBIA	93	72	98	66	82	4	0.62	-0.49	0.61	***	***	26.46	73	87	49	6	0	2	1
	FLORENCE	89	71	94	66	80	2	2.83	1.82	2.68	***	***	32.06	97	93	54	5	0	3	1
	GREENVILLE	92	69	95	67	80	5	0.00	-0.87	0.00	***	***	36.30	102	79	39	6	0	0	0
SD	ABERDEEN	77	52	90	42	65	0	1.14	0.68	1.14	***	***	23.26	144	93	62	1	0	1	1
	HURON	78	57	86	50	68	2	0.16	-0.25	0.16	***	***	33.19	200	95	58	0	0	1	0
	RAPID CITY	84	56	92	50	70	4	0.04	-0.22	0.04	***	***	29.67	221	86	44	2	0	1	0
	SIOUX FALLS	78	59	88	49	69	3	0.01	-0.66	0.01	***	***	30.57	161	88	63	0	0	1	0
TN	BRISTOL	88	61	90	58	75	4	0.00	-0.68	0.00	***	***	41.54	138	93	41	2	0	0	0
	CHATTANOOGA	95	69	98	66	82	6	0.00	-0.95	0.00	***	***	45.62	119	86	39	7	0	0	0
	KNOXVILLE	89	66	92	62	78	3	0.00	-0.63	0.00	***	***	48.23	139	88	40	2	0	0	0
	MEMPHIS	93	73	96	69	83	4	0.00	-0.73	0.00	***	***	52.24	140	85	47	7	0	0	0
	NASHVILLE	92	67	97	63	79	4	0.00	-0.83	0.00	***	***	47.61	142	86	40	5	0	0	0
TX	ABILENE	97	70	99	69	84	5	0.01	-0.65	0.01	***	***	18.99	118	68	32	7	0	1	0
	AMARILLO	93	63	96	61	78	5	0.00	-0.56	0.00	***	***	17.05	109	74	26	7	0	0	0
	AUSTIN	100	71	101	68	85	2	0.00	-0.55	0.00	***	***	26.15	118	75	31	7	0	0	0
	BEAUMONT	97	75	99	73	86	5	0.02	-1.35	0.02	***	***	53.69	133	93	50	7	0	1	0
	BROWNSVILLE	91	78	98	75	84	1	3.18	2.08	2.28	***	***	16.87	101	96	71	4	0	4	2
	CORPUS CHRISTI	94	76	98	74	85	2	1.23	0.14	0.68	***	***	14.25	68	93	60	6	0	3	2
	DEL RIO	99	76	101	74	88	5	0.00	-0.39	0.00	***	***	13.26	103	72	44	7	0	0	0
	EL PASO	95	73	98	70	84	5	0.00	-0.39	0.00	***	***	2.74	44	45	22	7	0	0	0
	FORT WORTH	97	75	100	71	86	5	0.00	-0.39	0.00	***	***	27.14	116	76	33	7	0	0	0
	GALVESTON	94	82	95	79	88	5	0.04	-1.29	0.04	***	***	27.97	97	88	48	7	0	1	0
	HOUSTON	99	75	100	74	87	5	0.00	-1.01	0.00	***	***	29.23	91	85	41	7	0	0	0
	LUBBOCK	94	66	95	62	80	5	0.00	-0.61	0.00	***	***	15.61	114	69	34	7	0	0	0
	MIDLAND	95	70	96	67	83	6	0.00	-0.45	0.00	***	***	11.43	116	70	36	7	0	0	0
	SAN ANGELO	99	67	100	64	83	5	0.00	-0.62	0.00	***	***	14.49	104	76	36	7	0	0	0
	SAN ANTONIO	98	76	99	73	87	5	0.00	-0.63	0.00	***	***	15.29	69	81	32	7	0	0	0
	VICTORIA	99	74	100	72	86	3	0.00	-1.00	0.00	***	***	15.87	59	92	47	7	0	0	0
	WACO	100	71	101	69	86	4	0.00	-0.46	0.00	***	***	27.50	126	82	36	7	0	0	0
	WICHITA FALLS	97	70	102	67	84	4	0.00	-0.68	0.00	***	***	21.07	106	90	38	7	0	0	0
UT	SALT LAKE CITY	94	70	100	64	82	12	0.11	-0.11	0.07	***	***	15.37	137	50	19	5	0	3	0
VT	BURLINGTON	74	55	79	52	64	0	2.18	1.24	1.13	***	***	28.40	115	89	49	0	0	5	2
VA	LYNCHBURG	89	64	95	58	77	6	0.00	-0.81	0.00	***	***	28.67	94	88	44	3	0	0	0
	NORFOLK	84	71	89	65	78	3	1.19	0.21	1.19	***	***	36.82	111	94	69	0	0	1	1
	RICHMOND	88	67	94	59	77	3	0.38	-0.51	0.38	***	***	34.42	111	94	64	3	0	1	0
	ROANOKE	88	66	95	62	77	5	0.06	-0.83	0.05	***	***	31.55	104	79	46	1	0	2	0
	WASH/DULLES	84	65	92	56	75	3	0.32	-0.59	0.32	***	***	30.17	103	87	54	1	0	1	0
WA	OLYMPIA	77	52	81	48	64	3	0.00	-0.41	0.00	***	***	17.22	59	90	71	0	0	0	0
	QUILLAYUTE	70	53	75	46	61	3	0.20	-0.51	0.20	***	***	37.50	63	97	81	0	0	1	0
	SEATTLE-TACOMA	77	60	81	59	69	5	0.59	0.26	0.59	***	***	17.81	85	82	67	0	0	1	1
	SPOKANE	83	58	89	54	70	6	0.04	-0.13	0.04	***	***	9.16	87	67	29	0	0	1	0
	YAKIMA	88	54	90	49	71	6	0.00	-0.08	0.00	***	***	6.78	136	75	41	1	0	0	0
WV	BECKLEY	82	59	87	56	71	4	0.03	-0.68	0.03	***	***	35.64	117	90	51	0	0	1	0
	CHARLESTON	86	62	91	57	74	4	0.09	-0.76	0.09	***	***	34.11	107	94	45	2	0	1	0
	ELKINS	81	58	86	56	70	4	0.00	-0.94	0.00	***	***	38.70	116	90	55	0	0	0	0
	HUNTINGTON	85	63	89	54	74	3	0.00	-0.71	0.00	***	***	36.69	119	94	52	0	0	0	0
WI	EAU CLAIRE	73	53	78	46	63	-1	1.30	0.24	0.87	***	***	31.86	131	94	51	0	0	2	1
	GREEN BAY	72	53	81	47	63	0	2.15	1.30	1.87	***	***	31.85	151	91	58	0	0	2	1
	LA CROSSE	79	58	85	51	69	2	0.17	-0.77	0.16	***	***	30.63	125	89	44	0	0	2	0
	MADISON	75	54	83	48	65	0	0.35	-0.56	0.19	***	***	31.85	129	92	65	0	0	2	0
	MILWAUKEE	73	60	80	52	67	0	0.26	-0.65	0.26	***	***	29.19	117	84	65	0	0	1	0
WY	CASPER	91	53	98	46	72	9	0.00	-0.15	0.00	***	***	14.89	155	63	22	5	0	0	0
	CHEYENNE	88	58	95	53	73	12	0.07	-0.29	0.03	***	***	20.22	161	66	29	4	0	3	0
	LANDER	89	55	95	50	72	8	0.07	-0.09	0.07	***	***	15.64	165	53	16	4	0	1	0
	SHERIDAN	88	52	99	49	70	7	0.00	-0.24	0.00	***	***	16.13	151	78	36	4	0	0	0

Based on 1971-2000 normals

***** Not Available**

August Weather and Crop Summary

Weather

Weather summary provided by USDA/WAOB

Highlights: Near- or below-normal temperatures across the northern half of the Plains and the Midwest maintained a slow pace of development for late-planted crops such as corn and soybeans. In contrast, persistent heat gripped many other areas of the country, especially from the Pacific Coast to the southern Plains and into parts of the Southeast.

The southern Plains' heat was accompanied by erratic rainfall, leading to a general increase in stress on rangeland, pastures, and rain-fed summer crops. On September 1, nearly one-half (45 percent) of the rangeland and pastures in Texas were rated in very poor to poor condition. Minimal August rain also fell in large sections of the Four Corners States and environs, in part due to the partial failure of the Southwestern monsoon.

By September 1, Texas led the Plains with topsoil moisture rated 84 percent very short to short. Similarly, New Mexico paced the Southwest with topsoil moisture rated 68 percent very short to short. Some short-term drought also affected the Northwest, where topsoil moisture was rated at least one-half very short to short on September 1 in Oregon (73 percent), Idaho (55 percent), Wyoming (53 percent), and Washington (50 percent).

Farther east, variable rainfall in the Midwest left some fields with plenty of moisture and others—mainly in the central and eastern Corn Belt—with patchy drought. In areas where planting occurred very late and root systems were poorly developed, some corn and soybeans experienced stress, despite an absence of extreme heat. By September 1, Michigan led the Midwest with topsoil moisture rated 45 percent very short to short.

U.S. soybean development was the slowest on record going back to 1995, with just 86 percent of the crop setting pods by September 1. The previous record of 92 percent had been set in 2013. Similarly, the U.S. corn crop was 41 percent dented by September 1, the third-slowest pace of development since the mid-1990s. Slower progress had occurred in 1996, with 33 percent dented on that date, and 2009, with 37 percent.

Elsewhere, growing conditions during August were mostly favorable for Southern crops, despite pockets of drought. On September 1, good to excellent crop ratings were reported for more than two-thirds of the U.S. rice (70 percent) and peanuts (67 percent). On the same date, however, topsoil moisture was rated at least 40 percent very short to short in Arkansas, Kentucky, and the Atlantic Coast States from Georgia to Delaware.

Historical Perspective: According to preliminary data provided by the National Centers for Environmental Information, the contiguous U.S. experienced its 13th-hottest, 45th-wettest August during the 1895-2019 period of record. The nation's August average temperature of 73.9°F was 1.8°F above the 20th century mean, while precipitation averaged 2.74 inches—105 percent of normal.

State temperature rankings ranged from the 32nd-coolest August in Iowa to the second-hottest August on record in Arizona, New Mexico, and Texas (figure 1). In those three states, August was hotter only in 2011. Elsewhere, top-ten rankings for August heat were also noted in California, Colorado, Florida, and Utah. Meanwhile, state precipitation rankings ranged from the sixth-driest August in Arizona and Utah to the wettest August on record in Kansas and Nebraska (figure 2). Previously, the wettest August in Kansas had occurred in 1927; the wettest August in Nebraska had been observed in 1977. Top-ten rankings for August wetness were reported in Missouri and South Dakota.

Figure 1 Statewide Average Temperature Ranks
August 2019
Period: 1895–2019

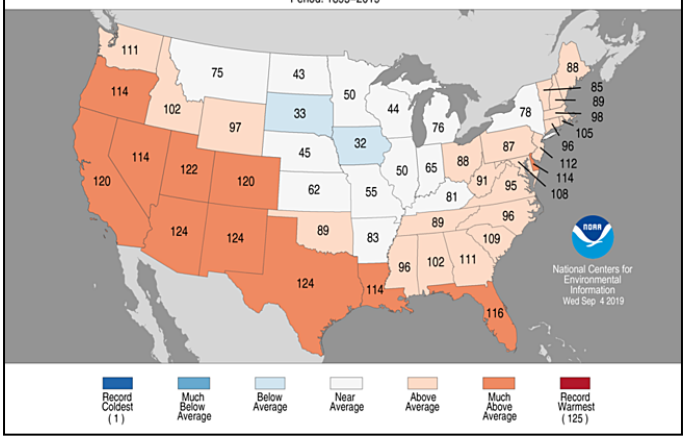
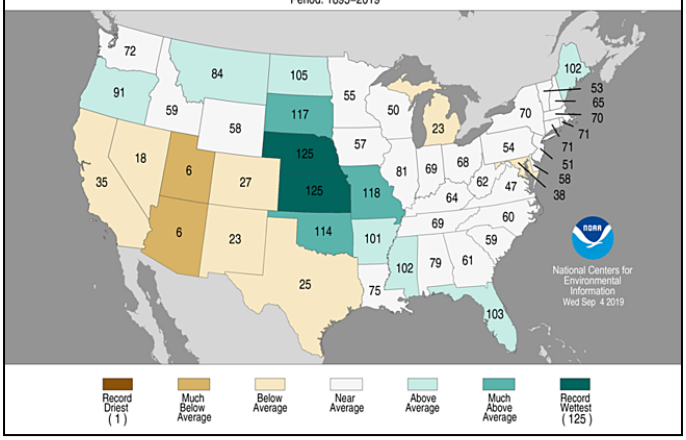


Figure 2 Statewide Precipitation Ranks
August 2019
Period: 1895–2019



Summary: As the calendar turned to August, showers were heavy in several areas across the eastern half of the country. On the eastern Plains, for example, Lawrence, KS, received 4.33 inches of rain on July 31 – August 1. Farther east, daily-record totals for August 1 included 3.62 inches in St. Petersburg, FL, and 3.47 inches in Greenville-Spartanburg, SC (3.47 inches). Later in the Great Lakes region, August 5 featured daily-record totals in Green Bay, WI (2.32 inches), and Alpena, MI (1.32 inches). The focus for heavy showers eventually returned to the East, where record-setting rainfall totals for August 6 included 2.88 inches in West Palm Beach, FL, and 1.29 inches in Florence, SC. On August 7, daily-record amounts reached 2.93 inches in Norfolk, VA, and 1.29 inches in Plattsburgh, NY. Showers also erupted across the nation's mid-section, where record-setting totals for August 7 included 2.29 inches in Goodland, KS, and 1.92 inches in Grand Island, NE. Daily rainfall in Grand Island also topped an inch on August 2, 15, 23, and 26, leading to a monthly record total of 11.94 inches (383 percent of normal). Previously, Grand Island's wettest August had occurred in 1977, when 8.73 inches fell. (Grand Island's only wetter month on record occurred in June 1967, when 13.96 inches fell.) Similarly, Goodland reported its wettest August on record, with 9.47 inches, or 350 percent of normal (previously, 9.29 inches in 1993). By August 8, daily-record totals topped the 3-inch mark in locations such as Salina, KS (3.31 inches); Bangor, ME (3.11 inches); and Miami, FL (3.10 inches). Elsewhere in Florida, Pensacola netted a record-setting total (3.55 inches) for August 9. Later, unusually heavy showers developed in northern California and the Pacific Northwest. In northern California, daily-record totals included 0.90 inch (on August 9) in Redding and 0.47 inch (on August 10) in Crescent City. Western daily-record amounts for August 10 totaled 0.91 inch in Douglas, AZ; 0.80 inch in Portland, OR; and 0.73 inch in Butte, MT. Farther east, Little Rock, AR, collected a record-setting rainfall amount (3.87 inches) for August 10. That marked Little Rock's wettest calendar day in August since August 29, 1978, when 4.15 inches fell.

Meanwhile, early-month heat was most intense across the south-central and southwestern U.S. In Dalhart, TX, consecutive daily-record highs (102 and 103°F, respectively) occurred on July 31 – August 1. A few days later, extreme heat baked the Desert Southwest. On August 4-5, consecutive daily-record highs (117 and 119°F, respectively) were set in Needles, CA. Other record-setting highs for August 5 included 121°F in Palm Springs, CA; 116°F in Yuma, AZ; and 113°F in Las Vegas, NV. Heat spread farther inland by August 6, when Salt Lake City, UT, posted a daily-record high of 102°F. In eastern Washington, Omak logged a pair of daily-record highs (103 and 104°F, respectively) on August 6-7. Heat re-intensified across the south-central U.S., where Borger, TX, collected a daily-record high of 106°F on August 7. The following day, Laredo, TX, registered a daily-record high of 109°F. Heat and high humidity levels developed in the Southeast, where St. Simons Island, GA (98 and 99°F), and Wilmington, NC (99 and 98°F), collected consecutive daily-record highs on August 9-10. Other Southeastern daily records for August 10 included 100°F in Savannah, GA, and 99°F in Jacksonville, FL.

As the middle of the month approached, heavy rain soaked parts of the nation's mid-section. On August 11, daily-record rainfall totals included 3.19 inches in Omaha, NE, and 2.84 inches in Goodland, KS. Rain extended across the northern Plains, where Pierre, SD, received 1.66 inches—a record for August 11—and into the Midwest. In the latter region, Columbia, MO, collected 2.40 inches, also a record for the 11th. The rainfall persisted into August 12, when record-setting totals reached 2.68 inches in St. Louis, MO, and 1.78 inches in Concordia, KS. Meanwhile, localized downpours affected the lower Southeast. Jacksonville, FL, reported a daily-record sum (3.18 inches) on August 11, with 2.68 inches falling in a 30-minute period. Elsewhere in Florida, daily-record amounts included 2.59 inches (on August 14) in Tampa and 3.29 inches (on August 16) in Sarasota-Bradenton. Farther north near the Atlantic Seaboard, daily-record totals reached 3.04 inches (on August 16) in Wilmington, NC, and 2.18 inches (on August 15) at Virginia's Dulles Airport. Parts of the lower Midwest also noted heavy showers, with daily-record totals occurring on August 13 in New Philadelphia, OH (2.74 inches), and Evansville, IN (2.10 inches). Elsewhere, severe thunderstorms produced large hail on several occasions, especially on the central High Plains. On August 13, north of Bethune, CO, a hailstone measured more than 4.8 inches in diameter, weighed 8.5 ounces, and had a circumference of nearly 13 inches. In subsequent days, multiple rounds of heavy rain struck the mid-South and environs. In Arkansas, Fort Smith's monthly rainfall climbed to 11.70 inches (452 percent of normal), aided by three consecutive daily-record amounts (3.74, 1.29, and 4.04 inches) from August 22-24. (Fort Smith's previous wettest August occurred in 1890, when 10.89 inches fell.) Heavy rain also fell on the central Plains, where Hastings, NE, netted consecutive daily-record totals (2.06 and 1.46 inches, respectively) on August 23-24. Elsewhere, daily-record totals topped the 3-inch mark in several locations, including Lake Charles, LA (4.90 inches on August 20); Baton Rouge, LA (3.56 inches on August 21); Augusta, GA (3.20 inches on August 23); Broken Bow, NE (3.18 inches on August 21); and Pine Bluff, AR (3.13 inches on August 23). In the Midwest, daily-record totals topped 2 inches in locations such as Des Moines, IA (2.77 inches on August 20), and St. Joseph, MO (2.10 inches on August 21). Western showers were generally lighter and much more isolated, although daily records were established in Clayton, NM (1.34 inches on August 23), and Billings, MT (0.97 inch on August 22).

Searing, mid-month heat prevailed across the south-central U.S. In New Mexico, Roswell registered daily-record highs of 105°F on August 12 and 17. In Texas, consecutive daily-

record highs were established on August 12-13 in Del Rio (107 and 108°F) and Harlingen (104 and 105°F). Daily-record highs were also set on August 12 in Texas locations such as Laredo (109°F) and Midland (107°F). Elsewhere in Texas, Galveston broke an all-time record with lows of 86°F on August 8, 12, and 18; prior to this year, that city had not experienced a minimum temperature above 85°F in the 145-year period of record. Farther west, mid-month heat briefly affected areas along and near the northern and central California coast. On August 14-15, consecutive daily-record highs occurred in California locations such as Redwood City (100°F both days) and the San Francisco Airport (94°F both days). Extreme heat gripped the Desert Southwest, where Palm Springs, CA, posted a pair of daily-record highs (117 and 119°F, respectively) on August 14-15. Other record-setting highs for August 15 included 120°F in Thermal, CA, and 95°F in Eureka, NV. Back in Texas, Del Rio logged another daily-record high on August 16, with a high of 107°F. Corpus Christi, TX, posted highs of 101 and 100°F, respectively, on August 15-16, achieving records both days. Dalhart, TX, collected consecutive daily-record highs (102 and 104°F, respectively) on August 16-17. Meanwhile in the Southeast, persistently hot weather led to a pair of daily-record highs (98 and 97°F, respectively) on August 11 and 14 in Jacksonville, FL. Montgomery, AL, reached or exceeded the 100-degree mark on 6 days in a row from August 13-18, with the temperature peaking at 102°F (and tying a daily-record high) on the 17th.

