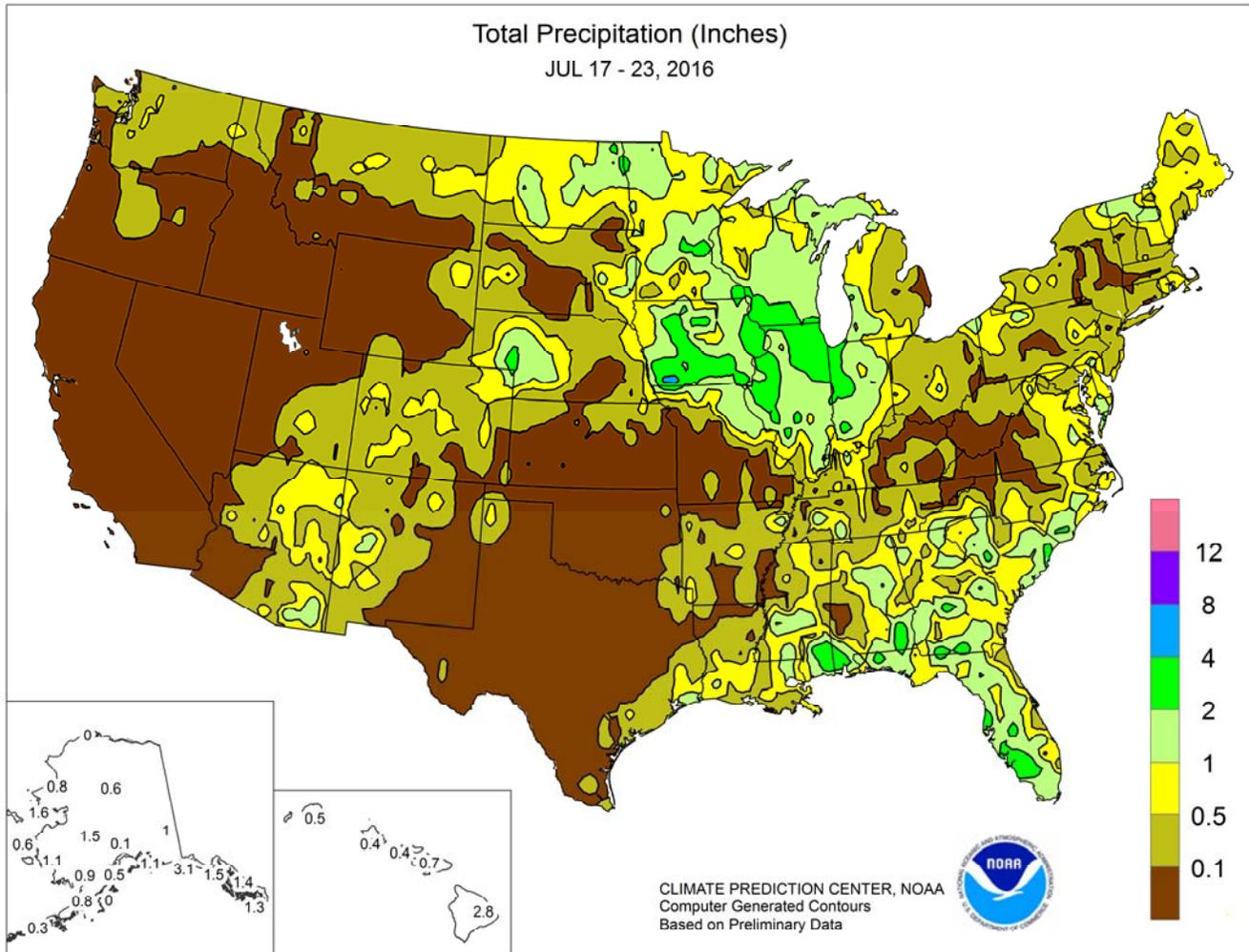


WEEKLY WEATHER AND CROP BULLETIN



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