During the second half of the month, periodic surges of cool air affected the Midwest and northern sections of the Rockies and Plains. For example, a daily-record low of 46°F was reported on August 18 in Miles City, MT. Elsewhere in Montana, a daily-record low of 37°F was reported on August 26 at the Dillon Airport. Later, Rapid City, SD, achieved a daily-record low (41°F) for August 28. Meanwhile, Eastern heat led to daily-record highs for August 18 in Harrisburg, PA (97°F), and Baltimore, MD (96°F). Baltimore set another record the following day, when the high reached 99°F. Other Eastern daily-record highs for August 19 included 99°F in Richmond, VA, and 95°F in Boston, MA. Heat also gripped much of Texas and interior sections of the West. On August 17-18, consecutive daily-record highs were set in Texas locations such as Abilene (106°F both days) and Lubbock (105 and 104°F). On August 19, record-setting heat briefly spread as far north as the central High Plains and the northern Intermountain West; highs reached 100°F in Sidney, NE, and 99°F in Douglas, WY. Pueblo, CO, posted consecutive daily-record highs (102 and 103°F, respectively) on August 19-20. Willcox, AZ, set a monthly record with a high of 107°F on August 20; the previous standard of 106°F had been set on August 7, 2018, and earlier dates. Elsewhere in Arizona, record-setting highs for August 21 reached 114°F in Phoenix and 110°F in Tucson. Safford, AZ, tallied a trio of daily-record highs (106, 107, and 107°F) from August 19-21. Later, another wave of heat reached the East, where Boston (93°F on August 22) collected another daily-record high. By August 24, however, high temperatures failed to top the 70-degree mark in locations such as Greensboro, NC (70°F), and Danville, VA (68°F). Farther west, however, the late-month period featured a scorching heat wave. Monthly records were set on consecutive days (August 25-26) in locations such as Roswell, NM (109 and 111°F, respectively), and Midland, TX (108 and 113°F). Previous August records had been 107°F in both Roswell and Midland. In fact, the only higher temperatures ever observed in Midland occurred in 1994, with highs of 116 and 114°F, respectively, on June 27-28. Elsewhere in Texas, monthly records were set or tied on August 26 with highs of 109°F in Del Rio and Lubbock. From August 2-31, McAllen, TX, noted highs above 100°F on 30 consecutive days. McAllen also reported daily-record highs of 105°F on August 25 and 28. By August 27, heat spread into the Northwest, where daily-record highs in Oregon soared to 103°F in Roseburg and 101°F in Eugene. By month's end, heat re-intensified across the Intermountain West. From August 31 – September 2, Grand Junction, CO, noted three consecutive daily-record highs (98, 100, and 98°F).

As the month drew to a close, heavy showers continued across the central Plains and environs. For example, daily-record totals included 1.87 inches (on August 29) in Hill City, KS, and 1.64 inches (on August 30) in Columbia, MO. From August 25-31, Columbia's rainfall totaled exactly 4 inches. Several other areas received locally heavy showers, with daily-record totals topping the 2-inch mark in Montgomery, AL (2.51 inches on August 25); Bismarck, ND (2.33 inches on August 25); and Bowling Green, KY (2.14 inches on August 27). In contrast, Flagstaff, AZ, remained on track to experience its driest monsoon season on record. From June 15 – August 31, Flagstaff's rainfall totaled just 1.13 inches (19 percent of normal). Outside the Lower 48 states, Dorian surprised U.S. territories in the Caribbean, suddenly becoming a Category 1 hurricane on August 28 while traversing the U.S. Virgin Islands of St. Thomas and St. John but unexpectedly sparing most of Puerto Rico. Later, Dorian moved perilously close to Florida's east coast during the Labor Day weekend while stalling and battering the northern Bahamas as a Category 5 storm.

Much-needed precipitation fell during August in Alaska, except across the state's southern tier. In Fairbanks, consecutive daily-record rainfall totals (1.27 and 0.76 inch, respectively) were reported on August 2-3). Other daily-record amounts included 2.16 inches (on August 2) in Nome and 1.20 inches (on August 3) in Bethel. Nome's total marked its wettest day (at any time of year) since August 9, 1956, when 2.36 inches fell. For Fairbanks, the 2nd was the wettest August day since August 26, 1990, when 1.38 inches fell. Meanwhile, record-setting warmth across southern Alaska accompanied persistent dryness. Juneau achieved readings of 80°F on greater from August 7-9, including a daily-record high of 83°F on the 7th. Kodiak notched a daily-record high of 83°F on August 6, narrowly missing a

monthly record (84°F on August 5, 1944). Eventually, Kodiak tied its all-time record with a high of 86°F on August 16. Kodiak had previously attained 86°F on June 28, 1953. Meanwhile, Anchorage posted highs greater than 70°F each day from August 4-17. Farther north, heavy rain returned to Fairbanks, with daily records (1.11 and 0.91 inch, respectively) being set on August 13 and 16. Fairbanks' August rainfall, 5.58 inches, or 297 percent of normal, topped the 5-inch mark for the first time since 1967. Despite cooler weather in late August, little rain fell across much of southern Alaska. On August 20-21, Yakutat noted consecutive daily-record lows of 33 and 34°F, respectively. King Salmon also tallied a daily-record low (32°F) on August 21. Although some heavy rain fell in Ketchikan, with 9.00 inches occurred from August 18-24, most southern areas remained dry. For example, Anchorage completed its warmest, driest August on record, with an average temperature of 62.7°F (5.9°F above normal) and rainfall totaling just 0.04 inch (1 percent of normal). Drought also persisted in southeastern Alaska, where it was the driest August on record in locations such as Sitka (1.63 inches, or 24 percent of normal) and Yakutat (1.05 inches, or 7 percent).

It was the hottest month on record in Lihue, Kauai (83.5°F, or 3.8°F above normal), and in Hilo, on the Big Island (80.1°F, or 3.7°F above normal). Previous records had been 82.7°F in August 2017 in Lihue, and 80.0°F in September 2015 in Hilo. In addition, Honolulu, Oahu, tied its August and all-time monthly average temperature record of 84.3°F (2.4°F above normal), originally set in August 1994. Hawaiian heat was impressive through August, but was especially notable late in the month. Lihue set or tied a daily record on each of the last 8 days of the month, with high temperatures peaking at 91°F on August 25 and 31. Lihue's previous August record high of 90°F had been most recently achieved on August 12, 2017. In addition, Lihue has never experienced a temperature greater than 91°F, and prior to this year had not reported a high of 91°F since October 9, 2012. Meanwhile, Honolulu set an August record and tied an all-time record with a high of 95°F on August 31. Honolulu's former August record of 93°F had been set most recently on August 12, 2015, while the only other observance of a high of 95°F had occurred on September 19, 1994. At the state's major airport observation sites, August rainfall ranged from 0.18 inch (32 percent of normal) in Honolulu to 9.40 inches (95 percent) in Hilo.

Fieldwork

Fieldwork summary provided by USDA/NASS

August was cooler than average for parts of the Great Lakes and Great Plains, with temperatures averaging 4°F or more below normal in a few spots. However, temperatures were warmer in the Southwest, averaging 6°F or more above normal in many locations. During August, parts of the Delta, Florida, and southern Plains received more than 10 inches of rain. However, portions of California, Michigan, the Pacific Northwest, Rocky Mountains, and Southwest remained mostly dry.

By August 4, seventy-eight percent of the nation's corn acreage was at or beyond the silking stage, 17 percentage points behind the previous year and 15 points behind the 5-year average. Twenty-three percent of the corn was at or beyond the dough stage by August 4, thirty-one percentage points behind the previous year and 19 points behind average. By August 18, ninety-five percent of the corn was at or beyond the silking stage, 5 percentage points behind the previous year and 4 points behind average. Fifty-five percent of the corn was at or beyond the dough stage by August 18, twenty-eight percentage points behind the previous year and 21 points behind average. By August 18, fifteen percent of this year's acreage was dented, 26 percentage points behind the previous year and 15 points behind average. By September 1, eighty-one percent of the corn was at or beyond the dough stage, 14 percentage points behind the previous year and 12 points behind average. By September 1, forty-one percent of this year's crop was dented, 32 percentage points behind the previous year and 22 points behind average. Six percent of the 2019 corn acreage had matured by September 1, fourteen percentage points behind the previous year and 7 points behind average. Overall, 58 percent of the nation's corn was rated in good to excellent condition September 1, nine percentage points below the same time last year.

Seventy-two percent of the nation's soybean acreage had reached the blooming stage by August 4, nineteen percentage points behind the previous year and 15 points behind the 5-year average. By August 4, thirty-seven percent of the soybeans were setting pods, 36 percentage points behind the previous year and 26 points behind average. By August 18, ninety percent of the soybeans had reached the blooming stage, 9 percentage points behind the previous year and 6 points behind average. Sixty-eight percent of the soybeans were setting pods by August 18, twenty-two percentage points behind the previous year and 17 points behind average. By September 1, ninety-six percent of the soybeans had reached the blooming stage, 4 percentage points behind both the previous year and the average. Eighty-six percent of the soybeans were setting pods by September 1, twelve percentage points behind the previous year and 10 points behind average. On September 1, fifty-five percent of the soybeans were rated in good to excellent condition, 11 percentage points below the same time last year.

Eighty-two percent of the 2019 winter wheat acreage was harvested by August 4, seven percentage points behind the previous year and 10 points behind the 5-year average. Ninety-three percent of the winter wheat was harvested by August 18, four percentage points behind the previous year

and 5 points behind average. Winter wheat harvest was complete or nearly so at that time in all estimating states except Idaho, Montana, South Dakota, and Washington.

Ninety five percent of the nation's cotton acreage had reached the squaring stage by August 4, four percentage points ahead of the previous year and 2 points ahead of the 5-year average. By August 4, fifty-nine percent of the cotton had begun setting bolls, 1 percentage point ahead of the previous year but 2 points behind average. By August 18, eighty-five percent of the cotton had set bolls, identical to both the previous year and the average. By August 18, twenty-four percent of the cotton had open bolls, 8 percentage points ahead of the previous year and 11 points ahead of average. By September 1, ninety-seven percent of the cotton had set bolls, 2 percentage points ahead of the previous year and 1 point ahead of average. By September 1, thirty-six percent of the cotton had open bolls, 8 percentage points ahead of the previous year and 9 points ahead of average. As of September 1, forty-eight percent of the 2019 cotton acreage was rated in good to excellent condition, 7 percentage point above the same time last year.

By August 4, forty five percent of the nation's sorghum had reached the heading stage, 22 percentage points behind the previous year and 17 points behind the 5-year average. Twenty three percent of the sorghum was at or beyond the coloring stage by August 4, seven percentage points behind both the previous year and the average. On August 4, seventy-one percent of Texas' sorghum acreage had reached the coloring stage, 4 percentage points behind the previous year but 1 point ahead of average. By August 18, seventy-five percent of the nation's sorghum had reached the heading stage, 11 percentage points behind the previous year and 8 points behind average. Thirty-one percent of the sorghum was at or beyond the coloring stage by August 18, fourteen percentage points behind the previous year and 12 points behind ear average. By August 18, twenty-one percent of the sorghum was mature, 2 percentage points behind the previous year and 5 points behind average. Seventy percent of Texas' sorghum acreage had matured by August 18, six percentage points ahead of the previous year and 3 points ahead of average. By September 1, ninety-two percent of the nation's sorghum had reached the heading stage, 4 percentage points behind the previous year and 3 points behind average. Fifty-two percent of the sorghum was at or beyond the coloring stage by September 1, fifteen percentage points behind the previous year and 12 points behind average. By September 1, twenty-four percent of the sorghum was mature, 6 percentage points behind the previous year and 9 points behind average. Seventy-six percent of Texas' sorghum had matured stage by September 1, two percentage points ahead of both the previous year and the 5-year average. Twenty-one percent of the 2019 sorghum was harvested by September 1, one percentage point behind both the previous year and the average. As of September 1, sixty-seven percent of the sorghum was rated in good to excellent condition, 15 percentage points above the same time last year.

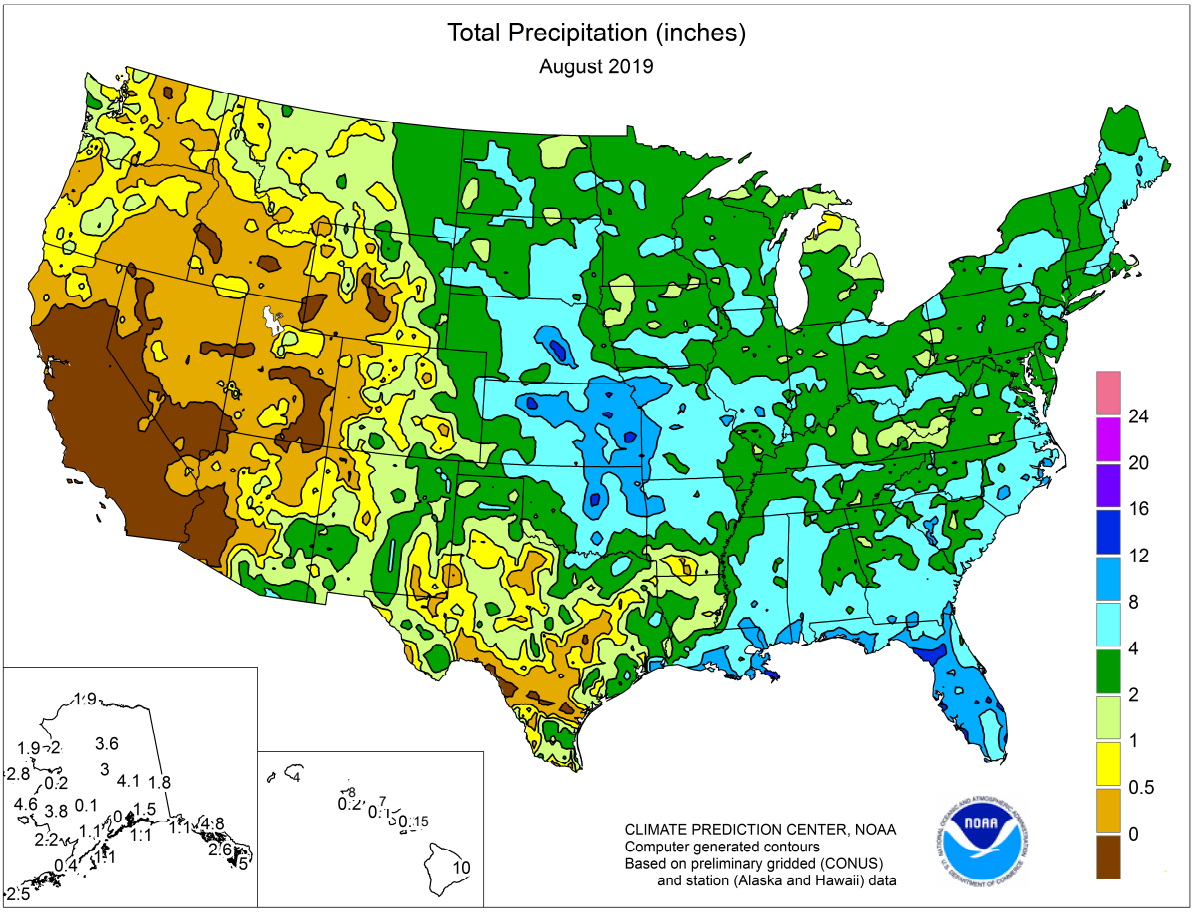
By August 4, sixty percent of the nation's rice had reached the heading stage, 19 percentage points behind the previous year and 13 points behind the 5-year average. By August 18, eighty-eight percent of the rice had reached the heading stage, 6 percentage points behind the previous year and 5 points behind average. Nationally, 10 percent of the rice was harvested by August 18, four percentage points behind the previous year and 3 points behind average. Nationally, 21 percent of the rice was harvested by September 1, eight percentage points behind the previous year and 6 points behind average. As of September 1, seventy percent of the rice was rated in good to excellent condition, 5 percentage points below the same time last year.

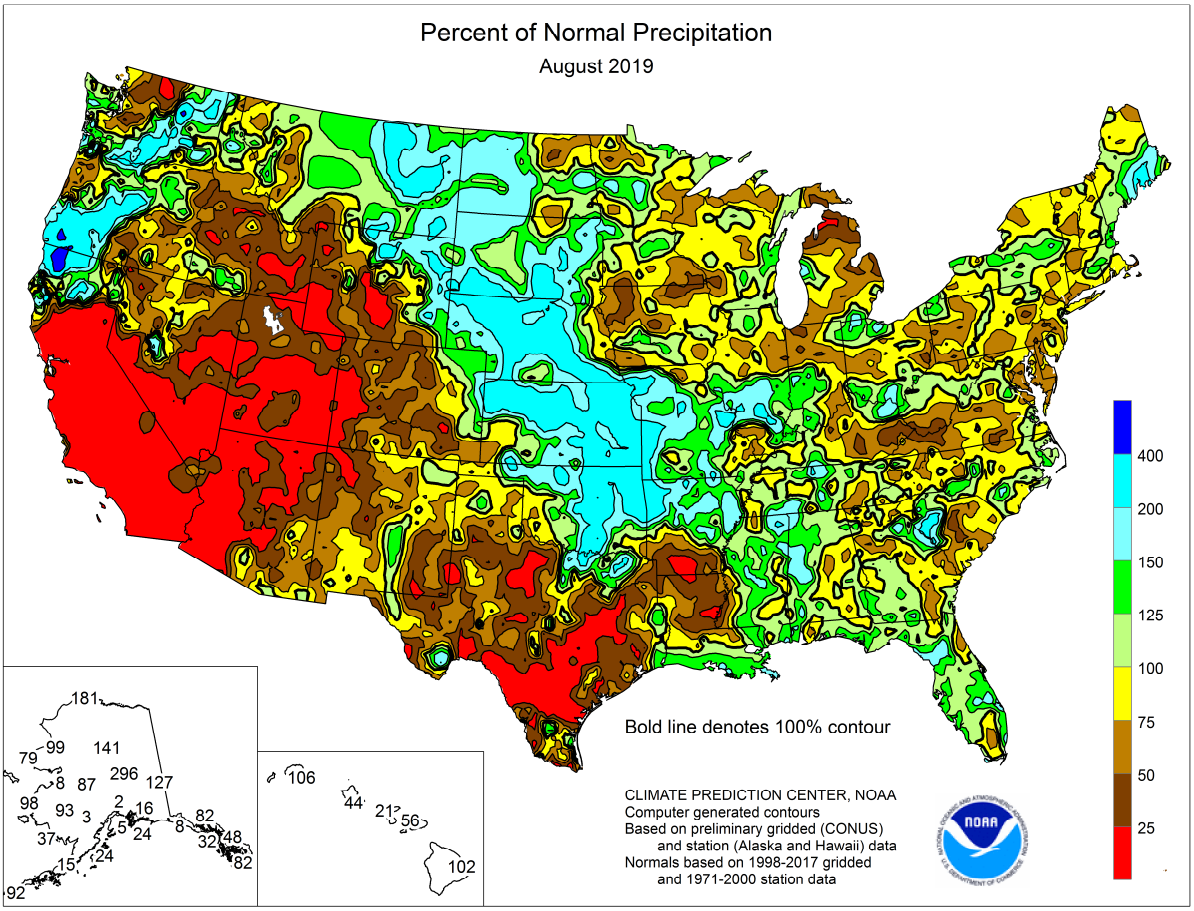
Thirty-two percent of the nation's oats had been harvested by August 4, seventeen percentage points behind both the previous year and the 5-year average. On August 4, sixty-five percent of the oats were rated in good to excellent condition, 6 percentage points below the same time last year. By August 18, sixty percent of the oats had been harvested, 18 percentage points behind both the previous year and the average. By September 1, eighty-four percent of the oats had been harvested, 9 percentage points behind the previous year and 7 points behind average.

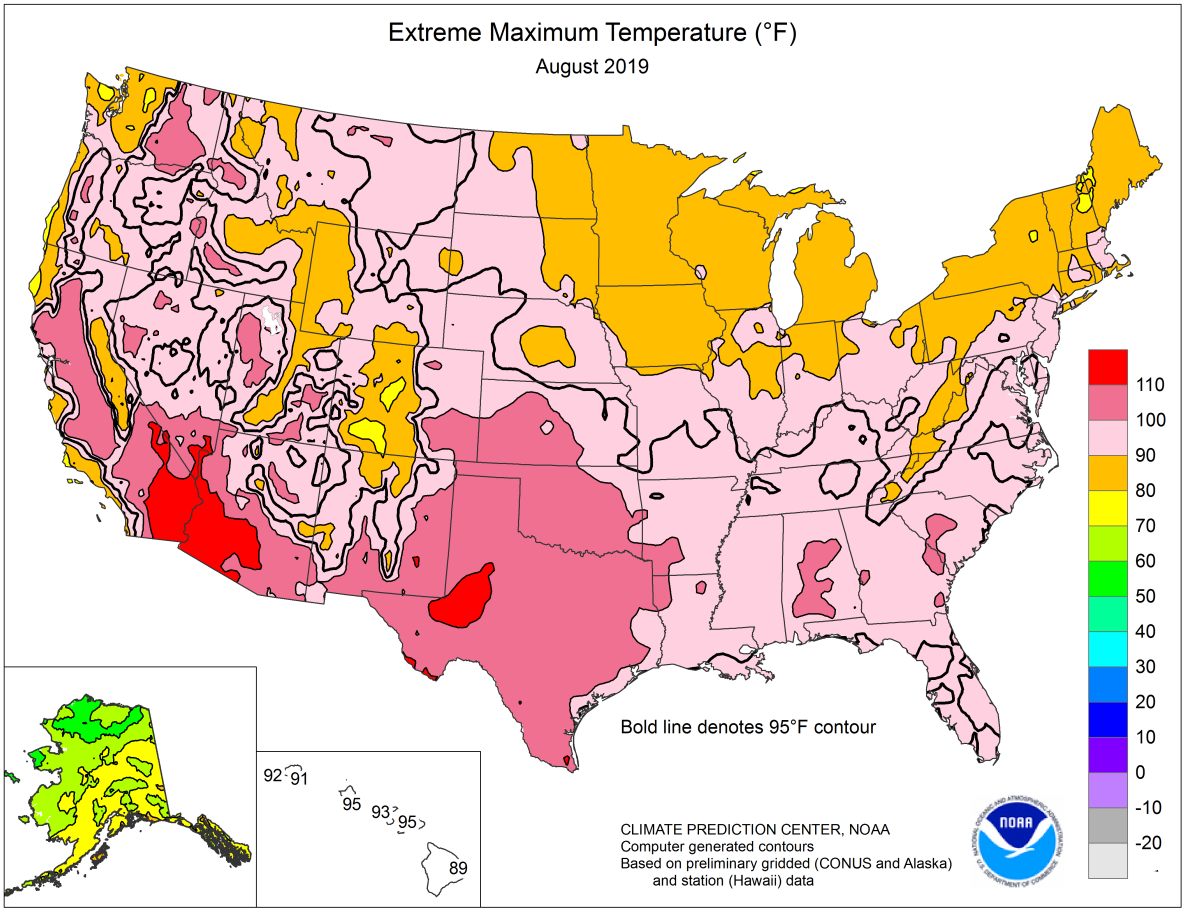
Three percent of the nation's barley was harvested by August 4, eleven percentage points behind the previous year and 15 points behind the 5-year average. Thirty-one percent of the barley was harvested by August 18, thirty-one percentage points behind the previous year and 28 points behind average. On August 18, seventy-three percent of the barley was rated good to excellent, 5 percentage points below the same time last year. Seventy-two percent of the barley was harvested by September 1, eleven points behind both the previous year and average.