July 17 – 23, 2016

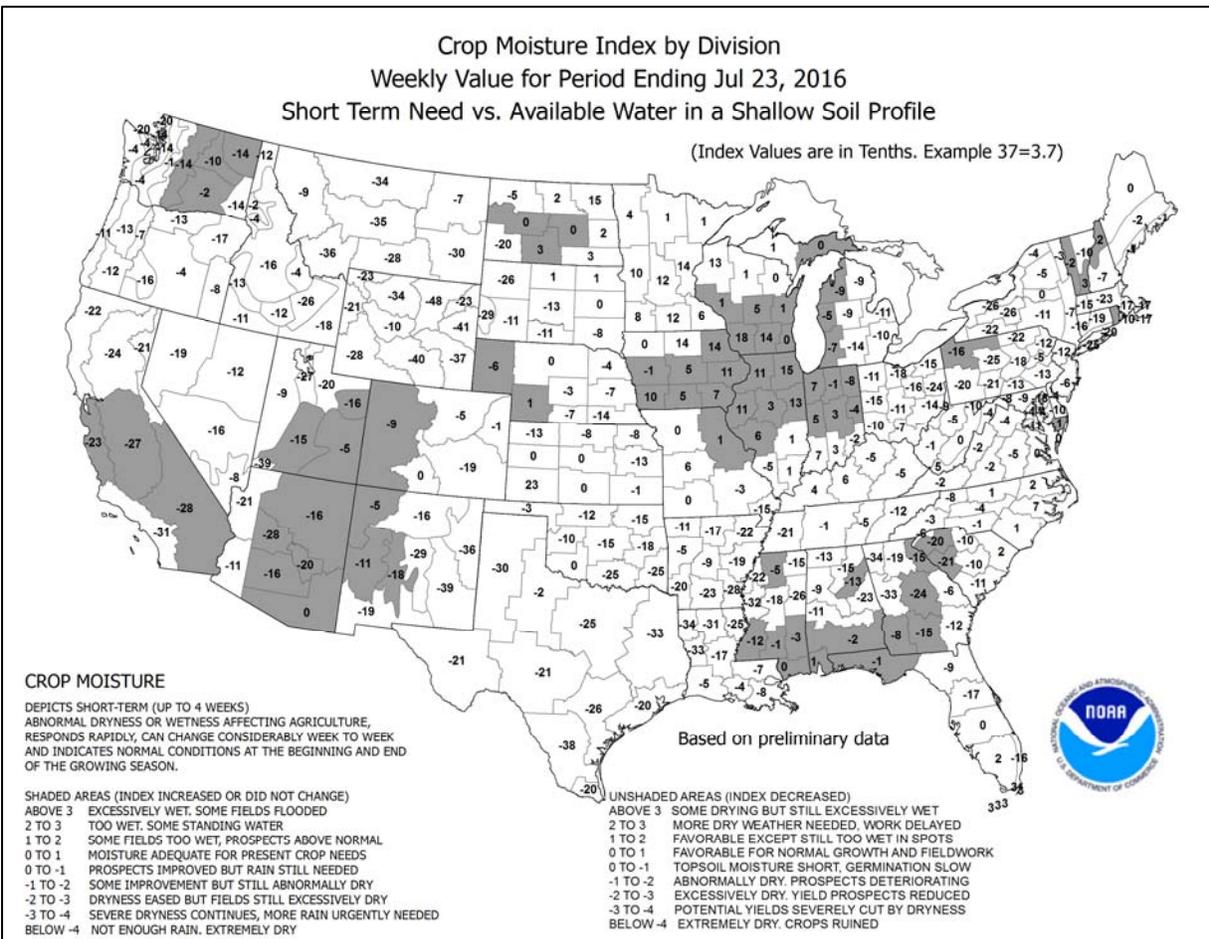
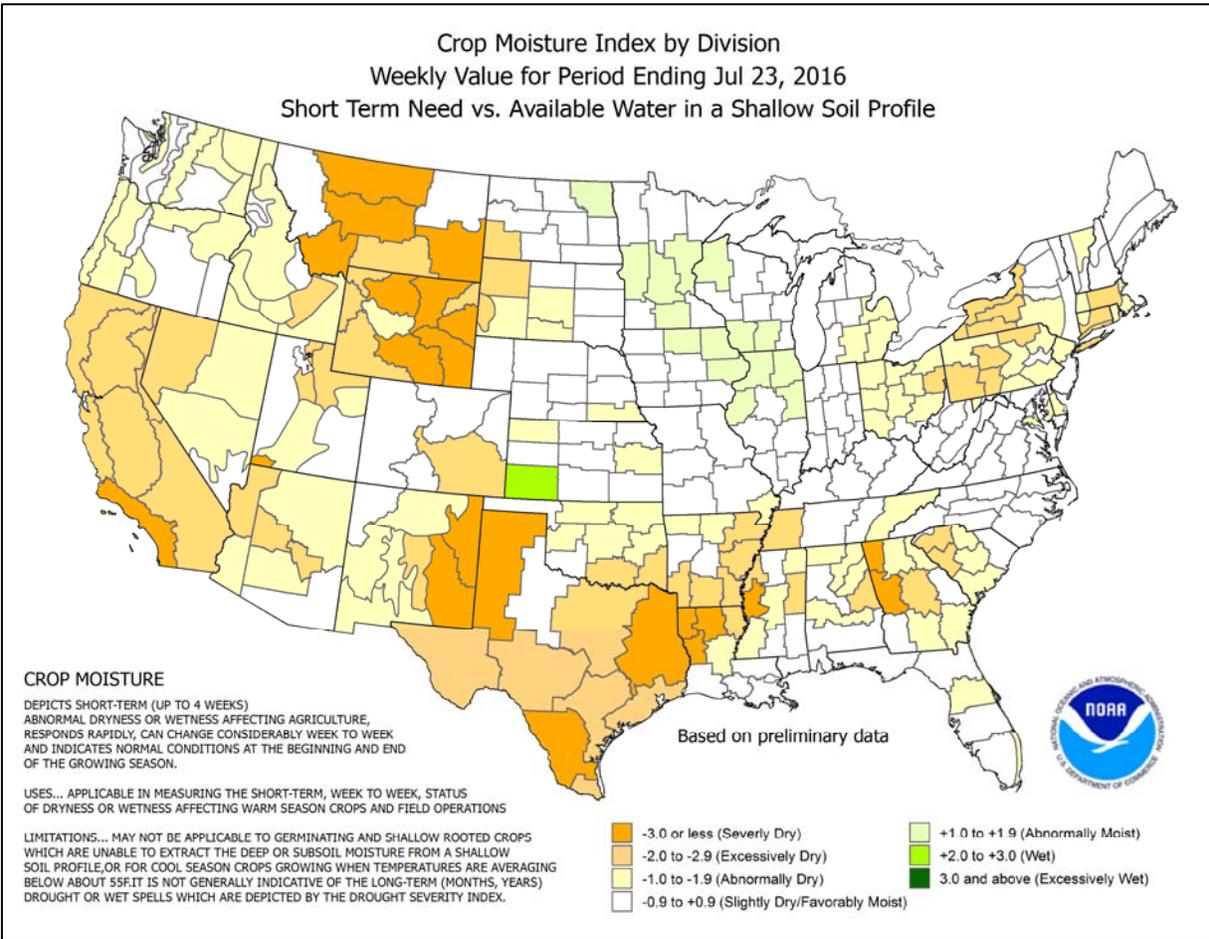
Highlights provided by USDA/WAOB

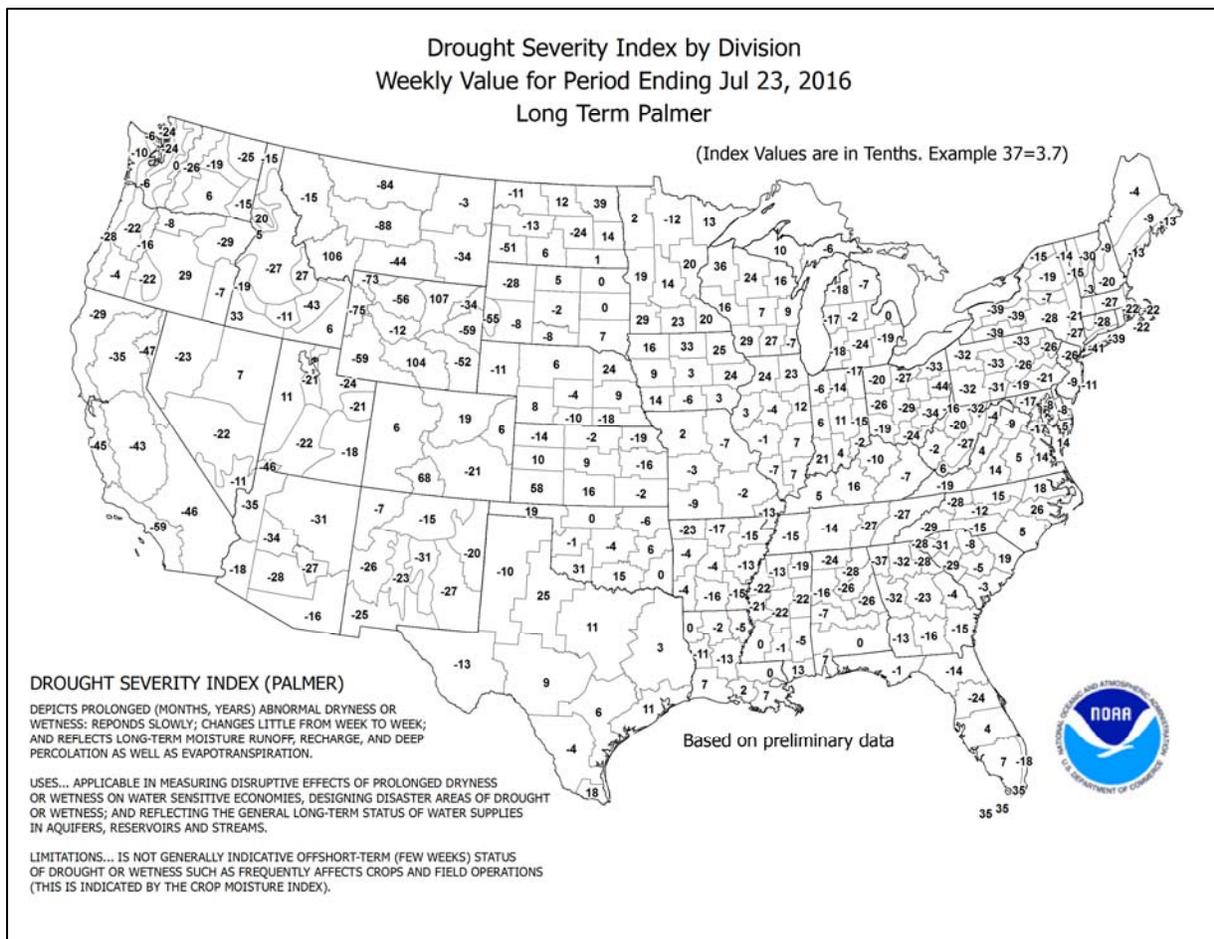
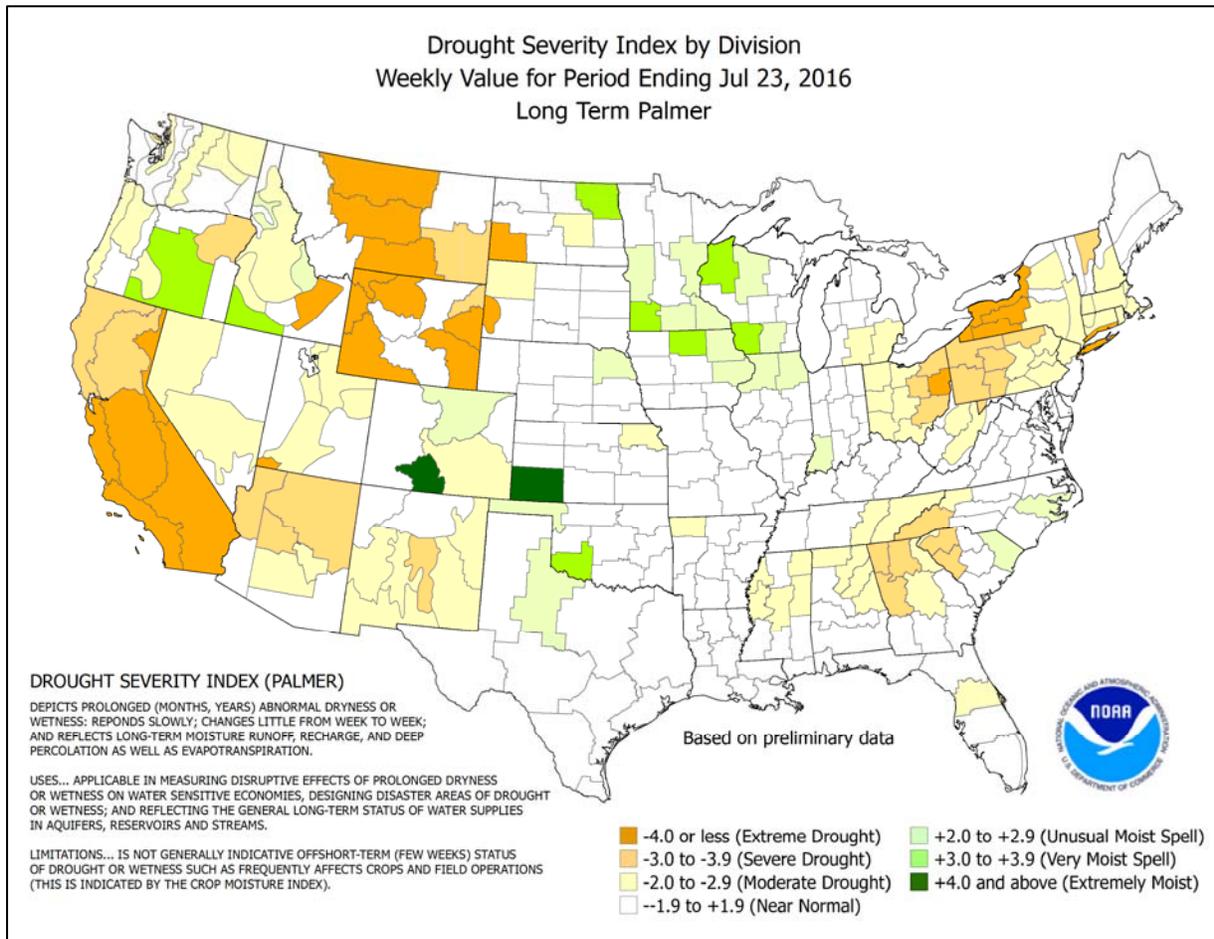
Despite building heat and humidity, parts of the Midwest received significant rain. Specifically, showers and thunderstorms produced as much as 2 to 4 inches of rain in the upper Mississippi Valley and environs. However, rain mostly bypassed some Midwestern locations, including the lower Great Lakes region. Outside of the Midwest, showers were generally light and scattered, although spotty rainfall provided local relief from hot weather in the Four Corners States and the lower Southeast. Most of the remainder of the country