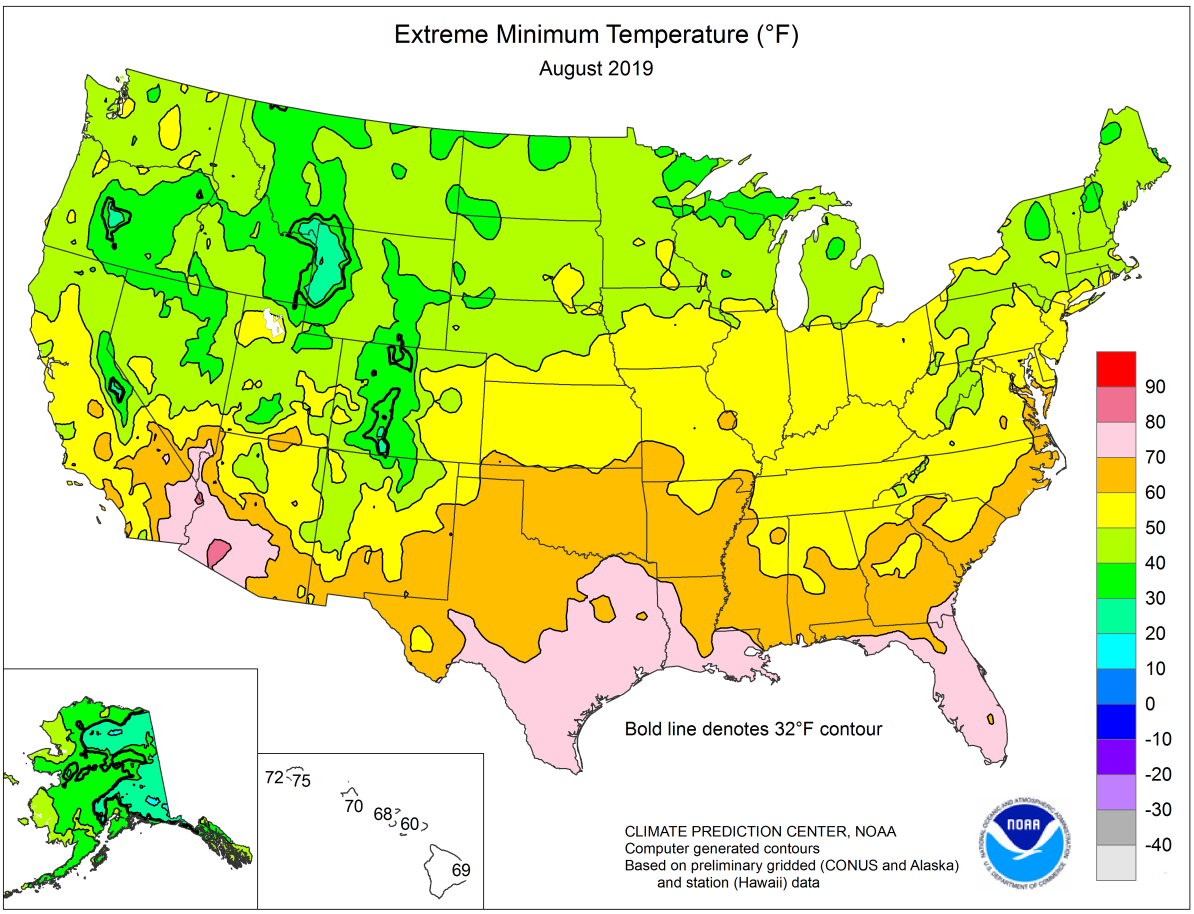
By August 4, two percent of the spring wheat was harvested, 10 percentage points behind the previous year and 12 points behind the 5-year average. By August 18, sixteen percent of the spring wheat was harvested, 40 percentage points behind the previous year and 33 points behind average. By September 1, fifty-five percent of the spring wheat was harvested, 31 percentage points behind the previous year and 23 points behind average. On September 1, sixty-seven percent of the spring wheat was rated in good to excellent condition, 7 percentage points below the same time last year.

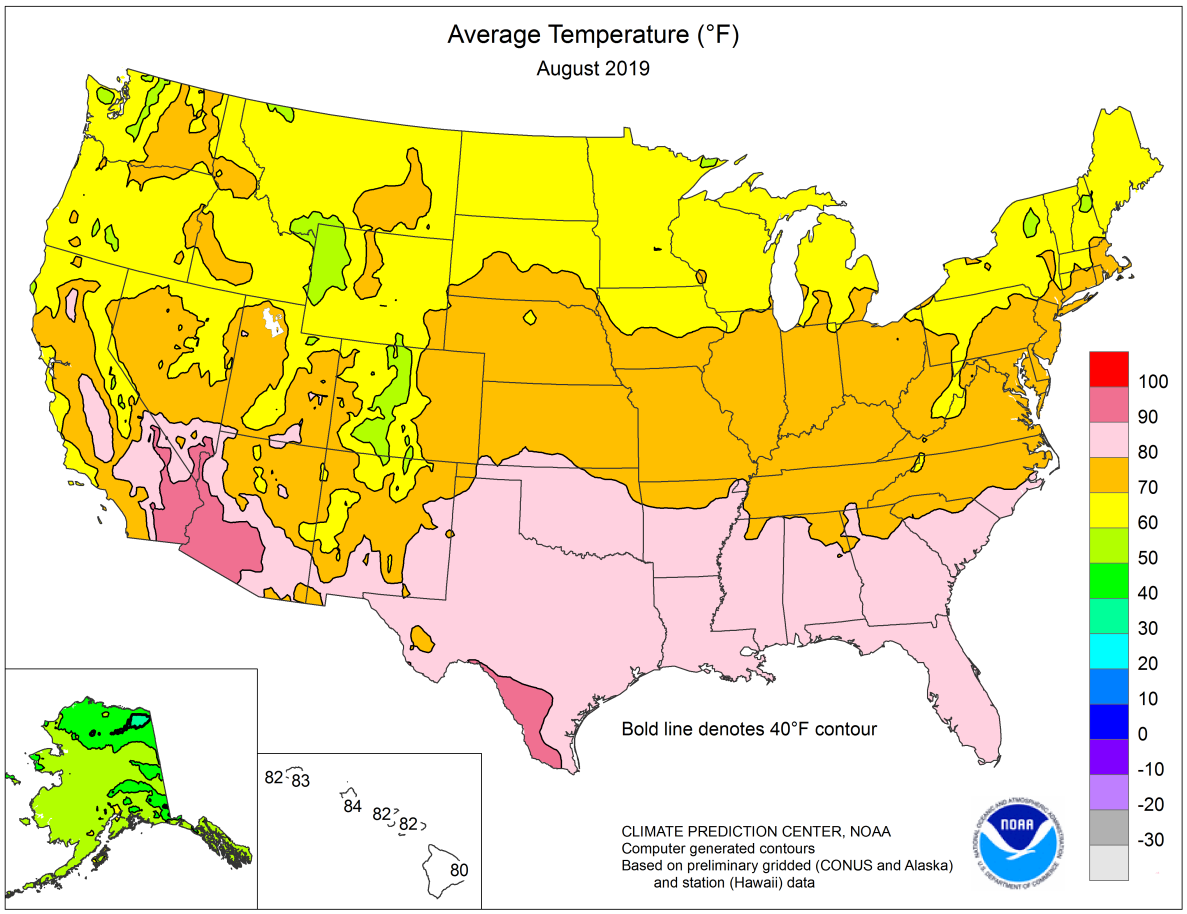
By August 4, ninety-two percent of the nation's peanut acreage had reached the pegging stage, 3 percentage points ahead of the previous year and 1 point ahead of the 5-year average. On September 1, sixty-seven percent of the peanuts were rated in good to excellent condition, 8 percentage points below the same time last year.

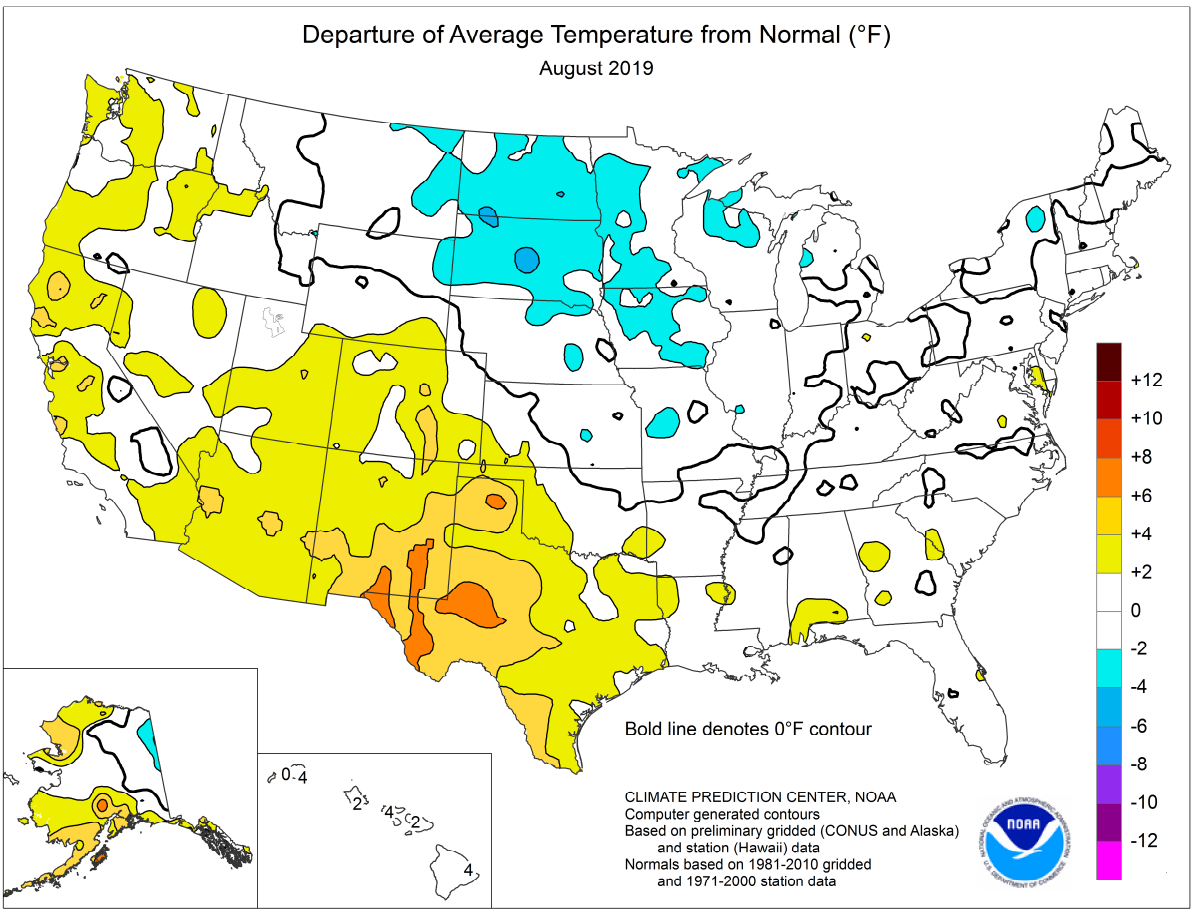

Total Precipitation (inches)
August 2019
24
20
16
12
8
4
2
1
0.5
0
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS)
and station (Alaska and Hawaii) data
NOAA


Percent of Normal Precipitation
August 2019
400
200
150
125
100
75
50
25
Bold line denotes 100% contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS)
and station (Alaska and Hawaii) data
Normals based on 1998-2017 gridded
and 1971-2000 station data
NOAA


Extreme Maximum Temperature (°F)
August 2019
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
92
91
95
93
95
89
Bold line denotes 95°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
NOAA


Extreme Minimum Temperature (°F)
August 2019
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
72
75
70
68
60
69
Bold line denotes 32°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
NOAA


Average Temperature (°F)
August 2019
100
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
82
83
84
82
82
80
Bold line denotes 40°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
NOAA


Departure of Average Temperature from Normal (°F)
August 2019
+12
+10
+8
+6
+4
+2
0
-2
-4
-6
-8
-10
-12
0
4
2
4
2
4
Bold line denotes 0°F contour
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded (CONUS and Alaska)
and station (Hawaii) data
Normals based on 1981-2010 gridded
and 1971-2000 station data
NOAA

National Weather Data for Selected Cities

August 2019

Data Provided by Climate Prediction Center

STATES AND STATIONS	TEMP, °F		PRECIP.		STATES AND STATIONS	TEMP, °F		PRECIP.		STATES AND STATIONS	TEMP, °F		PRECIP.	
	AVERAGE	DEPARTURE	TOTAL	DEPARTURE		AVERAGE	DEPARTURE	TOTAL	DEPARTURE		AVERAGE	DEPARTURE	TOTAL	DEPARTURE
AL BIRMINGHAM	82	2	4.82	1.34	LEXINGTON	78	3	2.17	-1.60	COLUMBUS	74	0	3.30	-0.42
HUNTSVILLE	80	1	2.57	-0.75	LONDON-CORBIN	75	1	2.71	-0.65	DAYTON	74	2	1.24	-2.25
MOBILE	83	2	10.69	4.49	LOUISVILLE	80	3	2.69	-0.72	MANSFIELD	72	3	1.90	-2.70
MONTGOMERY	84	3	4.77	1.14	PADUCAH	79	3	4.40	1.41	TOLEDO	73	2	6.35	3.16
AK ANCHORAGE	63	7	0.04	-2.89	LA BATON ROUGE	84	3	7.79	1.93	YOUNGSTOWN	70	2	4.20	0.77
BARROW	43	4	1.88	0.84	LAKE CHARLES	85	3	9.36	4.51	OK OKLAHOMA CITY	82	1	7.31	4.83
COLD BAY	57	5	1.90	-1.69	NEW ORLEANS	85	2	3.90	-2.25	TULSA	82	0	5.94	3.09
FAIRBANKS	56	0	5.62	3.88	SHREVEPORT	86	3	1.08	-1.63	OR ASTORIA	64	3	0.97	-0.24
JUNEAU	58	2	4.84	-0.53	ME BANGOR	67	-1	7.04	4.05	BURNS	68	4	0.32	-0.13
KING SALMON	58	3	0.65	-2.24	CARIBOU	65	2	2.52	-1.63	EUGENE	70	4	0.56	-0.43
KODIAK	62	7	1.08	-3.40	PORTLAND	69	2	4.46	1.41	MEDFORD	76	3	0.87	0.35
NOME	50	-1	4.62	1.39	MD BALTIMORE	78	4	2.39	-1.35	PENDLETON	73	1	0.14	-0.42
AZ FLAGSTAFF	67	3	0.41	-2.48	MA BOSTON	74	2	1.20	-2.17	PORTLAND	72	3	1.24	0.31
PHOENIX	97	6	0.24	-0.70	WORCESTER	69	1	3.72	-0.37	SALEM	70	3	0.32	-0.36
TUCSON	89	4	1.59	-0.71	MI ALPENA	65	0	1.39	-2.11	PA ALLENTOWN	75	4	4.80	0.45
AR FORT SMITH	83	1	11.38	8.82	DETROIT	73	1	3.15	0.05	ERIE	72	1	3.82	-0.39
LITTLE ROCK	82	1	5.30	2.37	FLINT	70	1	3.16	-0.27	MIDDLETOWN	77	3	2.15	-1.16
CA BAKERSFIELD	85	3	0.00	-0.08	GRAND RAPIDS	71	2	3.42	-0.36	PHILADELPHIA	78	2	2.66	-1.16
EUREKA	60	1	0.46	0.08	HOUGHTON LAKE	64	-1	2.04	-1.68	PITTSBURGH	72	1	2.45	-0.93
FRESNO	85	5	0.00	-0.01	LANSING	70	2	1.57	-1.89	WILKES-BARRE	72	2	5.60	2.50
LOS ANGELES	71	0	0.00	-0.14	MUSKEGON	70	1	2.11	-1.66	WILLIAMSPORT	72	1	3.04	-0.34
REDDING	83	4	1.01	0.79	TRAVERSE CITY	68	0	1.19	-2.20	PR SAN JUAN	84	2	4.67	-0.55
SACRAMENTO	78	3	0.00	-0.06	MN DULUTH	66	2	2.52	-1.70	RI PROVIDENCE	73	1	2.33	-1.57
SAN DIEGO	72	-1	0.00	-0.09	INT'L FALLS	62	-2	4.04	0.90	SC CHARLESTON	82	2	5.31	-1.60
SAN FRANCISCO	69	5	0.00	-0.07	MINNEAPOLIS	71	0	6.29	2.24	COLUMBIA	82	2	1.40	-4.01
STOCKTON	80	4	0.00	-0.05	ROCHESTER	67	-1	1.55	-2.78	FLORENCE	81	1	6.23	0.90
CO ALAMOSA	64	2	0.86	-0.33	ST. CLOUD	67	0	3.65	-0.28	GREENVILLE	78	0	6.76	2.68
CO SPRINGS	73	5	0.68	-2.80	MS JACKSON	83	2	4.36	0.70	MYRTLE BEACH	81	2	3.80	-1.78
DENVER	75	4	0.58	-1.17	MERIDIAN	83	2	4.39	1.05	SD ABERDEEN	68	-3	2.34	-0.08
GRAND JUNCTION	79	4	0.15	-0.69	TUPELO	82	2	3.99	1.32	HURON	69	-2	6.80	4.73
PUEBLO	78	4	1.05	-1.22	MO COLUMBIA	76	0	6.81	3.06	RAPID CITY	68	-3	2.90	1.29
CT BRIDGEPORT	74	1	2.87	-0.88	JOPLIN	78	0	5.98	2.16	SIOUX FALLS	70	-1	2.69	-0.32
HARTFORD	73	1	3.30	-0.68	KANSAS CITY	76	-1	7.66	4.12	TN BRISTOL	75	2	4.11	1.11
DC WASHINGTON	80	3	1.99	-1.45	SPRINGFIELD	78	0	5.08	1.71	CHATTANOOGA	81	3	1.73	-1.86
DE WILMINGTON	77	2	2.66	-0.85	ST JOSEPH	75	-1	7.19	3.39	JACKSON	79	0	2.56	-0.32
FL DAYTONA BEACH	83	1	7.93	1.84	ST LOUIS	78	0	6.35	3.37	KNOXVILLE	79	2	3.13	0.24
FT LAUDERDALE	83	0	9.86	2.98	MT BILLINGS	74	3	2.05	1.20	MEMPHIS	82	1	4.48	1.48
FT MYERS	83	0	12.79	3.25	BUTTE	63	1	1.48	0.12	NASHVILLE	80	2	4.44	1.16
JACKSONVILLE	83	2	9.40	2.53	GLASGOW	70	1	3.29	2.04	TX ABILENE	88	5	0.18	-2.45
KEY WEST	86	2	4.36	-1.04	GREAT FALLS	67	1	1.15	-0.50	AMARILLO	82	6	3.60	0.66
MELBOURNE	84	3	8.10	2.32	HELENA	70	3	1.63	0.34	AUSTIN	87	2	1.38	-0.93
MIAMI	85	1	15.52	6.89	KALISPELL	65	2	0.69	-0.56	BEAUMONT	85	2	8.72	3.87
ORLANDO	83	0	7.33	1.08	MILES CITY	71	-2	1.38	0.22	BROWNSVILLE	89	5	1.07	-1.92
PENSACOLA	84	2	12.35	5.50	MISSOULA	69	3	0.91	-0.24	COLLEGE STATION	88	3	1.69	-0.94
ST PETERSBURG	84	1	7.50	-0.76	NE GRAND ISLAND	73	-1	10.27	7.19	CORPUS CHRISTI	87	3	0.20	-3.34
TALLAHASSEE	84	2	4.42	-2.61	HASTINGS	74	0	5.01	1.83	DALLAS/FT WORTH	87	3	2.45	0.42
TAMPA	85	2	10.22	2.62	LINCOLN	75	0	2.80	-0.55	DEL RIO	92	7	0.00	-1.59
WEST PALM BEACH	83	0	11.41	4.76	MCCOOK	74	-1	3.31	0.51	EL PASO	88	7	0.89	-0.86
GA ATHENS	80	2	8.78	5.00	NORFOLK	72	-1	3.88	1.08	GALVESTON	88	4	2.26	-1.96
ATLANTA	82	3	1.89	-1.78	NORTH PLATTE	73	0	5.39	3.24	HOUSTON	88	5	2.43	-1.40
AUGUSTA	83	4	12.92	8.44	OMAHA/EPPLEY	75	1	5.34	2.13	LUBBOCK	84	6	2.14	-0.21
COLUMBUS	84	3	3.54	-0.24	SCOTTSBLUFF	73	2	2.86	1.67	MIDLAND	88	8	0.35	-1.42
MACON	83	3	6.19	2.40	VALENTINE	73	1	4.59	2.39	SAN ANGELO	89	8	0.33	-1.72
SAVANNAH	83	2	3.39	-3.81	NV ELKO	71	3	0.20	-0.16	SAN ANTONIO	89	5	0.31	-2.26
HI HILO	80	4	9.98	0.20	ELY	68	2	0.08	-0.83	VICTORIA	88	4	1.05	-2.00
HONOLULU	84	2	0.20	-0.26	LAS VEGAS	94	5	0.00	-0.45	WACO	88	3	0.76	-1.09
KAHULUI	82	2	0.30	-0.23	RENO	78	8	0.00	-0.27	WICHITA FALLS	86	3	1.39	-0.99
LIHUE	83	3	2.02	0.11	WINNEMUCCA	72	2	0.25	-0.10	UT SALT LAKE CITY	81	5	0.49	-0.27
ID BOISE	77	3	0.09	-0.21	NH CONCORD	68	0	5.09	1.88	VT BURLINGTON	70	2	2.71	-1.30
LEWISTON	77	4	0.11	-0.64	NJ ATLANTIC CITY	76	2	1.95	-2.37	VA LYNCHBURG	76	2	3.24	-0.17
POCATELLO	69	1	0.08	-0.58	NEWARK	76	0	5.95	1.93	NORFOLK	80	3	7.58	2.79
IL CHICAGO/O'HARE	73	1	3.63	-0.99	NM ALBUQUERQUE	80	4	0.40	-1.33	RICHMOND	79	3	2.30	-1.88
MOLINE	73	0	3.93	-0.48	NY ALBANY	72	3	4.12	0.45	ROANOKE	77	2	3.13	-0.61
PEORIA	73	0	3.84	0.68	BINGHAMTON	67	0	3.41	0.06	WASH/DULLES	76	2	4.80	1.02
ROCKFORD	71	0	5.54	1.33	BUFFALO	70	1	3.63	-0.24	WA OLYMPIA	66	3	0.81	-0.29
SPRINGFIELD	73	-1	3.93	0.52	ROCHESTER	70	1	1.64	-1.90	QUILLAYUTE	63	4	1.69	-0.98
IN EVANSVILLE	77	1	5.20	2.06	SYRACUSE	70	1	5.20	1.64	SEATTLE-TACOMA	69	3	1.20	0.18
FORT WAYNE	71	0	4.35	0.75	NC ASHEVILLE	74	2	3.98	-0.32	SPOKANE	72	3	0.48	-0.20
INDIANAPOLIS	75	1	3.19	-0.63	CHARLOTTE	79	0	8.19	4.47	YAKIMA	73	5	0.76	0.40
SOUTH BEND	70	-1	2.09	-1.89	GREENSBORO	77	1	3.40	-0.31	WV BECKLEY	71	2	3.59	0.14
IA BURLINGTON	73	-1	3.49	-0.37	HATTERAS	81	2	7.04	0.48	CHARLESTON	76	3	4.31	0.20
CEDAR RAPIDS	69	-3	5.11	0.88	RALEIGH	78	1	4.31	0.53	ELKINS	71	2	6.08	1.82
DES MOINES	73	-1	6.21	1.70	WILMINGTON	81	1	7.59	0.28	HUNTINGTON	75	1	6.18	2.30
DUBUQUE	68	-2	5.00	0.41	ND BISMARCK	67	-2	5.36	3.21	WI EAU CLAIRE	67	-2	3.40	-1.28
SIOUX CITY	71	-1	1.96	-0.94	DICKINSON	67	-2	1.25	-0.26	GREEN BAY	68	1	5.54	1.77
WATERLOO	71	0	4.92	0.84	FARGO	67	-2	3.90	1.38	LA CROSSE	72	0	1.67	-2.61
KS CONCORDIA	77	0	6.62	3.38	GRAND FORKS	67	-1	2.66	-0.06	MADISON	69	0	2.86	-1.47
DODGE CITY	80	2	2.83	0.10	JAMESTOWN	65	-4	3.91	1.58	MILWAUKEE	71	0	3.53	-0.50
GOODLAND	74	1	9.22	6.73	MINOT	67	-1	3.17	1.22	WAUSAU	65	-3	3.12	-1.41
HILL CITY	77	0	10.73	7.70	WILLISTON	68	0	1.97	0.49	WY CASPER	70	1	0.17	-0.56
TOPEKA	77	0	12.11	8.30	OH AKRON-CANTON	73	3	1.49	-2.16	CHEYENNE	71	5	0.47	-1.35
WICHITA	80	0	7.50	4.56	CINCINNATI	76	2	3.79	0.00	LANDER	71	2	0.46	-0.11
KY JACKSON	76	2	1.25	-2.88	CLEVELAND	73	3	3.23	-0.46	SHERIDAN	69	1	0.53	-0.27

Based on 1971-2000 normals

***** Not Available**

National Agricultural Summary

September 2 – 8, 2019

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Temperatures were more than 8°F above normal in parts of California, Nevada, the Pacific Northwest, Rocky Mountains, and Southwest. In contrast, temperatures were 4°F or more below normal in parts of North Dakota, Michigan, Minnesota, New York, Wisconsin, and Maine. Near- or below-normal precipitation was observed across much of the country. However, Hurricane Dorian brought significant rain, totaling 6 inches or more in some locations, in coastal areas of North Carolina and South Carolina.

Corn: By September 8, eighty-nine percent of the corn acreage was at or beyond the dough stage, 10 percentage points behind last year and 8 points behind the 5-year average. Eight--five percent or more of the acreage in 13 of the 18 estimating states was at or beyond the dough stage by week's end. By September 8, fifty-five percent of this year's crop was dented, 29 percentage points behind last year and 22 points behind average. All of the estimating states, except Pennsylvania and Texas, were behind their respective averages in denting progress. Eleven percent of the 2019 corn acreage had reached maturity as of September 8, twenty-two percentage points behind last year and 13 points behind average. Overall, 55 percent of the nation's corn was rated in good to excellent condition, 3 percentage point below the previous week and 13 points below the same time last year.

Soybean: Nationally, 92 percent of the nation's soybean acreage was setting pods, 8 percentage points behind last year and 7 points behind the 5-year average. On September 8, fifty-five percent of the soybeans were rated in good to excellent condition, unchanged from the previous week but 13 percentage points below the same time last year.

Cotton: By September 8, forty-three percent of the nation's cotton had open bolls, 5 percentage points ahead of last year and 6 points ahead of the 5-year average. By September 8, seven percent of the cotton was harvested, 2 percentage points behind last year but 1 point ahead of average. Based on conditions as of September 8, forty-three percent of the cotton was rated in good to excellent condition. This was 5 percentage points below the previous week but 5 points above the same time last year.

Sorghum: By September 8, ninety-seven percent of the nation's sorghum acreage had reached the heading stage, 2 percentage points behind last year and 1 point behind the 5-year average. Sixty-five percent of sorghum was at or beyond the coloring stage by September 8, thirteen percentage points behind last year and 9 points behind average. Sorghum coloring advanced 10 percentage points or more in all estimating states, except Texas, during the week. By September 8, twenty-seven percent of the nation's sorghum was mature, 6 percentage points behind last year and 10 points behind average. Eighty percent of Texas' sorghum acreage had matured by September 8, three percentage points ahead of last year and 4 points ahead of average. Twenty-two percent of the 2019 sorghum acreage was harvested by September 8, two percentage points behind both last year and the average. As of September 8, sixty-eight percent of the sorghum was rated in good to excellent condition, 1 percentage point above the previous week and 15 points above the same time last year.

Rice: Nationally, 30 percent of the rice acreage was harvested by September 8, nine percentage points behind last year and 7 points behind the 5-year average. As of September 8, sixty-nine percent of the rice was rated in good to excellent condition, 1 percentage point below the previous week and 6 points below the same time last year.

Small Grains: By September 8, eighty-nine percent of the nation's oats had been harvested, 7 percentage points behind last year and 6 points behind the 5-year average. Harvest was complete or nearing completion in Iowa, Minnesota, Nebraska, Ohio, Pennsylvania, South Dakota, and Texas.

Eighty-two percent of the nation's barley was harvested by September 8, nine percentage points behind last year and 10 points behind the 5-year average. Harvest progress advanced 17 percentage points in North Dakota during the week.

By September 8, seventy-one percent of the spring wheat acreage was harvested, 21 percentage points behind last year and 16 points behind the 5-year average. Harvest progress during the week advanced by 16 percentage points in Idaho, Montana, and North Dakota.

Other Crops: On September 8, sixty-four percent of the nation's peanut acreage was rated in good to excellent condition, 3 percentage points below the previous week and 8 points below the same time last year.

Crop Progress and Condition

Week Ending September 8, 2019

Weekly U.S. Progress and Condition Data provided by USDA/NASS

Corn Percent Dough

	Prev Year	Prev Week	Sep 8 2019	5-Yr Avg
CO	95	72	90	93
IL	100	82	88	99
IN	99	70	82	97
IA	98	86	91	97
KS	97	90	96	97
KY	96	83	93	95
MI	89	57	69	88
MN	100	84	90	98
MO	100	89	95	99
NE	100	90	94	98
NC	100	98	100	100
ND	98	72	87	94
OH	95	63	75	95
PA	89	70	79	87
SD	100	76	85	97
TN	100	98	100	99
TX	97	96	100	97
WI	91	61	72	88
18 Sts	99	81	89	97

These 18 States planted 92% of last year's corn acreage.

Corn Percent Dented

	Prev Year	Prev Week	Sep 8 2019	5-Yr Avg
CO	68	22	44	63
IL	95	46	53	87
IN	84	26	43	76
IA	86	41	60	79
KS	88	65	80	83
KY	89	70	85	86
MI	65	14	26	58
MN	81	25	42	76
MO	94	61	72	92
NE	84	54	70	81
NC	96	93	95	96
ND	82	8	25	63
OH	73	16	29	68
PA	64	44	65	62
SD	88	18	35	71
TN	96	87	94	95
TX	92	89	94	86
WI	68	18	31	59
18 Sts	84	41	55	77

These 18 States planted 92% of last year's corn acreage.

Corn Percent Mature

	Prev Year	Prev Week	Sep 8 2019	5-Yr Avg
CO	7	1	2	7
IL	53	2	8	35
IN	38	1	8	26
IA	26	1	4	17
KS	47	16	28	40
KY	72	40	59	62
MI	12	0	0	8
MN	15	0	1	8
MO	64	6	15	47
NE	20	1	9	18
NC	89	83	90	89
ND	24	0	1	10
OH	24	1	4	17
PA	12	4	19	15
SD	27	0	2	14
TN	69	42	63	65
TX	71	52	58	68
WI	19	0	0	11
18 Sts	33	6	11	24

These 18 States planted 92% of last year's corn acreage.

Corn Condition by Percent

	VP	P	F	G	EX
CO	0	2	18	65	15
IL	6	15	41	34	4
IN	9	18	40	29	4
IA	3	8	26	52	11
KS	5	12	35	38	10
KY	3	9	23	48	17
MI	7	15	37	29	12
MN	3	9	33	45	10
MO	3	16	39	38	4
NE	2	5	20	58	15
NC	13	17	29	31	10
ND	1	5	20	65	9
OH	6	19	42	30	3
PA	0	6	23	55	16
SD	2	5	24	49	20
TN	1	2	15	59	23
TX	1	9	38	41	11
WI	3	9	21	46	21
18 Sts	4	10	31	45	10
Prev Wk	3	10	29	47	11
Prev Yr	4	8	20	47	21

Soybeans Percent Setting Pods

	Prev Year	Prev Week	Sep 8 2019	5-Yr Avg
AR	100	95	97	100
IL	100	84	90	99
IN	100	76	84	99
IA	99	90	94	98
KS	95	83	89	94
KY	93	80	87	91
LA	100	100	100	100
MI	96	78	89	98
MN	100	97	99	99
MS	99	95	97	99
MO	95	74	84	91
NE	100	90	94	100
NC	91	86	93	90
ND	100	93	96	100
OH	100	82	89	100
SD	100	85	91	99
TN	100	89	95	96
WI	98	81	85	98
18 Sts	100	86	92	99

These 18 States planted 95% of last year's soybean acreage.

Soybean Condition by Percent

	VP	P	F	G	EX
AR	2	14	32	33	19
IL	6	13	40	36	5
IN	8	18	42	28	4
IA	3	8	28	51	10
KS	3	8	34	47	8
KY	4	10	27	48	11
LA	0	3	26	63	8
MI	4	12	42	33	9
MN	2	7	32	51	8
MS	1	5	28	53	13
MO	3	10	39	42	6
NE	1	4	20	61	14
NC	4	11	37	38	10
ND	2	6	26	58	8
OH	5	17	44	30	4
SD	2	6	27	46	19
TN	1	4	26	57	12
WI	2	5	23	46	24
18 Sts	3	9	33	45	10
Prev Wk	3	10	32	46	9
Prev Yr	3	7	22	50	18

Crop Progress and Condition

Week Ending September 8, 2019

Weekly U.S. Progress and Condition Data provided by USDA/NASS

Cotton Percent Bolls Opening

	Prev Year	Prev Week	Sep 8 2019	5-Yr Avg
AL	52	48	57	44
AZ	72	61	68	70
AR	69	42	66	54
CA	3	9	15	29
GA	38	42	59	51
KS	23	4	9	18
LA	89	53	65	84
MS	67	29	42	55
MO	64	20	29	36
NC	40	28	40	38
OK	33	15	40	24
SC	26	40	56	42
TN	66	13	27	40
TX	29	38	39	29
VA	35	23	41	32
15 Sts	38	36	43	37

These 15 States planted 99% of last year's cotton acreage.

Cotton Percent Harvested

	Prev Year	Prev Week	Sep 8 2019	5-Yr Avg
AL	0	NA	0	0
AZ	7	NA	2	5
AR	0	NA	0	0
CA	0	NA	0	0
GA	0	NA	0	0
KS	0	NA	0	0
LA	7	0	1	2
MS	1	NA	0	0
MO	0	NA	0	0
NC	0	NA	0	0
OK	0	NA	0	0
SC	0	NA	0	0
TN	0	NA	0	0
TX	17	12	13	12
VA	0	NA	0	0
15 Sts	9	NA	7	6

These 15 States harvested 99% of last year's cotton acreage.

Cotton Condition by Percent

	VP	P	F	G	EX
AL	6	12	23	49	10
AZ	0	11	33	45	11
AR	0	2	12	36	50
CA	0	0	65	30	5
GA	3	8	31	48	10
KS	3	11	39	41	6
LA	0	3	26	63	8
MS	1	6	40	43	10
MO	9	14	53	24	0
NC	6	19	25	39	11
OK	2	10	44	43	1
SC	0	11	34	51	4
TN	4	7	20	56	13
TX	3	19	46	30	2
VA	2	2	9	82	5
15 Sts	3	15	39	37	6
Prev Wk	1	14	37	39	9
Prev Yr	13	21	28	29	9

Sorghum Percent Headed

	Prev Year	Prev Week	Sep 8 2019	5-Yr Avg
CO	97	93	96	95
KS	98	90	96	97
NE	100	97	100	100
OK	95	90	96	95
SD	98	95	97	98
TX	97	96	100	97
6 Sts	99	92	97	98

These 6 States planted 97% of last year's sorghum acreage.

Sorghum Percent Coloring

	Prev Year	Prev Week	Sep 8 2019	5-Yr Avg
CO	73	19	31	58
KS	72	39	56	67
NE	82	27	59	82
OK	65	43	53	70
SD	60	38	58	69
TX	89	90	93	85
6 Sts	78	52	65	74

These 6 States planted 97% of last year's sorghum acreage.

Sorghum Percent Mature

	Prev Year	Prev Week	Sep 8 2019	5-Yr Avg
CO	8	1	2	8
KS	9	1	3	11
NE	12	0	1	10
OK	28	15	25	31
SD	4	0	4	9
TX	77	76	80	76
6 Sts	33	24	27	37

These 6 States planted 97% of last year's sorghum acreage.

Sorghum Percent Harvested

	Prev Year	Prev Week	Sep 8 2019	5-Yr Avg
CO	0	0	0	0
KS	2	0	0	1
NE	0	0	0	0
OK	7	1	3	8
SD	0	0	0	0
TX	66	72	75	60
6 Sts	24	21	22	24

These 6 States harvested 98% of last year's sorghum acreage.

Sorghum Condition by Percent

	VP	P	F	G	EX
CO	1	2	23	64	10
KS	2	7	27	53	11
NE	0	1	15	67	17
OK	0	3	25	69	3
SD	0	1	21	71	7
TX	1	5	29	40	25
6 Sts	1	5	26	53	15
Prev Wk	1	5	27	53	14
Prev Yr	5	12	30	42	11

Peanut Condition by Percent

	VP	P	F	G	EX
AL	9	13	34	40	4
FL	3	3	24	62	8
GA	1	7	26	55	11
NC	4	7	36	40	13
OK	0	0	13	77	10
SC	0	4	34	53	9
TX	0	0	30	68	2
VA	0	2	8	72	18
8 Sts	2	6	28	55	9
Prev Wk	1	5	27	57	10
Prev Yr	1	4	23	56	16

Crop Progress and Condition

Week Ending September 8, 2019

Weekly U.S. Progress and Condition Data provided by USDA/NASS

Oats Percent Harvested

	Prev Year	Prev Week	Sep 8 2019	5-Yr Avg
IA	99	100	100	100
MN	97	88	94	96
NE	100	99	100	100
ND	94	58	72	87
OH	100	100	100	100
PA	89	84	90	91
SD	100	92	96	99
TX	100	100	100	100
WI	91	73	78	91
9 Sts	96	84	89	95

These 9 States harvested 65% of last year's oat acreage.

Rice Percent Harvested

	Prev Year	Prev Week	Sep 8 2019	5-Yr Avg
AR	31	11	23	32
CA	2	0	1	2
LA	88	75	81	86
MS	63	15	25	40
MO	8	0	5	11
TX	91	63	78	88
6 Sts	39	21	30	37

These 6 States harvested 100% of last year's rice acreage.

Rice Condition by Percent

	VP	P	F	G	EX
AR	2	8	30	40	20
CA	0	0	0	45	55
LA	1	4	30	58	7
MS	0	3	24	60	13
MO	3	6	38	39	14
TX	1	4	30	54	11
6 Sts	1	5	25	46	23
Prev Wk	1	4	25	47	23
Prev Yr	0	3	22	59	16

Spring Wheat Percent Harvested

	Prev Year	Prev Week	Sep 8 2019	5-Yr Avg
ID	87	69	85	88
MN	99	65	78	90
MT	85	46	62	86
ND	93	52	68	83
SD	100	79	91	96
WA	90	61	74	95
6 Sts	92	55	71	87

These 6 States harvested 99% of last year's spring wheat acreage.

Barley Percent Harvested

	Prev Year	Prev Week	Sep 8 2019	5-Yr Avg
ID	95	83	92	93
MN	100	92	97	96
MT	83	68	76	91
ND	96	64	81	90
WA	91	59	66	95
5 Sts	91	72	82	92

These 5 States harvested 83% of last year's barley acreage.