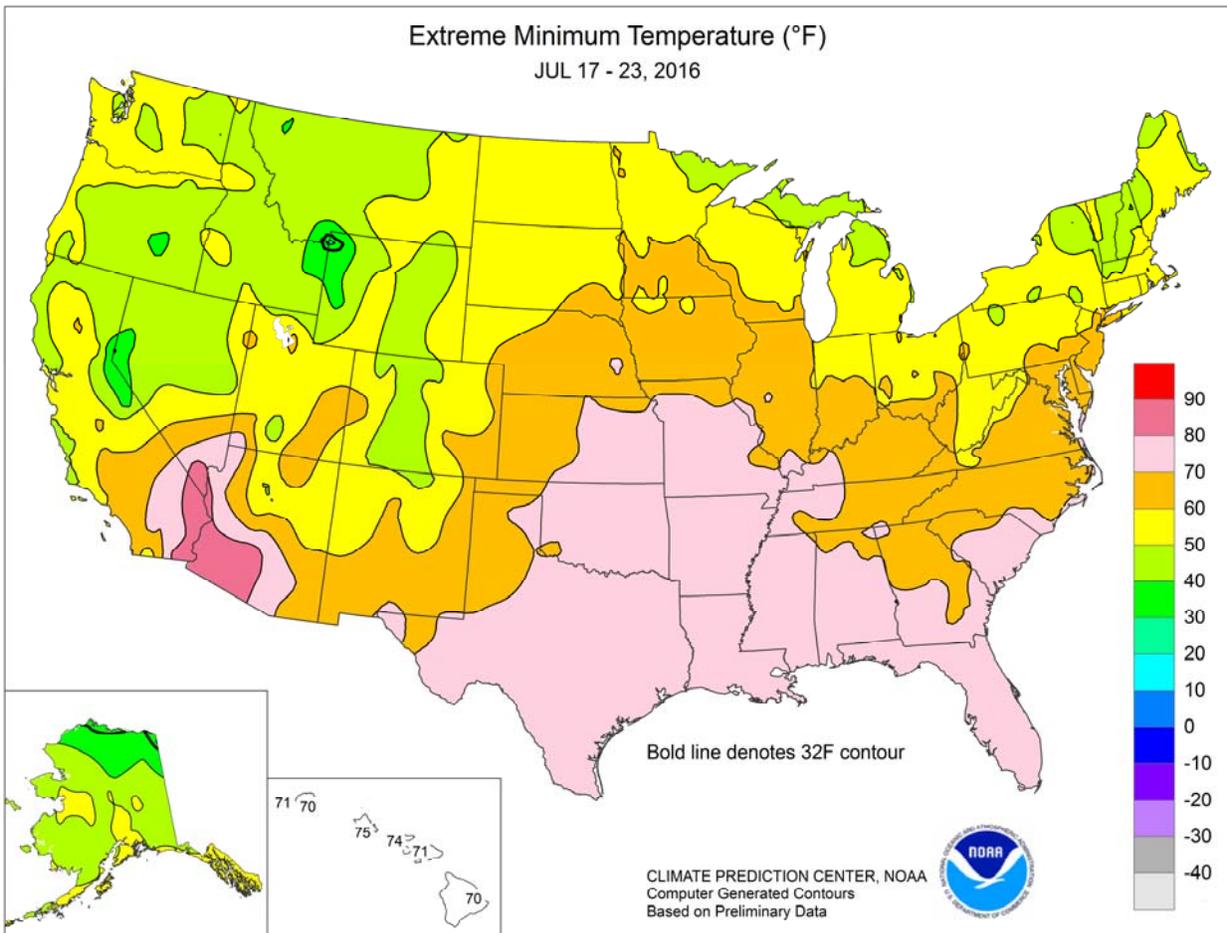
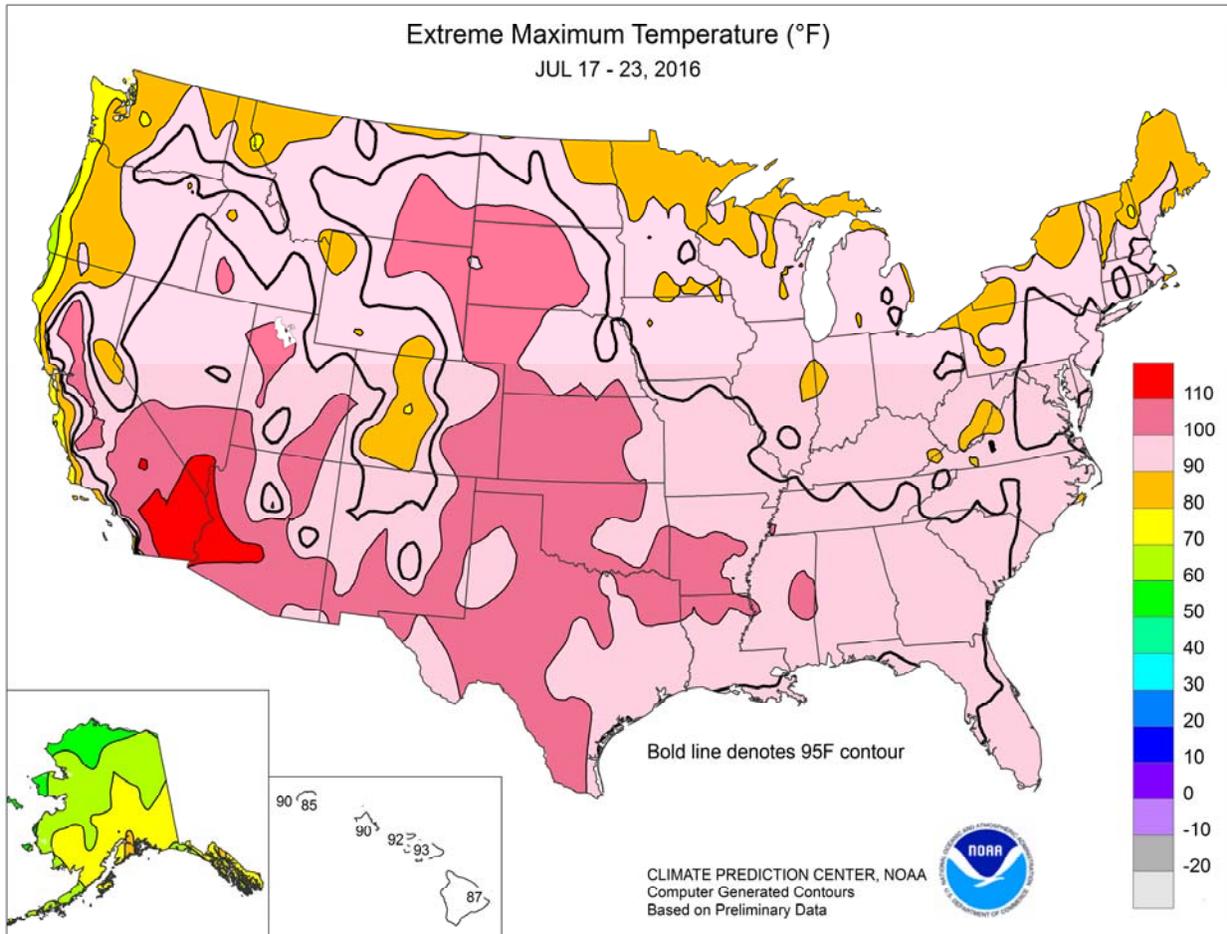
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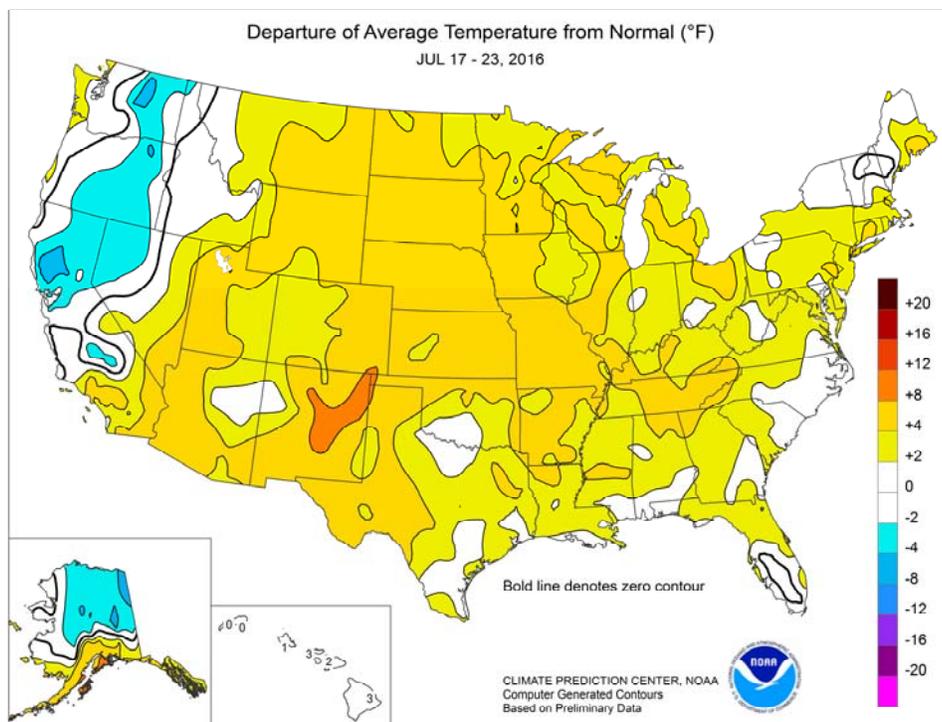