Crop Progress and Condition

Week Ending September 8, 2019

Weekly U.S. Progress and Condition Data provided by USDA/NASS

Pasture and Range Condition by Percent
Week Ending Sep 8, 2019

	VP	P	F	G	EX			VP	P	F	G	EX
AL	5	15	36	40	4		NH	6	7	42	43	2
AZ	6	35	42	17	0		NJ	4	5	45	46	0
AR	1	5	32	51	11		NM	18	28	29	20	5
CA	25	20	10	45	0		NY	2	11	29	43	15
CO	2	4	22	64	8		NC	3	23	42	29	3
CT	0	0	100	0	0		ND	3	7	21	60	9
DE	7	29	36	19	9		OH	2	14	40	35	9
FL	1	6	23	49	21		OK	1	13	25	58	3
GA	5	20	37	34	4		OR	13	26	34	26	1
ID	1	10	32	44	13		PA	0	5	47	42	6
IL	7	14	42	34	3		RI	0	15	55	30	0
IN	8	23	39	27	3		SC	2	20	42	35	1
IA	5	13	40	38	4		SD	0	4	18	49	29
KS	1	5	26	59	9		TN	3	14	40	37	6
KY	10	19	36	33	2		TX	18	30	33	18	1
LA	2	8	37	48	5		UT	3	5	24	60	8
ME	0	5	50	20	25		VT	0	26	40	34	0
MD	2	4	47	39	8		VA	15	35	35	14	1
MA	0	10	30	60	0		WA	13	34	26	27	0
MI	4	24	40	25	7		WV	1	10	38	44	7
MN	2	9	27	54	8		WI	2	7	29	46	16
MS	1	7	39	48	5		WY	3	13	46	34	4
MO	1	5	25	58	11		48 Sts	6	14	29	43	8
MT	3	6	26	49	16							
NE	1	3	15	64	17		Prev Wk	5	13	29	44	9
NV	10	10	30	50	0		Prev Yr	9	17	31	36	7

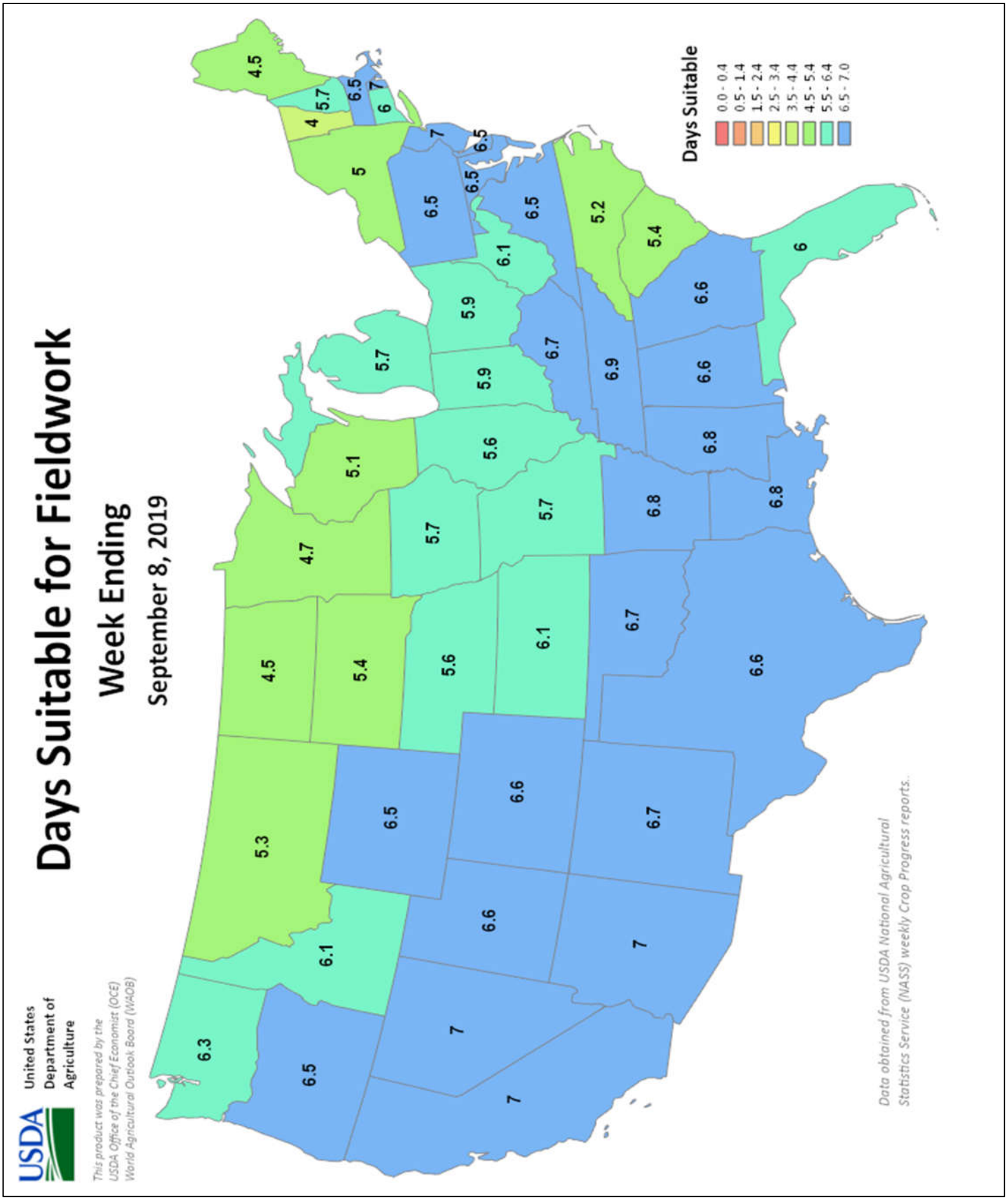
VP - Very Poor; **P - Poor;** **F - Fair;** **G - Good;** **EX - Excellent**

NA - Not Available; ***Revised**

Crop Progress and Condition

Week Ending September 8, 2019

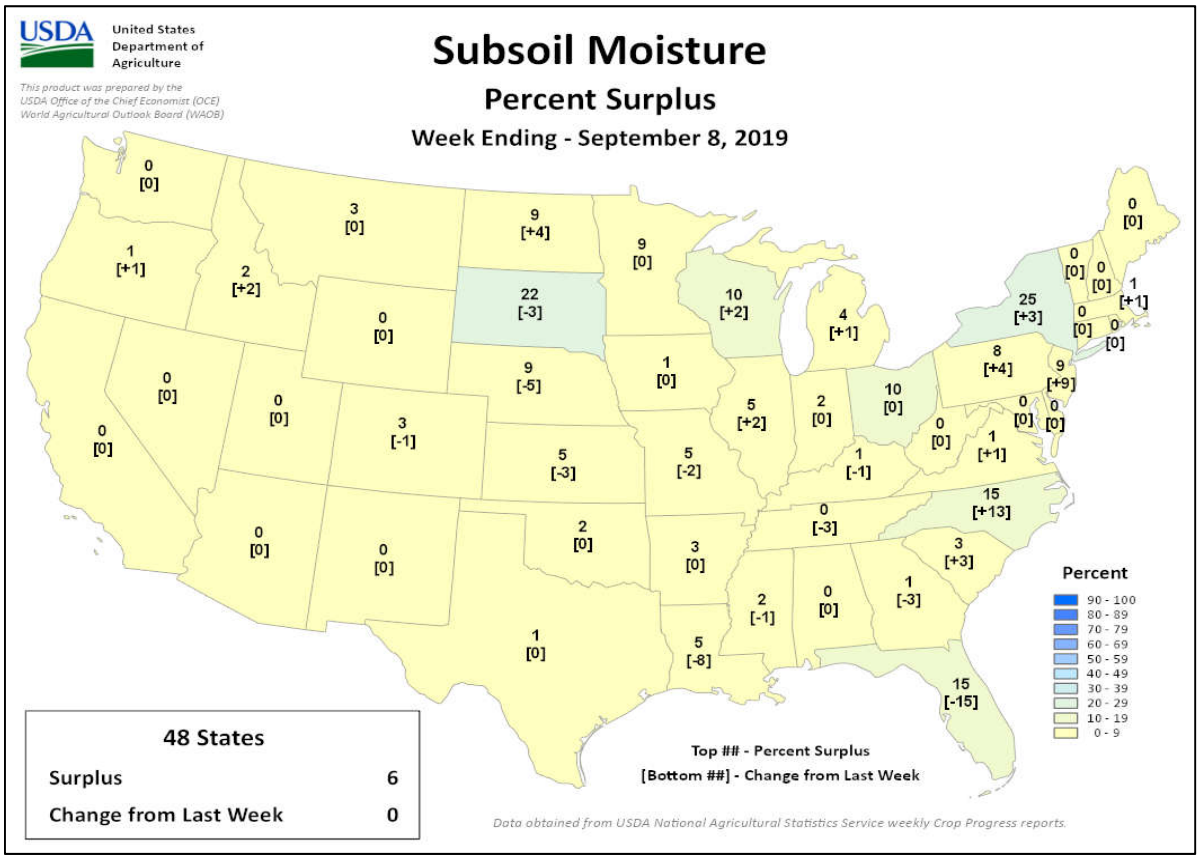
Weekly U.S. Progress and Condition Data provided by USDA/NASS

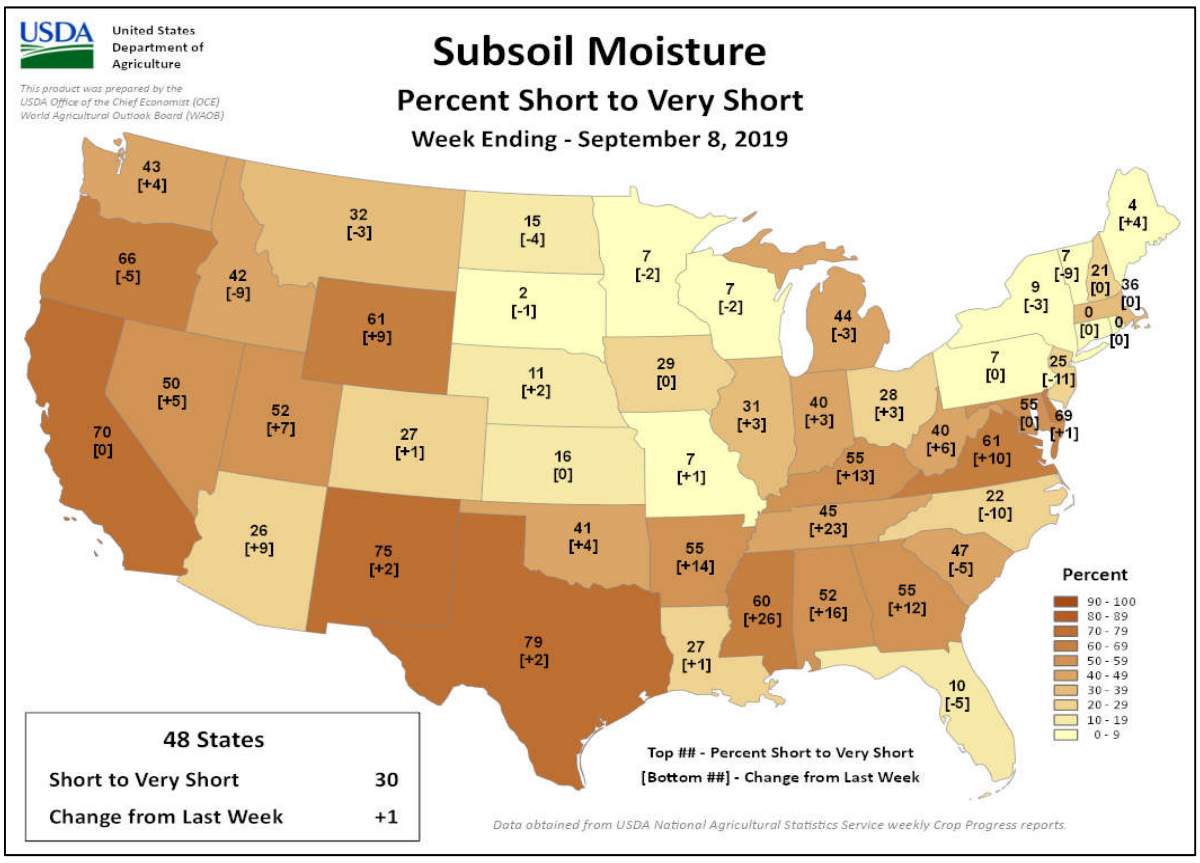


Crop Progress and Condition

Week Ending September 8, 2019

Weekly U.S. Progress and Condition Data provided by USDA/NASS

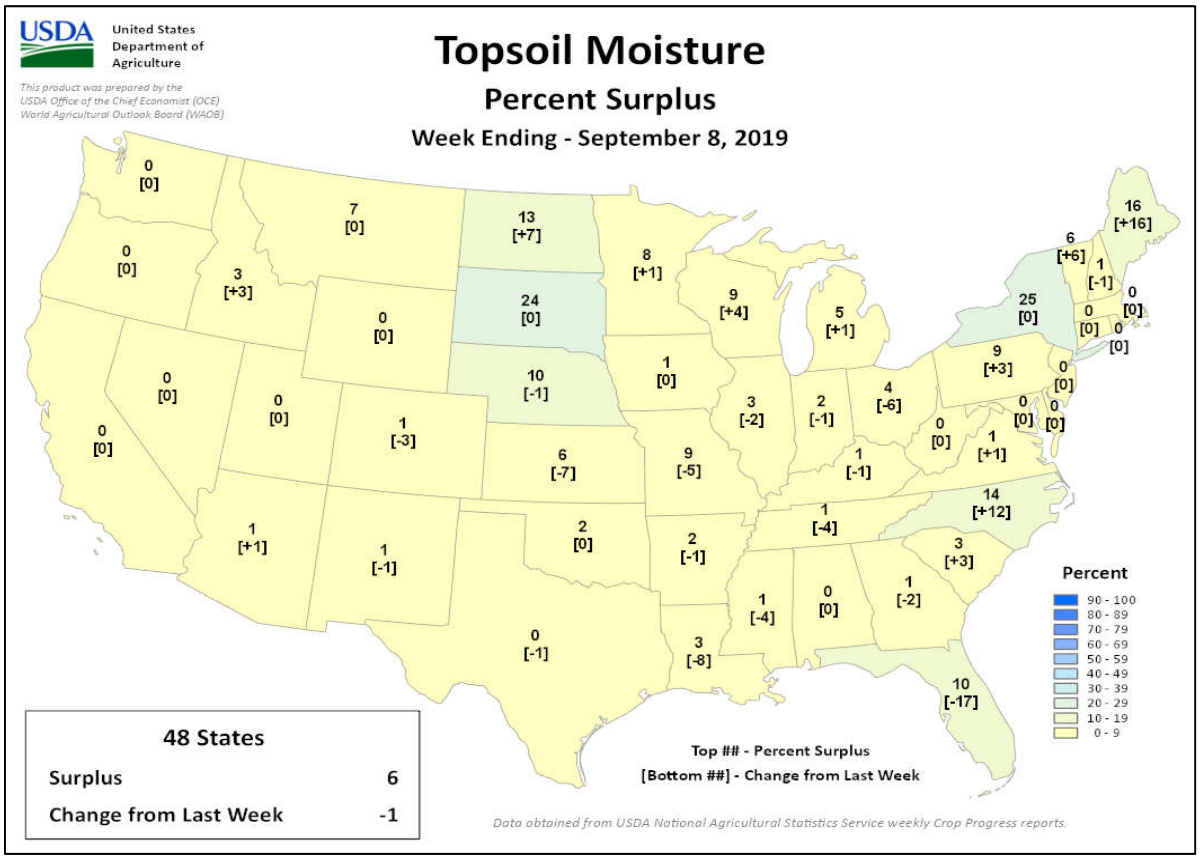


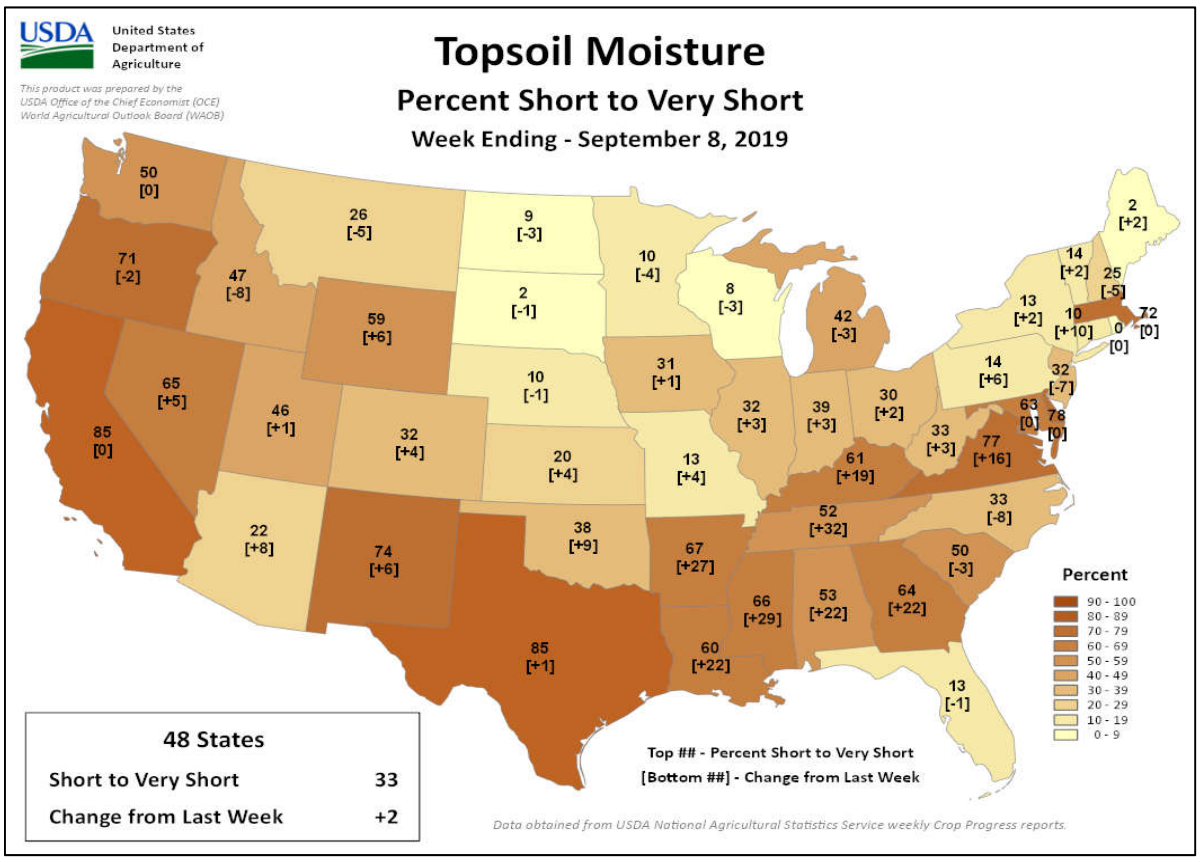


Crop Progress and Condition

Week Ending September 8, 2019

Weekly U.S. Progress and Condition Data provided by USDA/NASS





International Weather and Crop Summary

September 1-7, 2019

International Weather and Crop Highlights and Summaries provided by USDA/WAOB

HIGHLIGHTS

EUROPE: Much-needed rain in northeastern Europe contrasted with varying degrees of dryness and drought across other parts of northern Europe as well as the Balkans.

WESTERN FSU: Increasingly dry, warm weather accelerated summer crop drydown and harvesting but amplified drought concerns in parts of Ukraine.

EASTERN FSU: Cool, wet weather was generally too late to benefit filling to maturing spring wheat, while seasonably sunny weather favored early cotton harvesting in the south.

MIDDLE EAST: Sunny skies benefited summer crop drydown and early harvesting in Turkey.

SOUTH ASIA: Monsoon showers continued to improve moisture conditions for rice and cotton in India.

EASTERN ASIA: Typhoon Lingling produced heavy rainfall along portions of eastern China and the Koreas.

SOUTHEAST ASIA: A weak tropical cyclone brought downpours to the northern Philippines and parts of Indochina.

AUSTRALIA: Showers benefited winter grains and oilseeds in the south and west, while drought continued to hamper farming in the northeast.

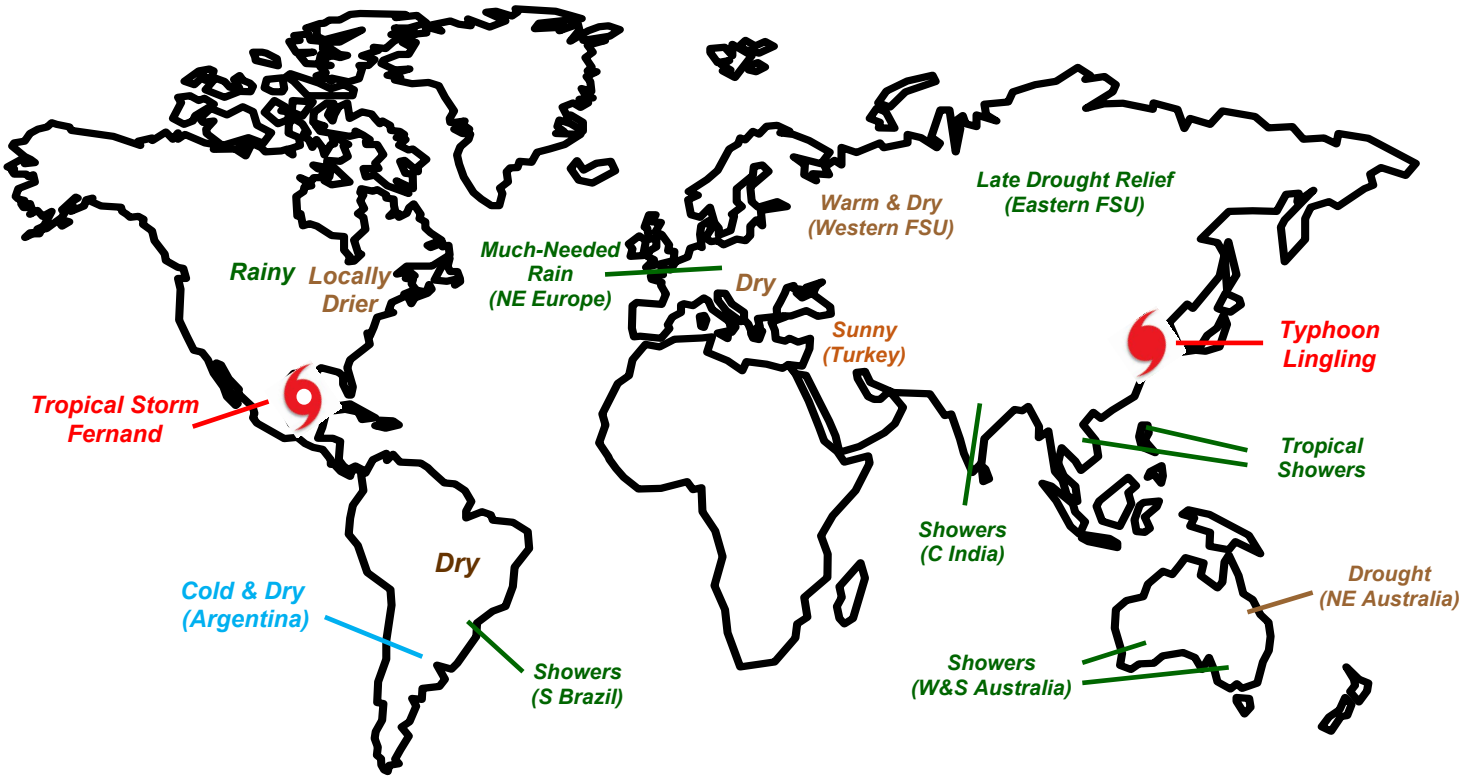
ARGENTINA: Cold, dry weather slowed winter grain development, temporarily forestalling the need for moisture.

BRAZIL: Showers slowed seasonal fieldwork, including early wheat harvests, in the south.

MEXICO: Tropical Storm Fernand brought much-needed rain to the northeast.

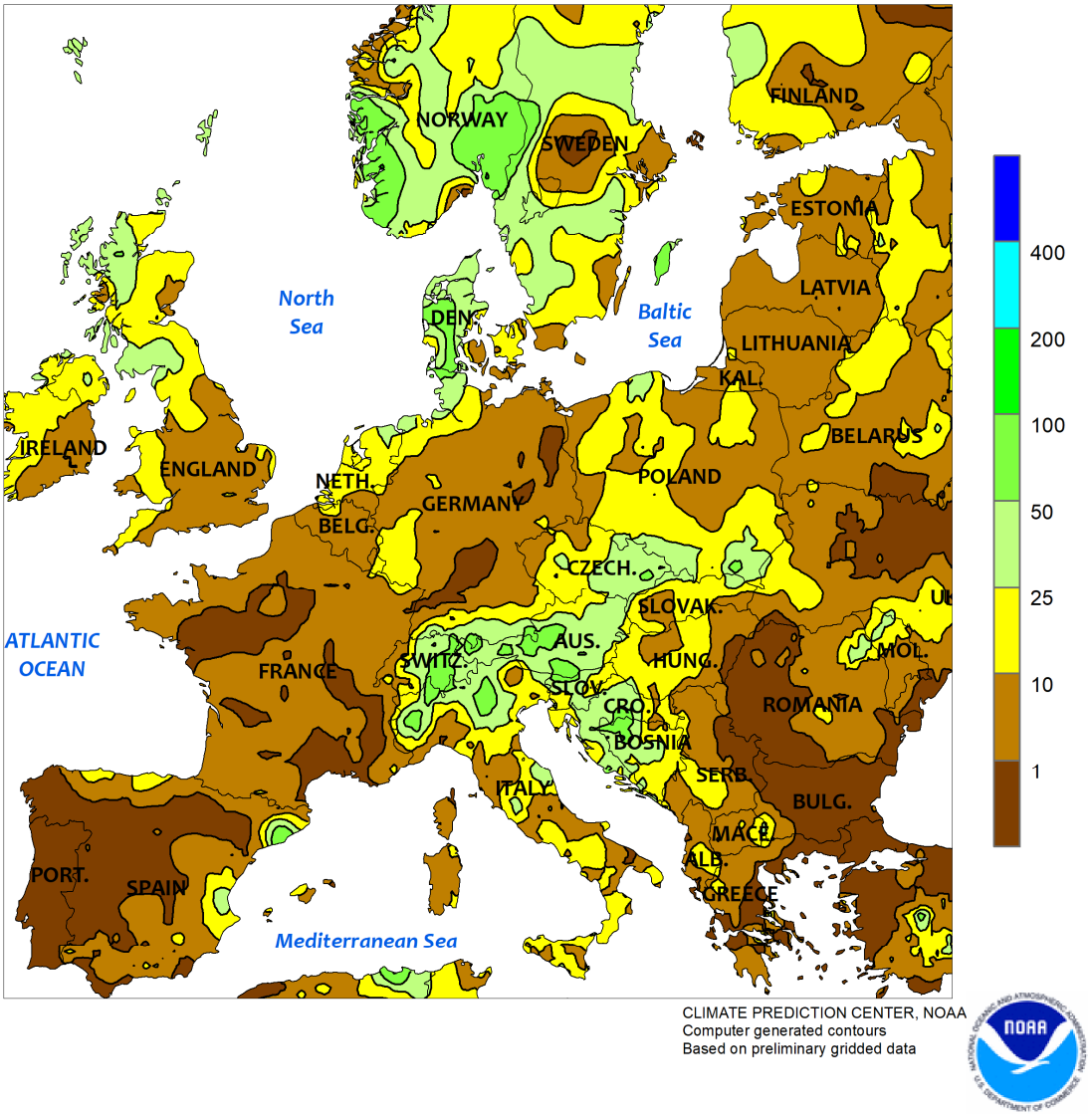
CANADIAN PRAIRIES: Rainy weather maintained a slow pace of spring crop harvesting in eastern farming areas.

SOUTHEASTERN CANADA: Dry weather aided Ontario's corn and soybean harvests, as rain boosted moisture for winter crops in Quebec.



For additional information contact: mbrusberg@oce.usda.gov

EUROPE
Total Precipitation (mm)
September 1 - 7, 2019

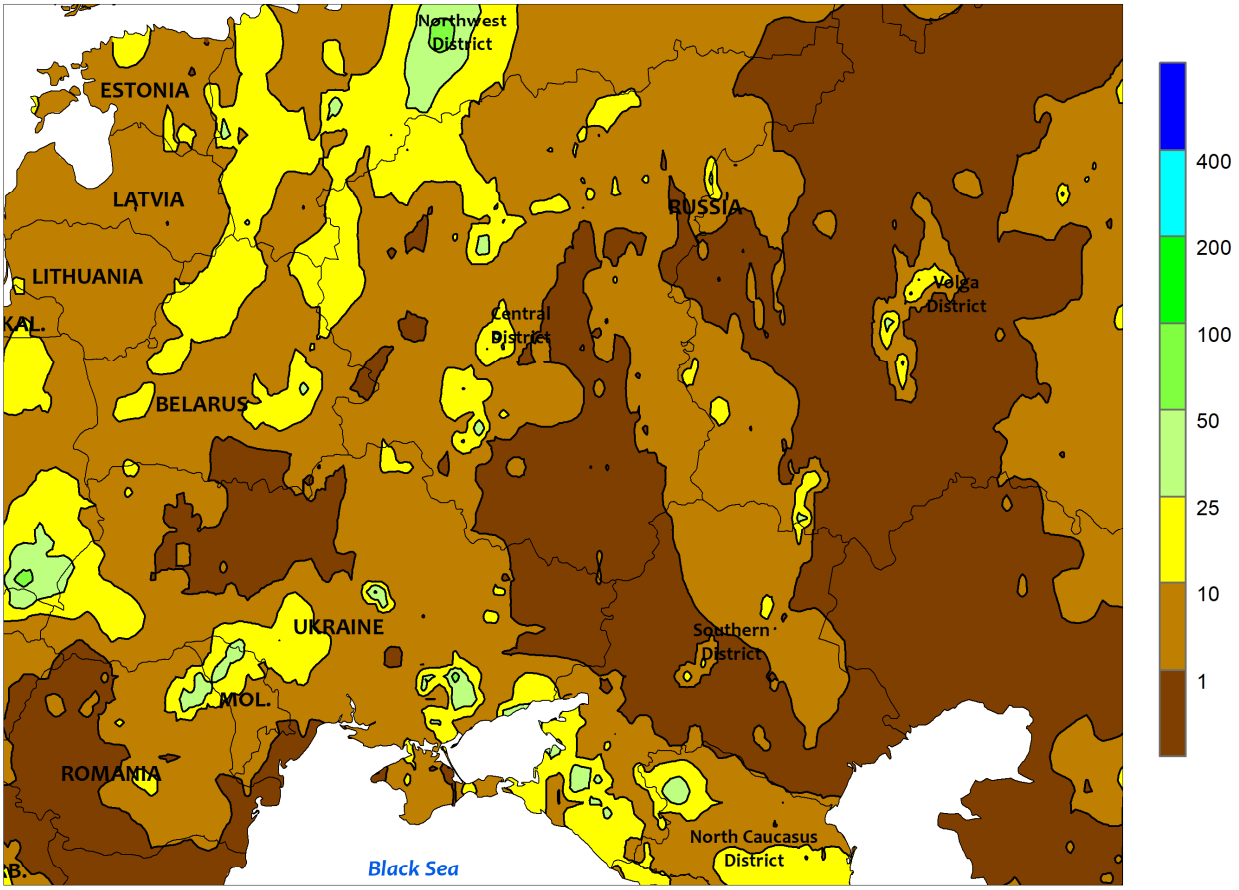


EUROPE

Rain eased drought concerns in northeastern Europe, while varying degrees of dryness and drought continued over other portions of northern Europe as well as Spain and the Balkans. Moderate to heavy rain (10-100 mm, locally more) was reported from northern Italy northeastward into Hungary and much of Poland, easing short-term drought and providing timely moisture for winter crop planting and emergence. Conversely, rain was lighter (5 mm or less) across France and Germany, with pronounced short-term dryness (30-day rainfall less than 25 percent of normal) noted in parts of north-central France and northeastern Germany. Moisture will be needed soon in these locales for winter wheat and rapeseed sowing. In contrast, moisture supplies remained favorable in croplands adjacent to the North Sea, with 25 to 100 mm of rain during the past week noted from northern England into Scandinavia. Late-summer heat (32-34°C) and dryness accelerated the maturation and drydown of corn, sunflowers, and soybeans over southeastern Europe, though acute short-term drought (30-day rainfall less than 10 percent of normal) has reduced soil moisture available for winter crop planting and establishment. Dry weather prevailed in Spain, where summer drought in the south (90-day rainfall less than 50 percent of normal) contrasted with recent soil moisture improvements in the north (60-day rainfall totaling 100-200 percent of normal).

For additional information contact: mbrusberg@oce.usda.gov

WESTERN FSU
Total Precipitation (mm)
September 1 - 7, 2019



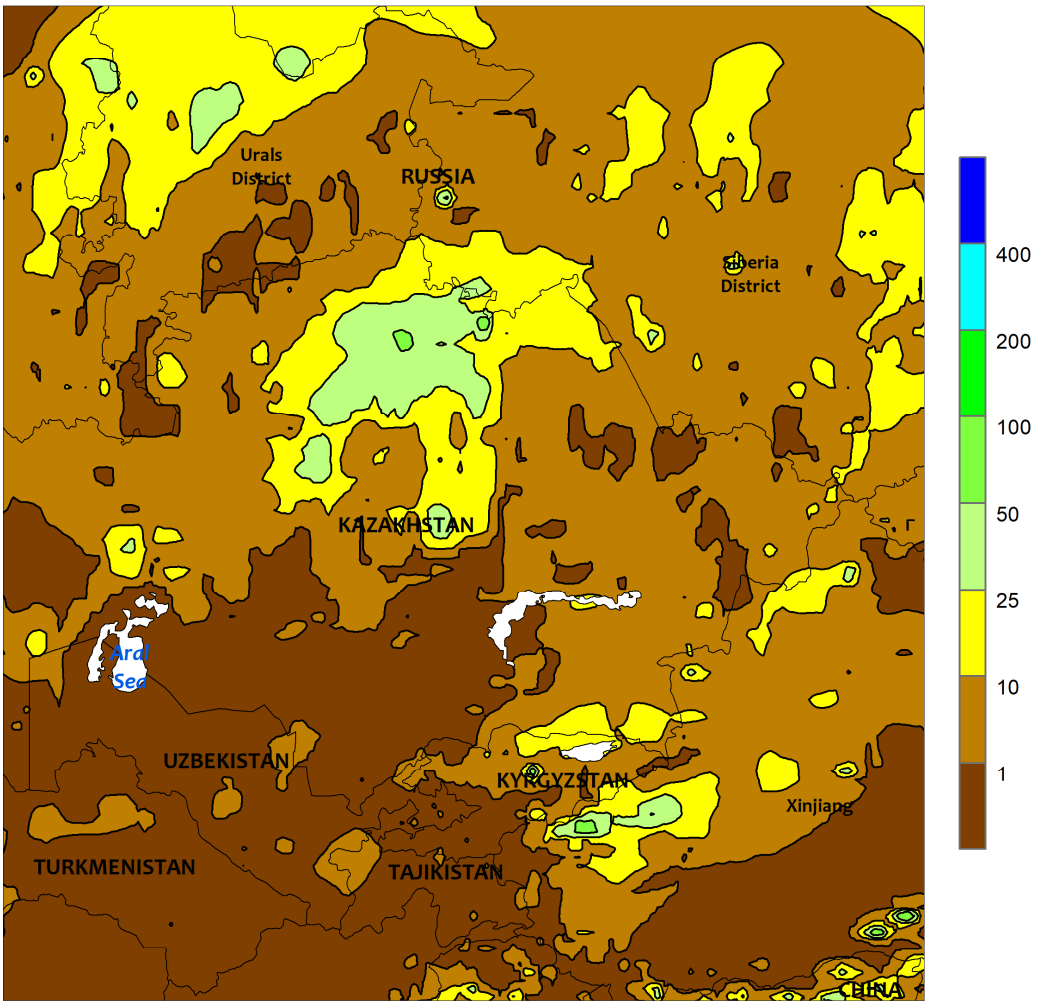
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

WESTERN FSU

Increasingly dry weather accelerated summer crop maturation and drydown but amplified drought concerns over Ukraine. After a mostly favorable summer growing season in northern and western Ukraine, short-term drought (60-day rainfall less than 50 percent of normal, with August rainfall less than 10 percent of normal) trimmed yield prospects for later-developing corn and soybeans. Conversely, near- to above-normal summer rainfall from southern and eastern Ukraine into western Russia benefited corn and sunflowers, with dry, warm weather (2-6°C above normal) during the past week facilitating early harvesting. However, soil moisture for winter wheat in areas adjacent to the Black Sea has become limited due to acute dryness over the past 30 days (precipitation locally less than 10 percent of normal), though this week's rain (10-25 mm, locally more) in southwestern Russia and southeastern Ukraine provided much-needed topsoil moisture locally.

For additional information contact: mbrusberg@oce.usda.gov

EASTERN FSU
Total Precipitation (mm)
September 1 - 7, 2019



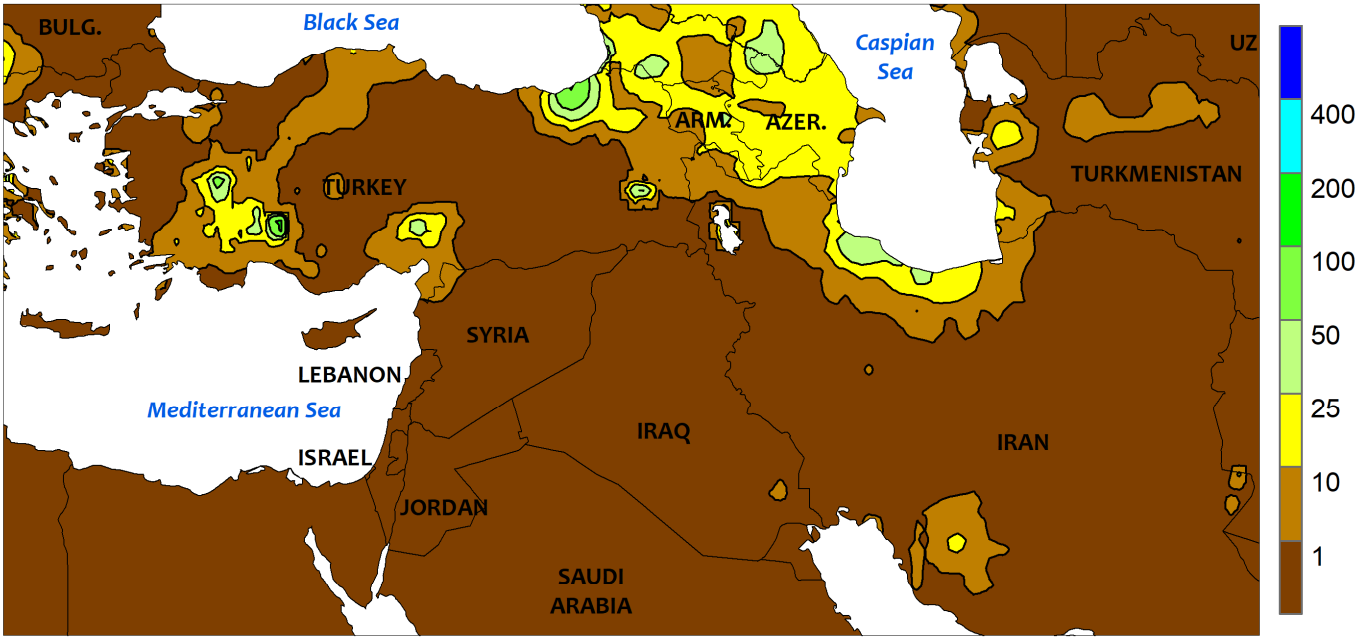
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

EASTERN FSU

Another slow-moving storm brought additional moderate to heavy rain (10-65 mm) to western and northern portions of the region, though the moisture was too late to offer much benefit to maturing spring grains. Prior to the resumption of rain in late August, rainfall during the key stages of development for spring wheat and barley totaled less than 50 percent of normal (locally less than 25 percent) in the southeastern Volga District (Orangeburg), northwestern Kazakhstan (Kostanay), as well as western portions of Russia's Siberia District (Omsk, Novosibirsk, and Altai Krai). As a result, spring grain yield prospects are down versus last year in both Russia and Kazakhstan despite the late-season moisture. While the soaking rains of the past two weeks have recharged water supplies, producers will need sunny weather to facilitate drydown and harvesting. In Uzbekistan and neighboring countries, sunny skies favored early cotton harvesting, though below-normal temperatures (up to 5°C above normal) slowed the maturation of later-developing cotton.

For additional information contact: mbrusberg@oce.usda.gov

MIDDLE EAST
Total Precipitation (mm)
September 1 - 7, 2019



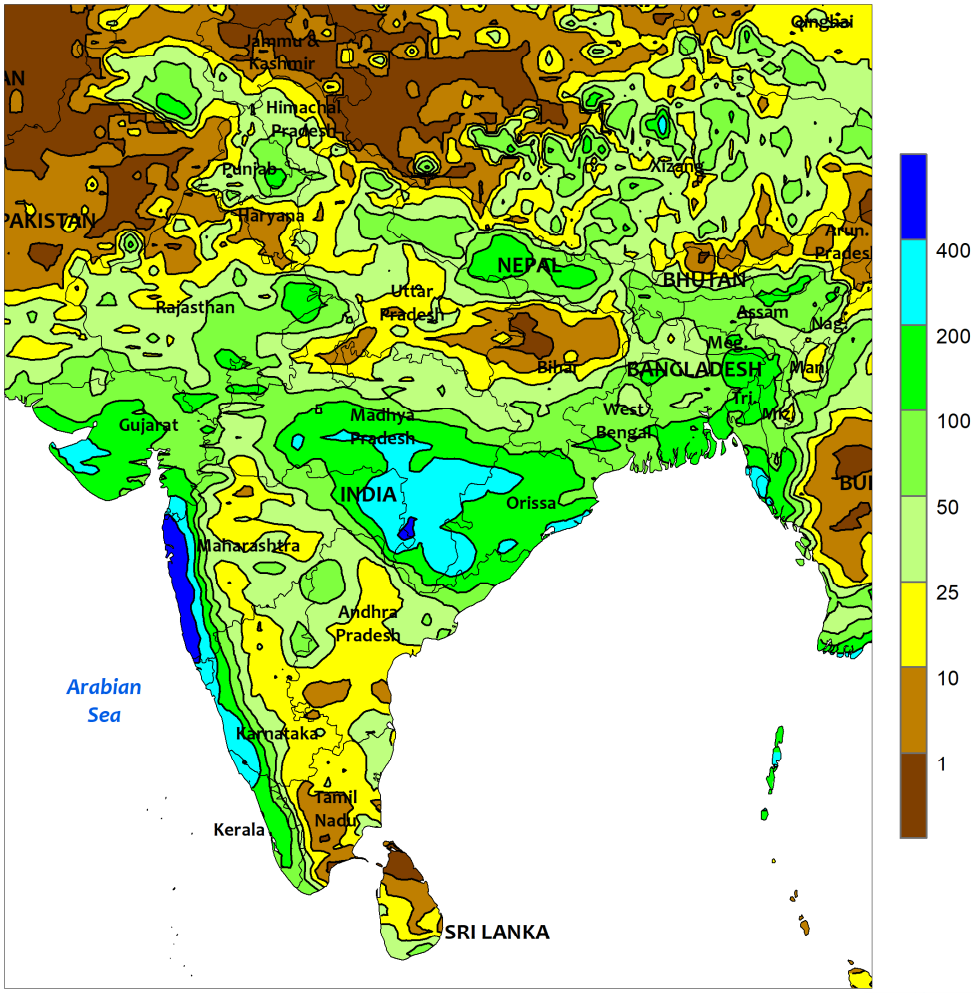
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

MIDDLE EAST

Seasonably dry, warm weather in Turkey promoted summer crop drydown and harvesting. In Turkey, a good summer crop growing season ended with most locales reporting near- to above-normal rainfall. This week's sunny, warm weather (up to 3°C above normal) favored seasonal fieldwork, including early cotton harvesting in western and southeastern Turkey as well as corn and sunflower harvesting in central and northern growing areas. Winter grain sowing typically occurs in October in Turkey and Iran, a bit later from Syria into Iraq.