(Continued from front cover)

experienced hot, dry conditions, leading to an expansion of short-term drought in the **south-central U.S.** and fueling an increase in wildfire activity in parts of the **West**. In fact, below-average weekly temperatures were generally limited to **northern California** and the **Pacific Northwest**. In contrast, weekly temperatures averaged at least 5°F above normal in a vast area across portions of the **Southwest, central and southern Rockies, Plains, Midwest, and mid-South**. Readings averaged as much as 10°F above normal in the **southern Rockies** and neighboring areas. Temperatures above 100°F were common on the **Plains**, but **Midwestern** temperatures above 95°F were limited to the southwestern fringe of the major corn and soybean production areas. As a result, long-duration stress on livestock and rain-fed summer crops was mostly limited to the **Plains** and the **South**.

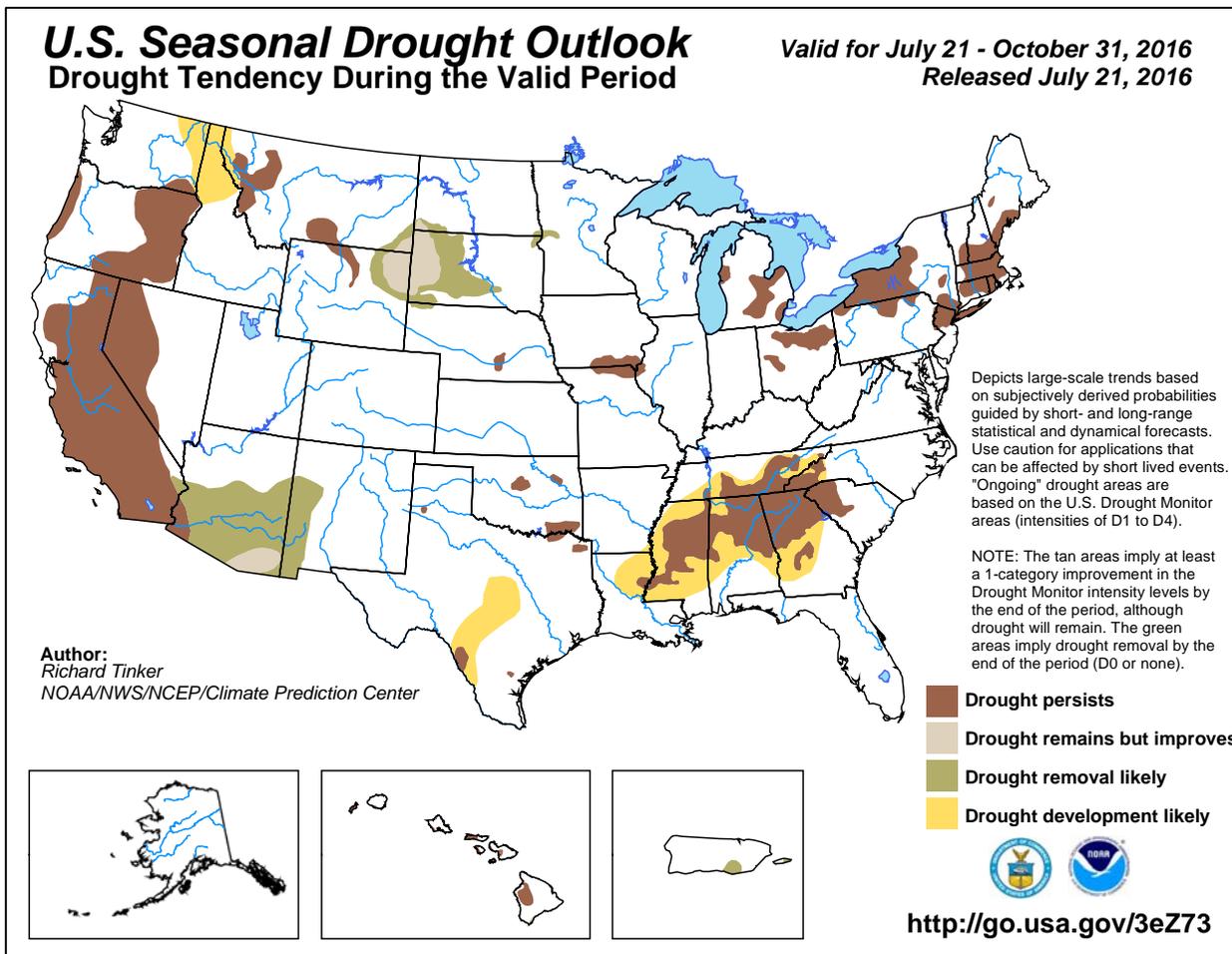
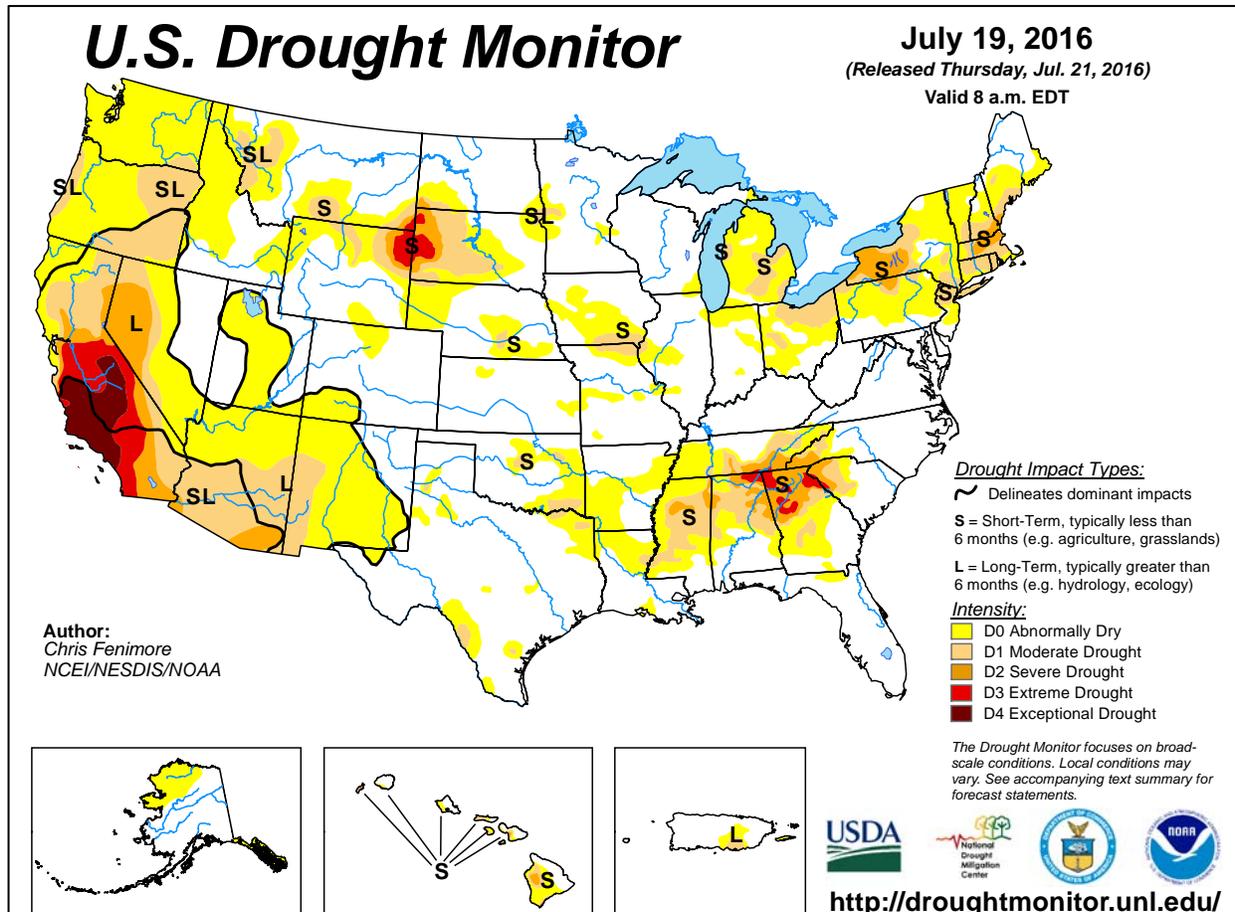
Except for several organized clusters of storms in the **Midwest**, showers were widely scattered. **Midwestern** daily-record totals included 2.71 inches (on July 18) in **Indianapolis, IN**, and 1.45 inches (on July 20) in **Dubuque, IA**. Occasional high winds accompanied the storms, with July 21 gusts clocked to 75 mph in **Ashland, WI**, and 69 mph in **Duluth, MN**. Showers were sporadically heavy in other locations, including **Jackson, MS** (3.08 inches on July 23), and **Beaumont-Port Arthur, TX** (2.43 inches on July 17). In **Arizona**, **Douglas** also netted a daily-record sum (1.75 inches) for July 17. However, rainfall deficits since the beginning of summer (June 1 – July 23) continued to mount in many **Southern** locations, including **Anniston, AL** (3.68 inches; 49 percent of normal); **Columbus, GA** (3.01 inches; 41 percent); and **Chattanooga, TN** (2.44 inches; 32 percent).