For additional information contact: mbrusberg@oce.usda.gov

SOUTH ASIA
Total Precipitation (mm)
September 1 - 7, 2019

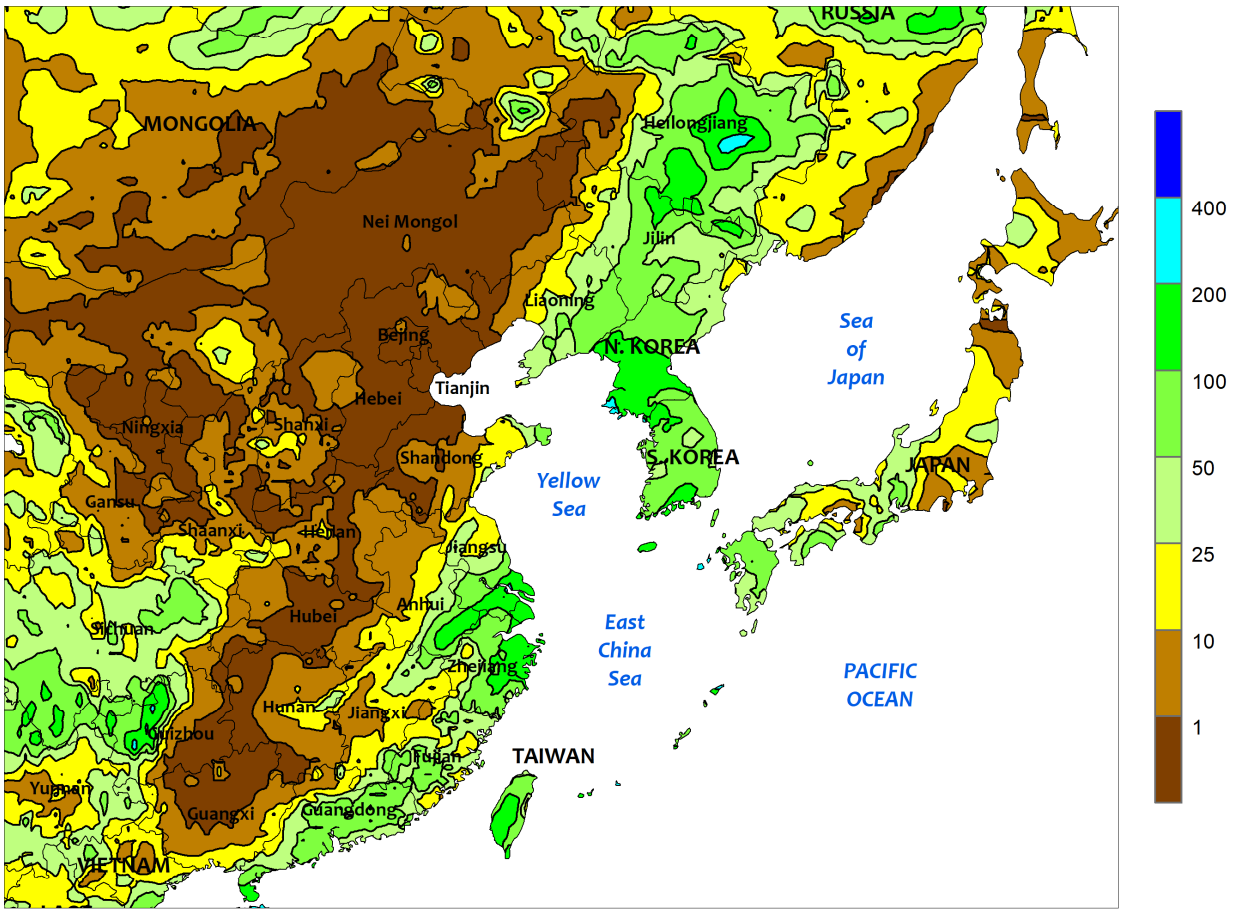


SOUTH ASIA

Heavy showers continued to propagate across central India, maintaining or boosting moisture supplies for kharif crops. In eastern India, over 100 mm of rain eased ongoing moisture deficits for rice in Orissa, while over 300 mm in Chhattisgarh briefly submerged rice. Similarly, heavy showers (50-200 mm) in Gujarat erased 60-day rainfall deficits and significantly improved soil moisture for cotton and groundnuts. In other parts of India, 25 to 100 mm of rain maintained above-average seasonal totals for soybeans in western Madhya Pradesh and environs, while a pocket of drier weather in central Maharashtra reduced soil moisture for cotton and oilseeds. Meanwhile in northern India and adjacent areas of Pakistan, locally heavy showers slowed the early stages of maturation of irrigated cotton and rice.

For additional information contact: mbrusberg@oce.usda.gov

EASTERN ASIA
Total Precipitation (mm)
September 1 - 7, 2019



CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

EASTERN ASIA

Typhoon Lingling tracked off the eastern coast of China during the latter half of the week before making landfall on the Korean Peninsula. The storm produced heavy showers (25-100 mm) in portions of southeastern China and throughout a large section of the northeast, but little rainfall materialized in drought-plagued eastern areas. In areas receiving rainfall, the moisture provided beneficial late-season moisture to immature summer crops. Rainfall (50-200 mm) was particularly welcome in the Koreas, where severe drought has gripped the peninsula for much of the season.

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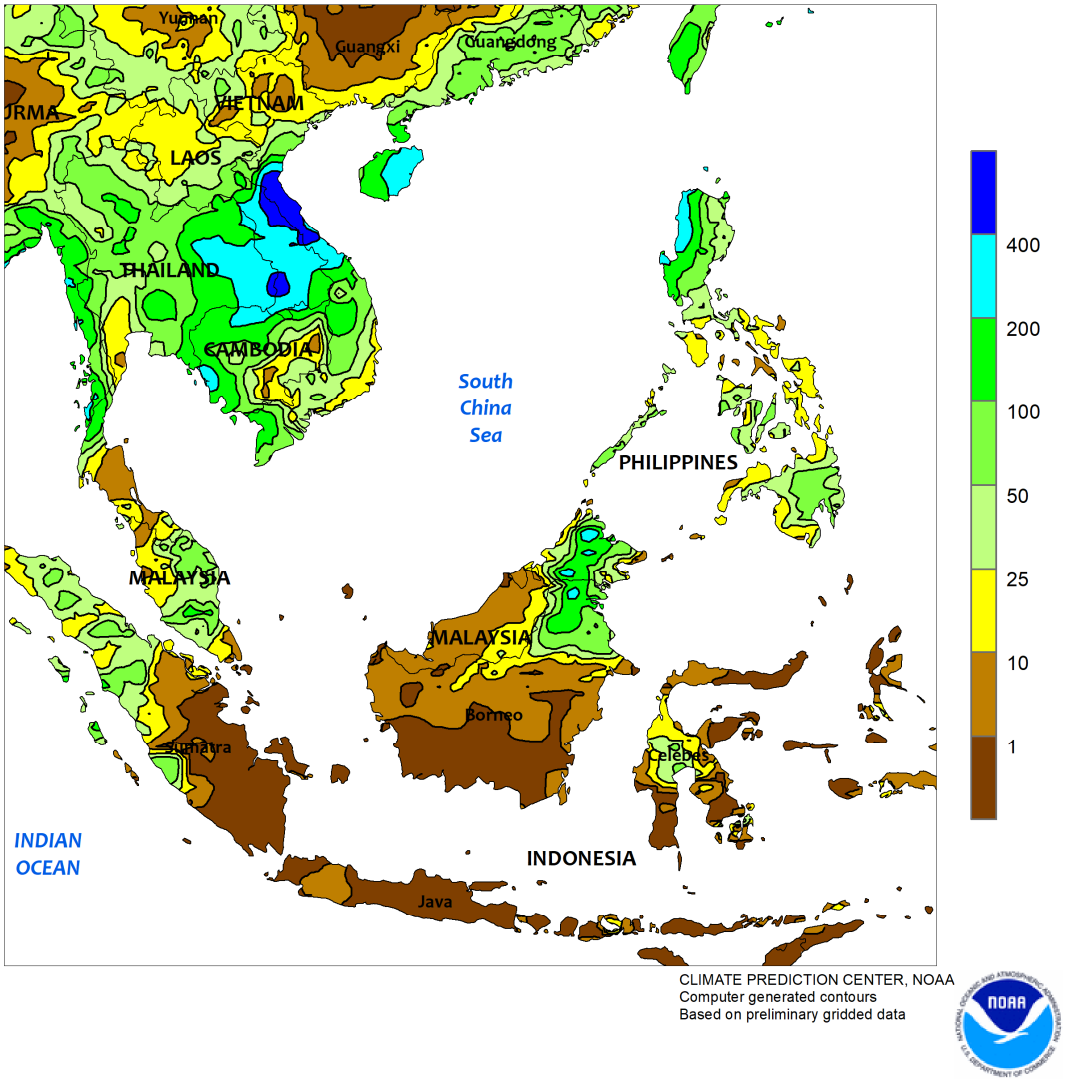
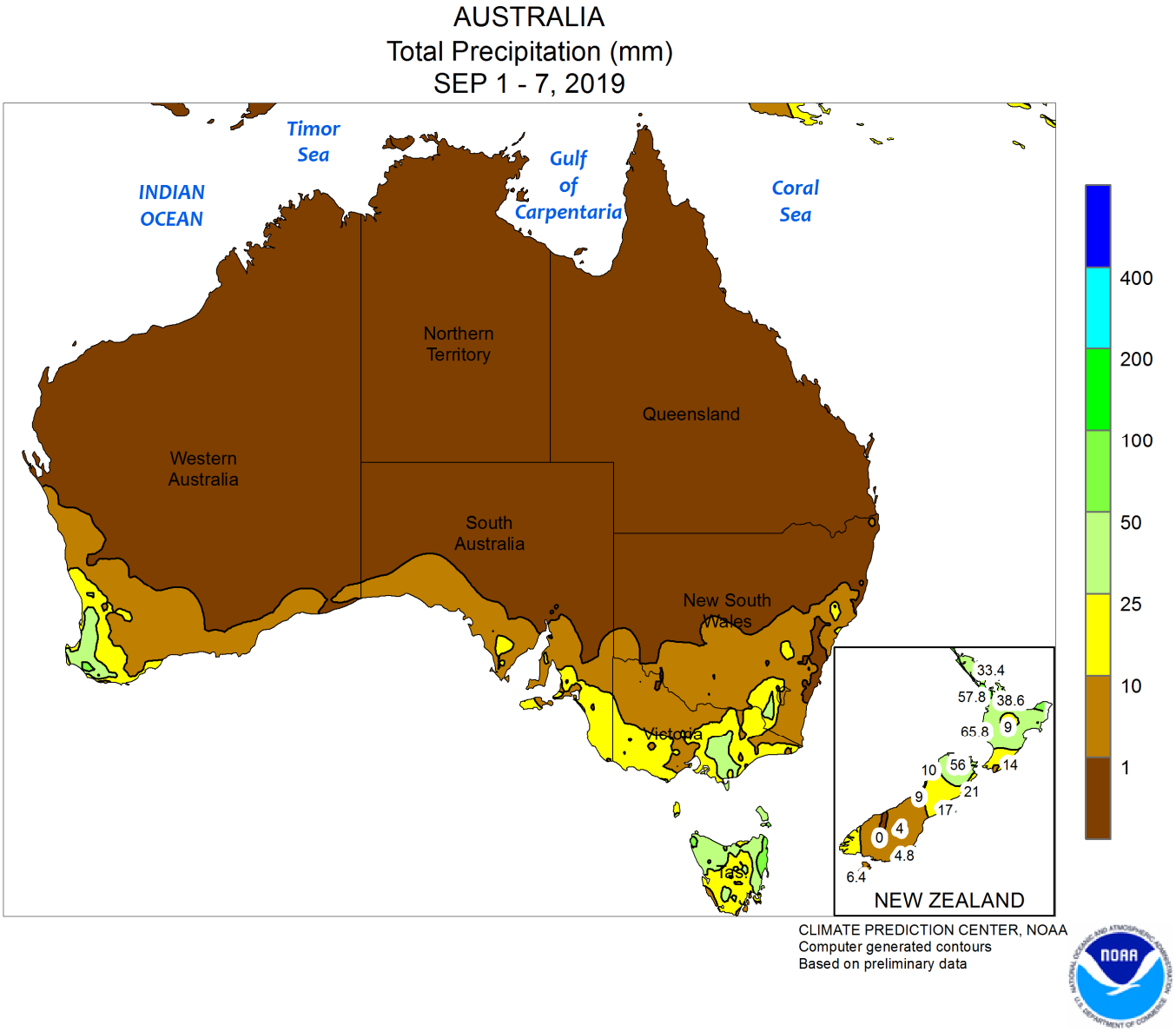
SOUTHEAST ASIA
Total Precipitation (mm)
September 1 - 7, 2019



SOUTHEAST ASIA

A weak tropical cyclone (Kajiki) formed off the northern coast of the Philippines early in the period before moving west, making landfall in central Vietnam. The storm produced over 200 mm of rain in the northwestern Philippines, southern Laos, and nearby portions of Thailand, while drenching central Vietnam with totals in excess of 400 mm. The downpours briefly submerged rice in the aforementioned areas, while rice in surrounding areas benefited from more seasonable amounts (50-200 mm). In particular, northeastern Thailand continued to rebound from season-long drought, with seasonal rainfall totals above normal for the first time (since June 1).



AUSTRALIA

Dry weather kept drought firmly entrenched across southern Queensland and northern New South Wales, further reducing the yield prospects of wheat and other immature winter crops. The persistent dryness has accelerated many winter crops toward maturation, with harvesting reportedly underway in some areas. Given the severity of the drought, rain would not significantly benefit winter crops at this stage in the growing season. Nevertheless, rain is urgently needed to replenish irrigation supplies and to help condition the topsoil for summer crop planting. Farther south, scattered showers (5-25 mm) in southeastern Australia helped stabilize crop conditions after a period of drier-than-normal weather. Additional rainfall would be welcome in the upcoming weeks to help maintain generally good yield prospects as crops advance through the reproductive stages of development. Elsewhere in the wheat belt, early week showers (5-25 mm) in Western Australia benefited wheat, barley, and canola before dry weather returned for the remainder of the week. Temperatures averaged near normal in the south and west (within 1°C of normal), with minimum temperatures dropping below freezing locally on some nights. In the east, temperatures averaged 1 to 3°C above normal, accelerating crop development.

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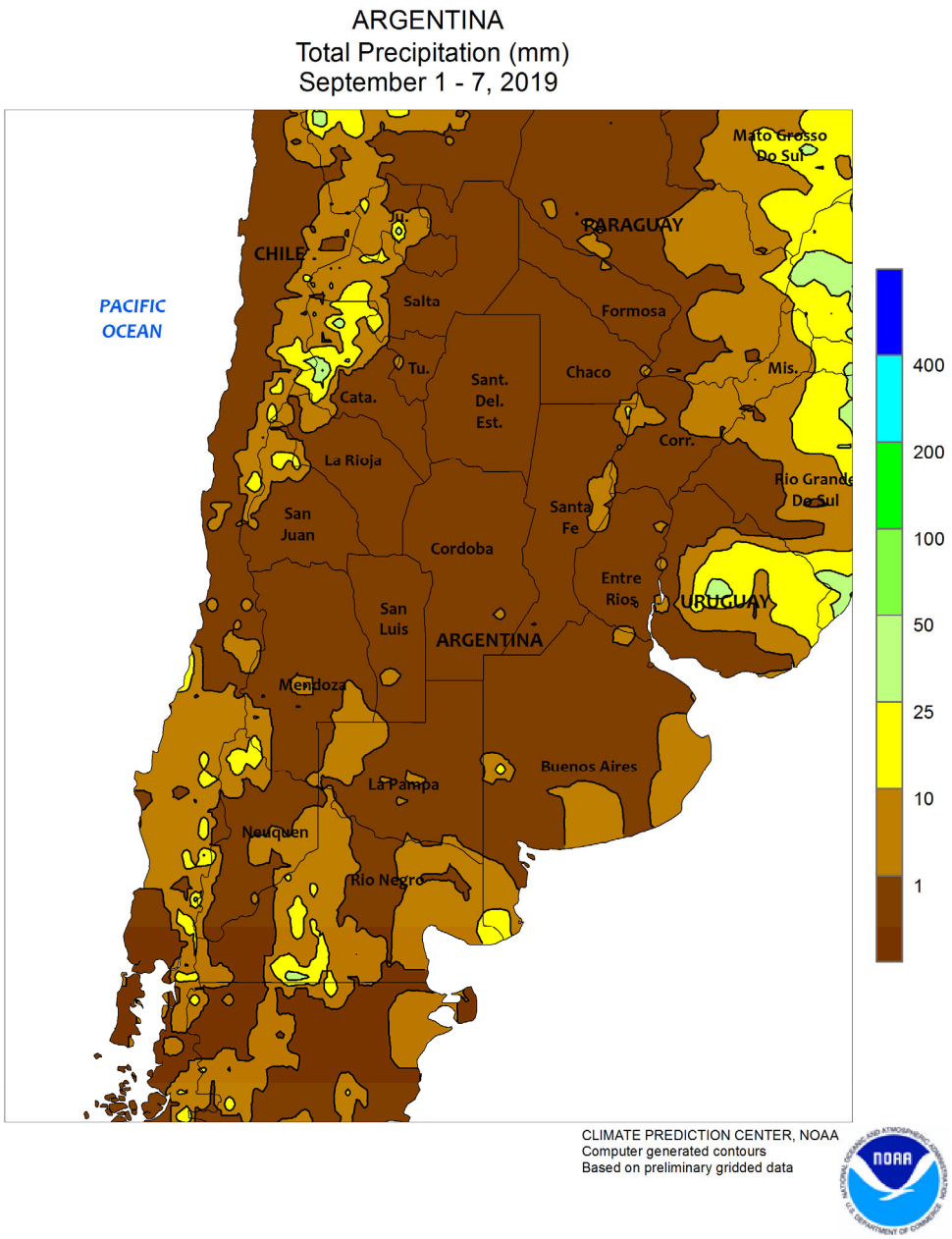
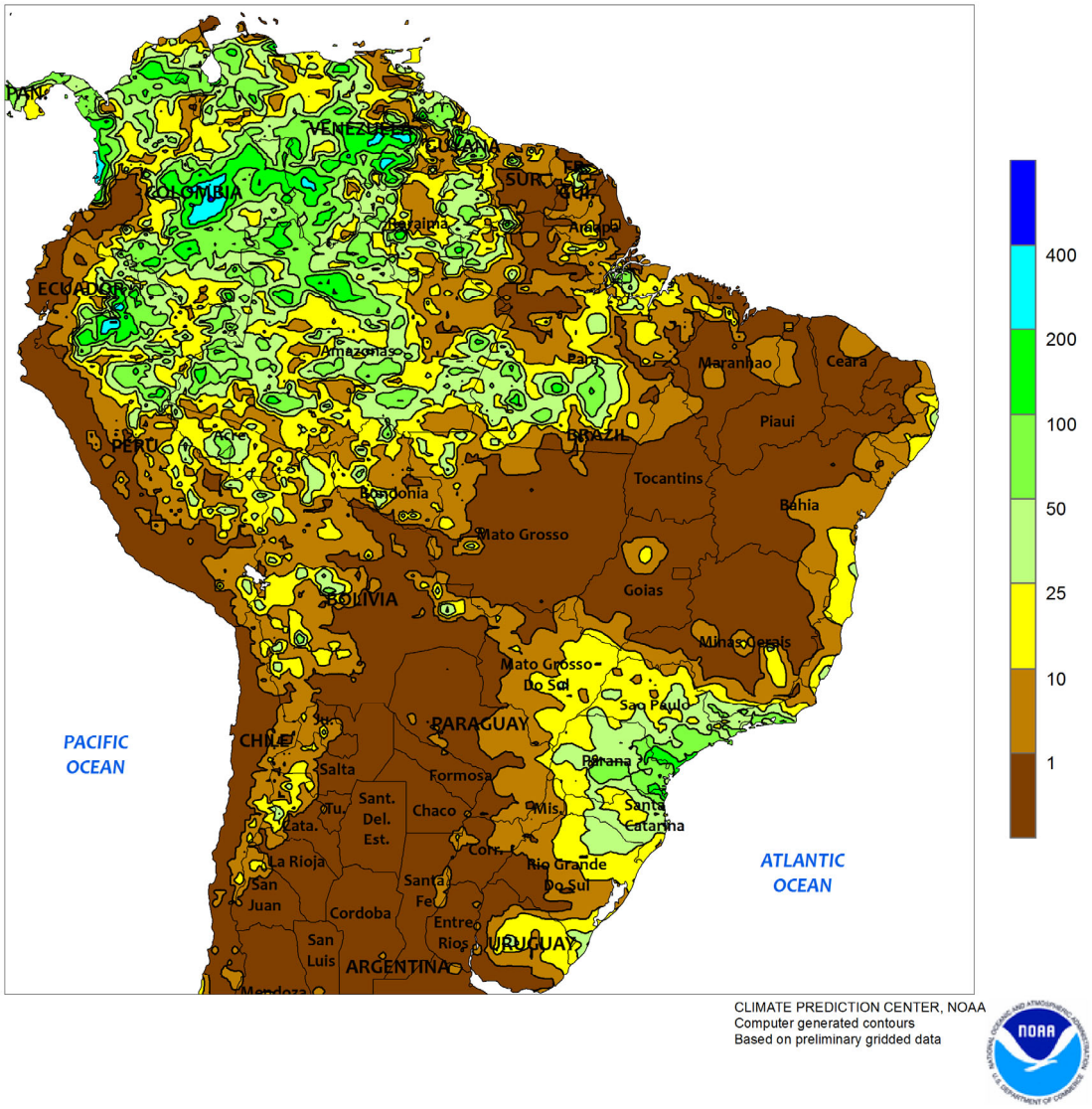


ARGENTINA

Dry, unseasonably cold weather dominated the region, aiding any remaining seasonal fieldwork while slowing development of winter grains. Weekly temperatures averaged 2 to 4°C below normal in most major farming areas, with nighttime lows dropping below -5°C in La Pampa and western Buenos Aires; in fact, freezes occurred for much of the week northward into southern sections of Cordoba, Santa Fe, and Entre Rios, until somewhat warmer weather returned at week's end. Daytime highs ranged from the middle 10s (degrees C) in La Pampa and Buenos Aires to the 30s near the border of Paraguay during the late-week warm up. Large sections of northern and central Argentina were completely dry during the week, and many western farming areas will be in need of rain once seasonal warming advances winter grain growth.

For additional information contact: mbrusberg@oce.usda.gov

BRAZIL
Total Precipitation (mm)
September 1 - 7, 2019



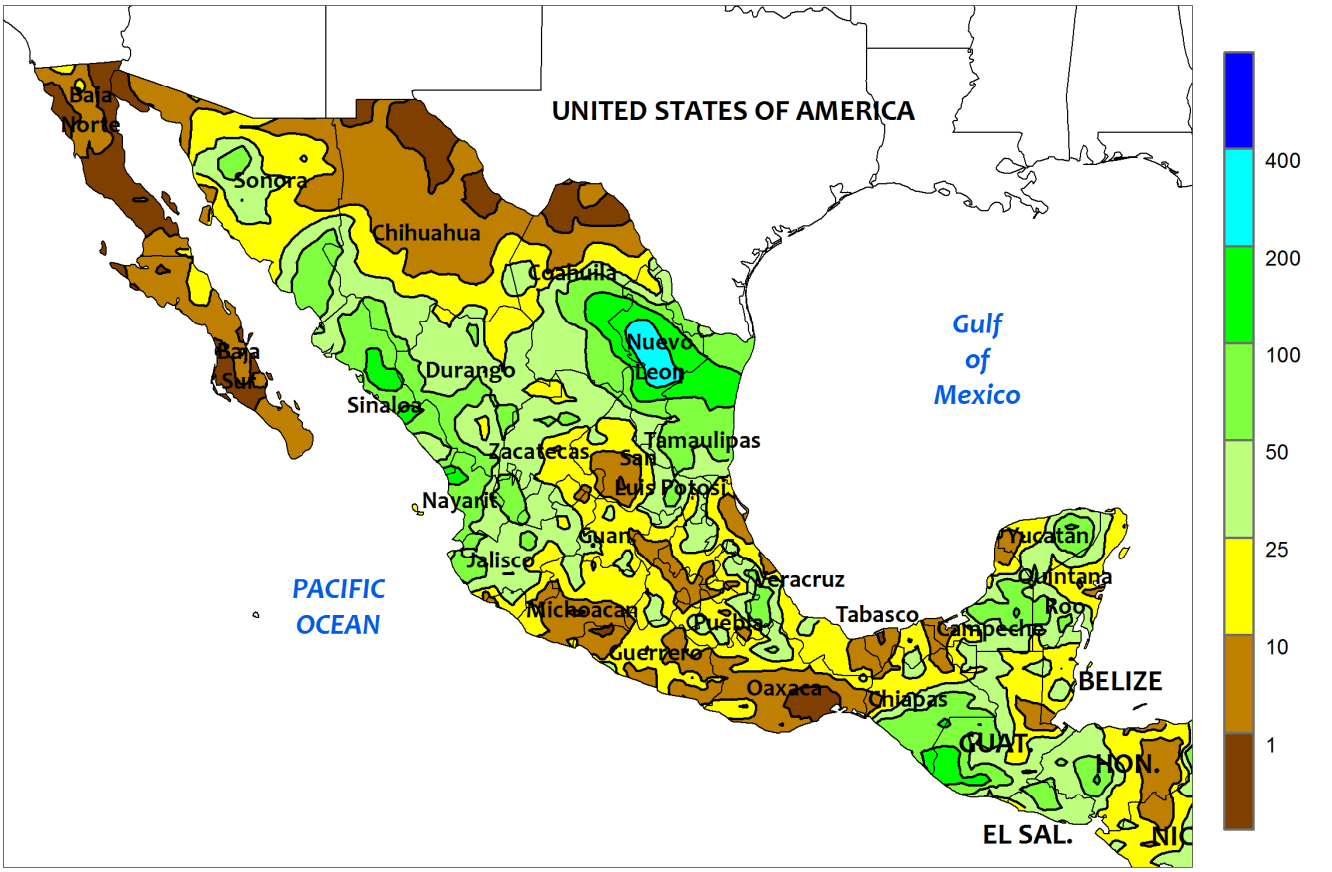
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

BRAZIL

Dry weather continued throughout much of central and northeastern Brazil, supporting the final stages of cotton harvesting and other fieldwork as soybean farmers await the start of the rainy season. Summer warmth accompanied the dryness, aiding drydown of mature crops. According to the government of Mato Grosso, cotton harvesting was nearly finished at 99 percent complete as of September 6. Farther south, showers (10-50 mm, locally higher) extended northward from northern Rio Grande do Sul to Sao Paulo, as well as nearby locations in Mato Grosso do Sul and southern Minas Gerais. While the southern rain was untimely for second-crop corn and early wheat harvesting, the moisture will ultimately be favorable for main-season summer crops that will be planted soon. In Parana, second-crop corn was reportedly 98 percent harvested as of September 2, while wheat was 12 percent harvested; additionally, first-crop corn was 3 percent planted. Meanwhile, wheat was 41 percent flowering to filling in Rio Grande do Sul as of September 5. Elsewhere in southern Brazil, the rain will likely contribute to early sugarcane development in Sao Paulo and may help to spur flowering of coffee in Minas Gerais. Cooler conditions prevailed in southern Brazil, with nighttime lows dropping below 5°C in Rio Grande do Sul, but no freeze was reported.

For additional information contact: mbrusberg@oce.usda.gov

MEXICO
Total Precipitation (mm)
September 1 - 7, 2019



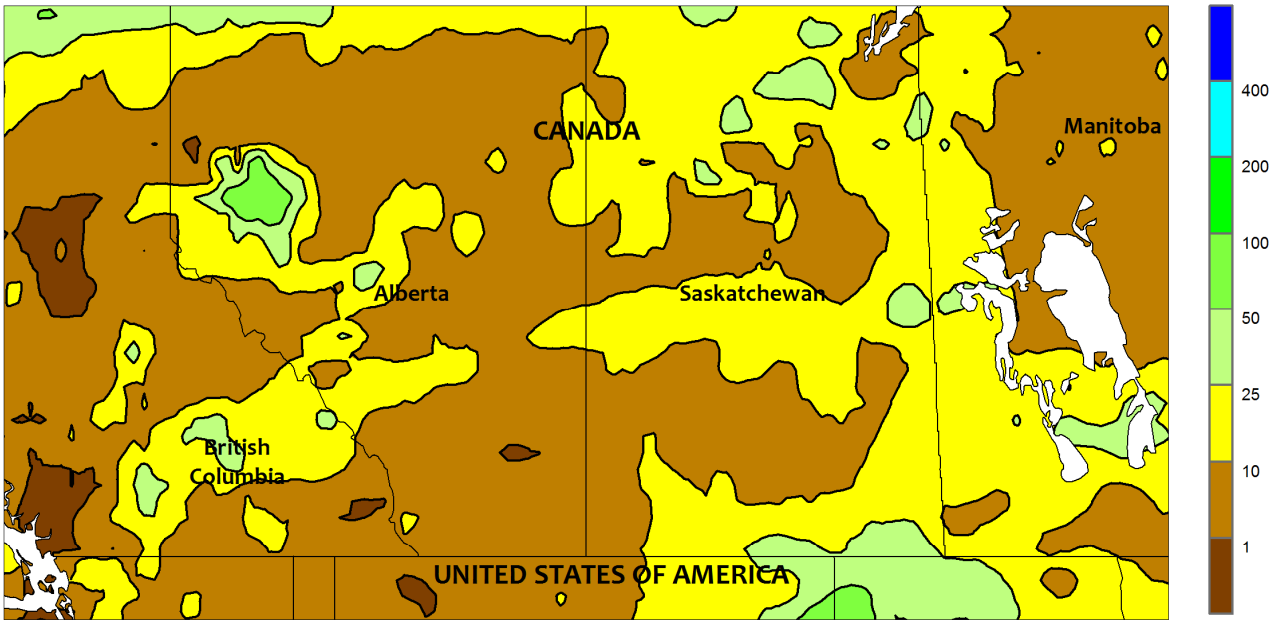
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

MEXICO

Tropical Storm Fernand generated much-needed rain throughout a large section of the northeast, while causing some localized flooding and wind damage. Fernand made landfall in Tamaulipas on September 4 with sustained winds of approximately 45 knots. The heaviest rain (greater than 200 mm) was concentrated over Nuevo Leon with amounts exceeding 50 mm as far west as central Coahuila. More moderate rain (10-50 mm or more) boosted moisture for sugarcane, soybeans, and other crops in northern Veracruz and neighboring locations in San Luis Potosi and southern Tamaulipas, but unseasonably drier conditions persisted from central Veracruz to Tabasco and western Campeche. Drier-than-normal weather also dominated a large area of south-central Mexico, including the southern Plateau (Jalisco to Puebla) and southern Pacific Coast (Michoacan through Oaxaca), where many locations recorded less than 10 mm. Additional rain would be welcome throughout southern Mexico for late development of rain-fed summer crops and to help replenish reservoir levels before the anticipated onset of seasonably drier weather in October. Elsewhere, monsoon showers (locally in excess of 50 mm) continued throughout the northwest, helping to replenish reservoirs used in irrigation of winter-grown crops, though the rainy season also typically ends soon in that part of the country.

For additional information contact: mbrusberg@oce.usda.gov

CANADIAN PRAIRIES
Total Precipitation (mm)
September 1 - 7, 2019



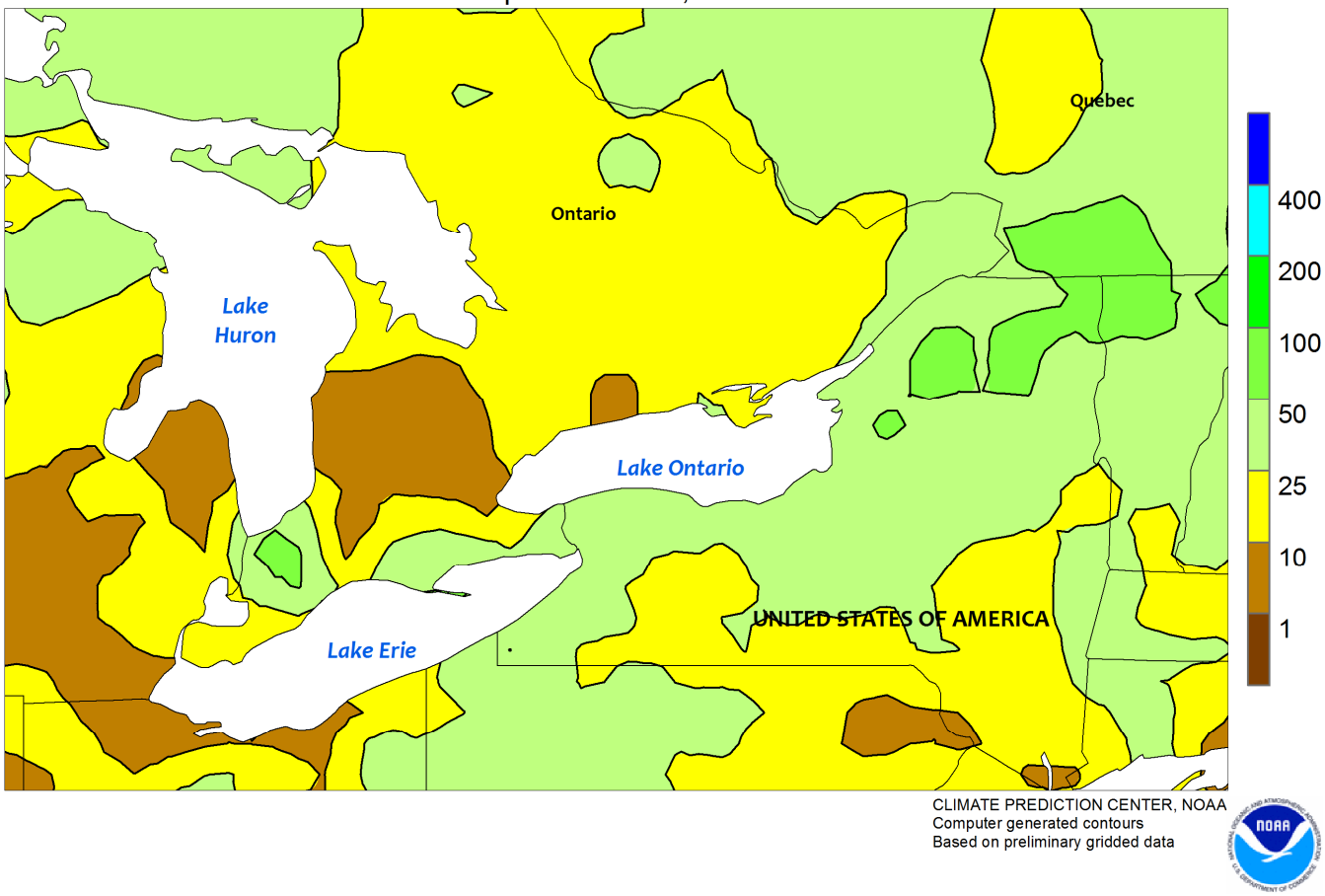
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary gridded data

CANADIAN PRAIRIES

Showers continued in eastern sections of the Prairies, bringing additional relief from earlier periods of drought but maintaining a slow pace of spring crop harvesting. Rainfall totaled 10 to 35 mm over most farming areas in Manitoba, southern Saskatchewan, and northern agricultural districts of Saskatchewan and Alberta. Weekly average temperatures were near to below normal in the aforementioned areas, with nighttime lows dropping below 5°C. In contrast, mostly dry, unseasonably warm weather (daytime highs reaching the upper 20s and lower 30s degrees C) aided maturation and harvesting of spring grains and oilseeds in and around southern Alberta. According to the government of Alberta, harvesting of all crops reached 29 percent complete in the southern region as of September 3, lagging the 5-year average by 2 points; spring wheat and canola were 23 and 8 percent harvested, respectively. In Manitoba, overall harvest progress was reportedly 38 percent complete versus the 3-year average of 51 percent. In addition, corn and soybeans reportedly needed additional time to mature in Manitoba's southern production areas, though the average date of the first autumn freeze is nearing and some Interlake districts have already recorded patchy frost.

For additional information contact: mbrusberg@oce.usda.gov

SOUTHEASTERN CANADA
Total Precipitation (mm)
September 1 - 7, 2019



SOUTHEASTERN CANADA

Cooler- and mostly drier-than-normal weather dominated Ontario, favoring corn and soybean harvesting though some areas required additional moisture for winter wheat establishment. Weekly temperatures averaged 1 to 2°C below normal, with nighttime lows dipping below 5°C in several areas and daytime highs limited to the lower and middle 20s (degrees C). Meanwhile, rainfall totaled below 5 mm in many locations in the western half of southern Ontario's agricultural districts. Somewhat higher amounts (greater than 10 mm) were recorded in eastern agricultural districts, providing needed moisture for wheat germination in areas where planting is typically underway. Wetter conditions (rainfall totaling more than 25 mm) prevailed in Quebec, though temperatures were generally in the same range as those recorded in Ontario. The average date of the first autumn freeze ranges from early to mid-September in northern and eastern production areas to mid-October in the warmer locations in Ontario.

For additional information contact: mbrusberg@oce.usda.gov

United States Department of Agriculture

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

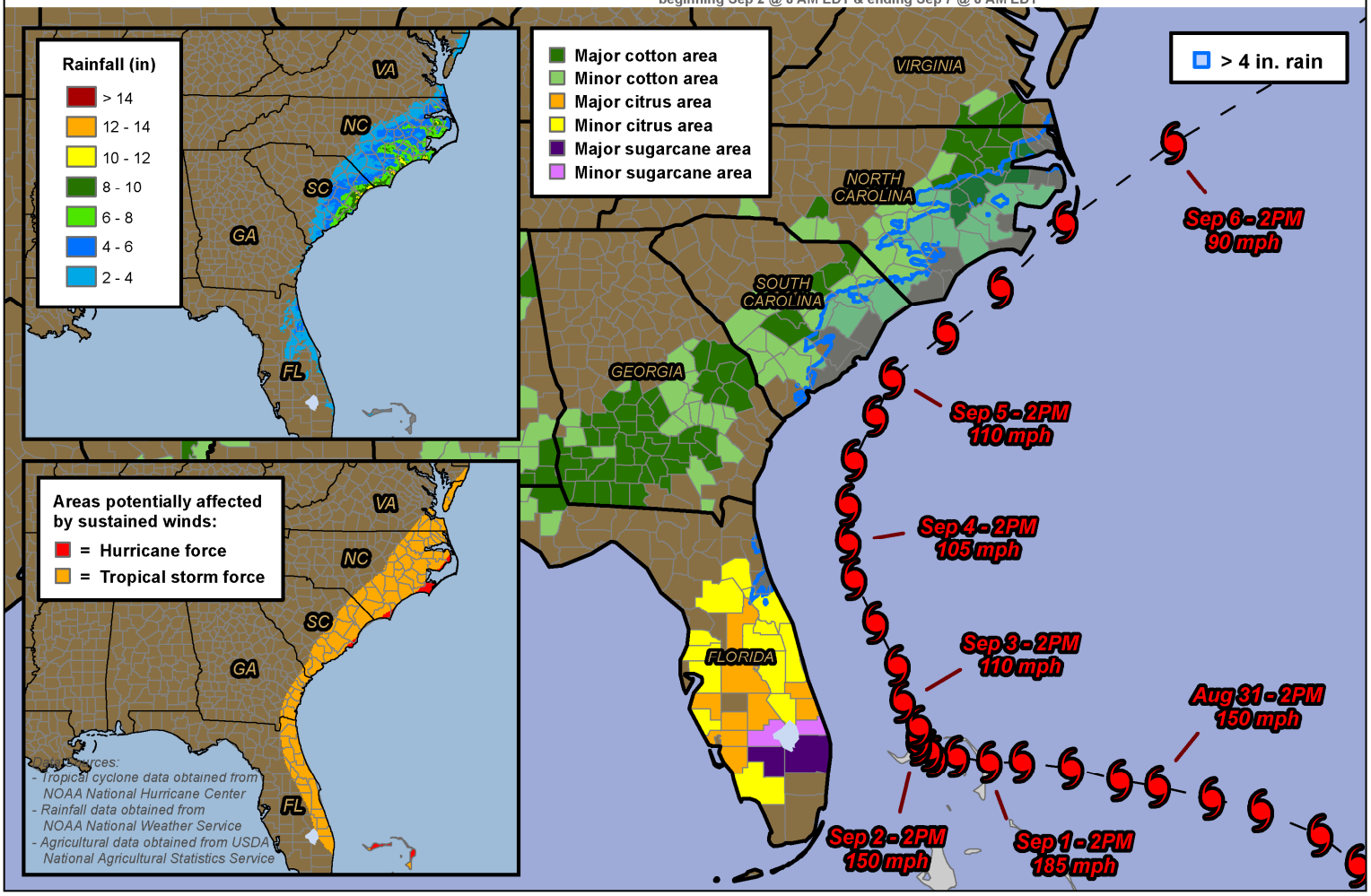
Hurricane Dorian

Storm-related Rainfall & Winds

September 2 - 7, 2019*

(Updated - Sep 9, 2019)

* beginning Sep 2 @ 8 AM EDT & ending Sep 7 @ 8 AM EDT



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Correspondence to the meteorologists should be directed to:
***Weekly Weather and Crop Bulletin*, NOAA/USDA, Joint Agricultural Weather Facility, USDA South Building, Room 4443B, Washington, DC 20250.**
Internet URL: http://www.usda.gov/oce/weather
E-mail address: *brippey@oce.usda.gov*

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U.S. DEPARTMENT OF AGRICULTURE
World Agricultural Outlook Board
Managing Editor..... ***Brad Rippey*** (202) 720-2397
Production Editor..... ***Brian Morris*** (202) 720-3062
International Editor..... ***Mark Brusberg*** (202) 720-2012
Agricultural Weather Analysts..... ***Harlan Shannon and Eric Luebehusen***

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Jannety Mosley (202) 720-7621

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Meteorologists..... ***David Miskus, Brad Pugh, Adam Allgood, and Rich Tinker***