In addition, long-running streaks of above-normal daily average temperatures stretched to 60 days (May 25 – July 23) in **Meridian, MS**, and 44 days (June 10 – July 23) in **McAllen, TX**. **McAllen** also posted 22 consecutive days (June 29 – July 20) with highs of 100°F or greater. Meanwhile, mid- to late-week heat expanded beyond the **South** to encompass much of the country. In the **Northwest**, however, where cool weather prevailed, **Idaho Falls, ID**, notched a daily-record low of 39°F on July 17. Farther south, daily-record highs for July 17 climbed to 105°F in **Dalhart, TX**, and 102°F in **Clayton, NM**. In **Florida**, **Tampa** started the week with consecutive daily-record highs (96 and 95°F, respectively) on July 17-18. Farther north, triple-digit, daily-record highs in **South Dakota** for July 20 soared to 108°F in **Dupree** and 107°F in **Timber Lake**. On July 21, the dewpoint temperature in **Rochester, MN**, climbed to the 80-degree mark for the first time since July 19, 2011. Heat also returned to the **West**, where **Campo, CA**, logged a daily-record high (105°F) for July 21. Two days



later, record-setting highs for July 23 in **southern California** rose to 110°F in **Riverside** and 108°F in **Campo**. Elsewhere in **California**, the Sand fire near **Santa Clarita** was the largest of several new blazes, with more than 37,000 acres of vegetation and at least 18 homes burned by July 25. Meanwhile in **Salt Lake City, UT**, the low temperature stayed above the 80-degree mark for the first time on record—81°F on July 19. Toward week's end, heat continued across the **Plains** and **South** and reached the **East**. Triple-digit, daily-record highs for July 22 surged to 104°F in **Pueblo, CO**; 101°F in **Buffalo, WY**, and **Vicksburg, MS**; and 100°F in **Livingston, MT**. Farther east, record-setting highs for July 23 reached 99°F in **Williamsport, PA**; 98°F in **Detroit, MI**; and 97°F in **Bridgeport, CT**.

Cool weather invaded **northern and central Alaska**, but warmth lingered across the state's southern tier. Widespread showers accompanied the cooler conditions, while heavy precipitation overspread **southeastern Alaska** at week's end. **Kodiak** (78 and 77°F) and **Cold Bay** (66 and 67°F) opened the week with consecutive daily-record highs on July 17-18. Other **Alaskan** daily-record highs for July 18 included 82°F in **Juneau** and 79°F in **Anchorage**. Selected weekly rainfall totals reached 1.58 inches in **Nome** and 1.50 inches in **McGrath**. In **southeastern Alaska**, July 21-24 rainfall totaled 3.86 inches at **Annex Creek** and 3.24 inches in **Yakutat**. Farther south, the late-week arrival of Tropical Storm Darby across the **Hawaiian Islands** led to heavy surf, gusty winds, and significant rainfall. From July 22-24, peak wind gusts on the **Big Island** were clocked to 61 mph at the **Kohala Ranch** and 53 mph at the **Waimea-Kohala Airport**. The **Lanai Airport** reported a gust to 48 mph. Meanwhile, some of the heaviest rain fell on **Oahu**, where several locations received in excess of 10 inches of rain. In fact, 24-hour totals on July 24-25 reached 10.56 inches in **Luluku** and 8.68 inches at the **Manoa Lyon Arboretum**.



July Heat Builds Across the U.S.

The following information was compiled by USDA/OCE from information provided by USDA/NASS and DOC/NOAA/NWS.

Following the warmest U.S. June on record, according to the National Centers for Environmental Information, cool air settled across the Midwest and Northeast in early July. For example, the 9th was the coolest July day in 7 years in parts of New England, with high temperatures that day reaching just 59°F in Portland, ME, and 63°F in Concord, NH. In the Midwest, plenty of rain accompanied the early-month cool spell.

However, hot weather has prevailed for much of the month—both during the day and at night—from the southern Plains into the Southeast. Starting on July 2, New Orleans, LA, recorded minimum temperatures of 80°F or higher on 6 consecutive days. New Orleans’ previous all-time record of 5 days had been set from July 30 – August 3, 2010. On July 5, all-time records for highest minimum temperature were tied or broken in Louisiana locations such as Lake Charles (83°F) and Baton Rouge (82°F), while Houston, TX, tied a July record with a low of 83°F.

In Mississippi, Meridian has reported an above-normal daily average temperature each day starting May 25. In Texas, McAllen’s spell of above-normal daily average temperatures began on June 10. Farther west, Lubbock, TX—with a high of 109°F on July 7—tied a monthly record originally set on July 10, 1940, and experienced its hottest day since June 26, 2011, when the temperature peaked at 112°F. Dalhart, TX, tied a monthly record with highs of 107°F on July 7, 10, and 11. Previously, Dalhart had reached 107°F on July 9, 2011. Elsewhere in Texas, Borger (110°F) and Amarillo (108°F) shattered monthly record highs on July 11. In New Mexico, all-time records were tied or broken on July 13 in locations such as San Jon (111°F; previously, 110°F on June 24, 1990) and Portales (109°F; previously, 109°F on June 25, 2011).

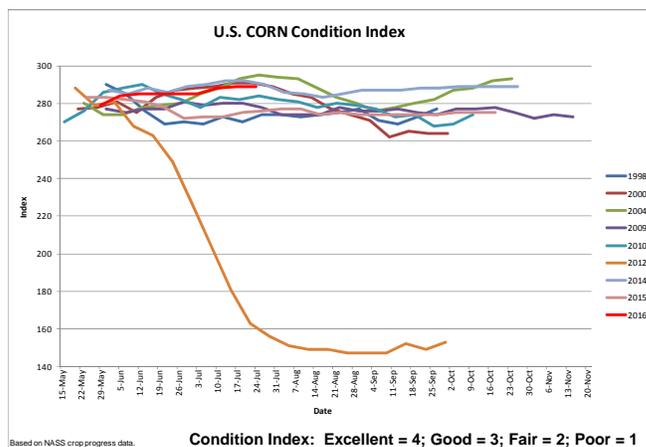
During the third full week of July, heat spread northward across the Plains and briefly affected the Midwest. Despite several days of heat and high humidity, adverse Midwestern conditions were less extreme and of much shorter duration than those observed across the South. In addition, occasional Midwestern showers helped to offset the effects of the hot spell, allowing corn and soybean conditions to hold mostly steady during the week ending July 24. In fact, U.S. corn has been rated higher in late July only three times in the last two decades: 2000, 2004, and 2014.

Selected All-Time-Record High Temperatures (°F)

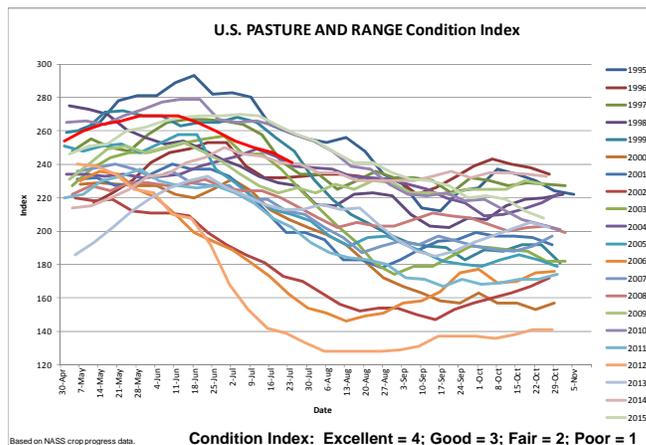
Location	High	Date	Previous Record
San Jon, NM	111	July 13	110 on June 24, 1990
Portales, NM	109	July 13	109 on June 25, 2011

Selected July Record-High Temperatures (°F) in Texas

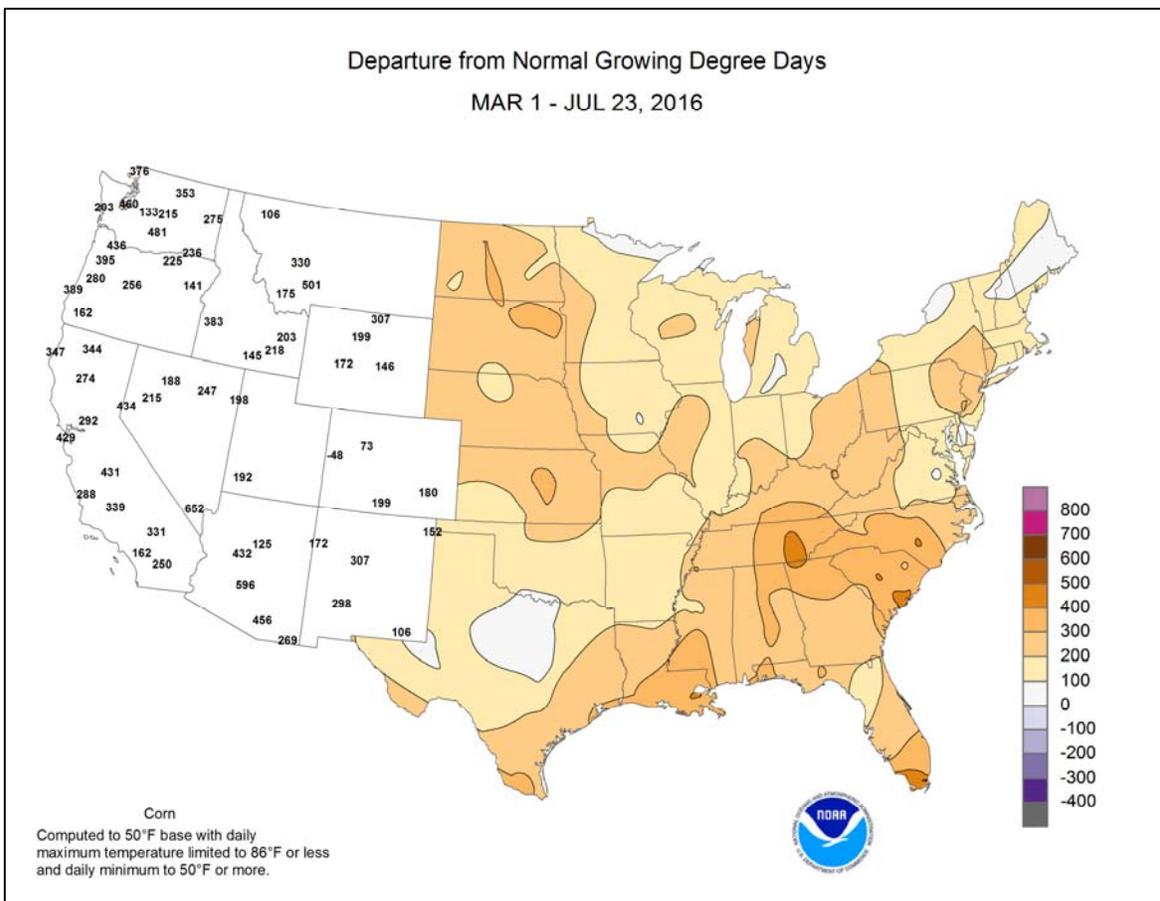
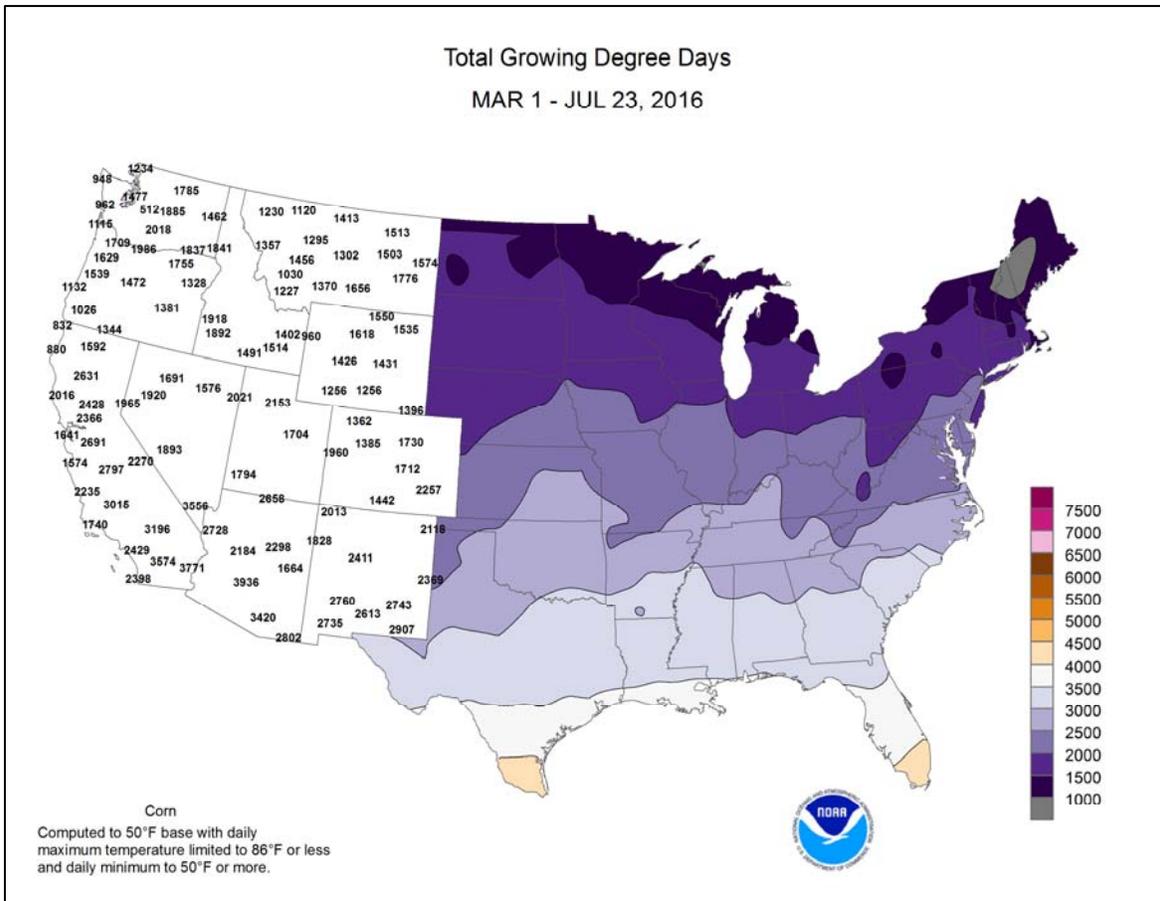
Location	High	Date	Previous
Lubbock	109	July 7	109 on July 10, 1940
Amarillo	108	July 11	106 on July 9, 1940, 2009
Dalhart	107	July 7, 10, 11	107 on July 9, 2011

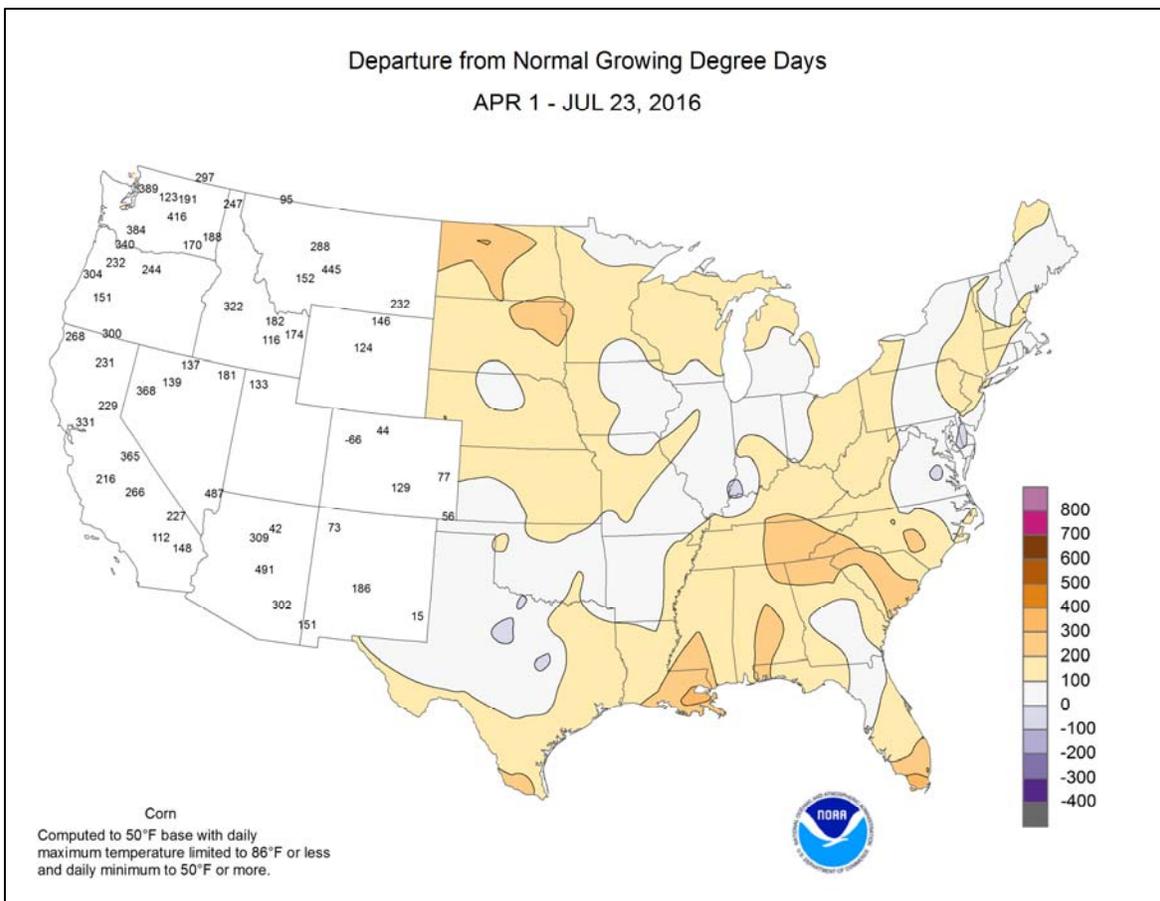
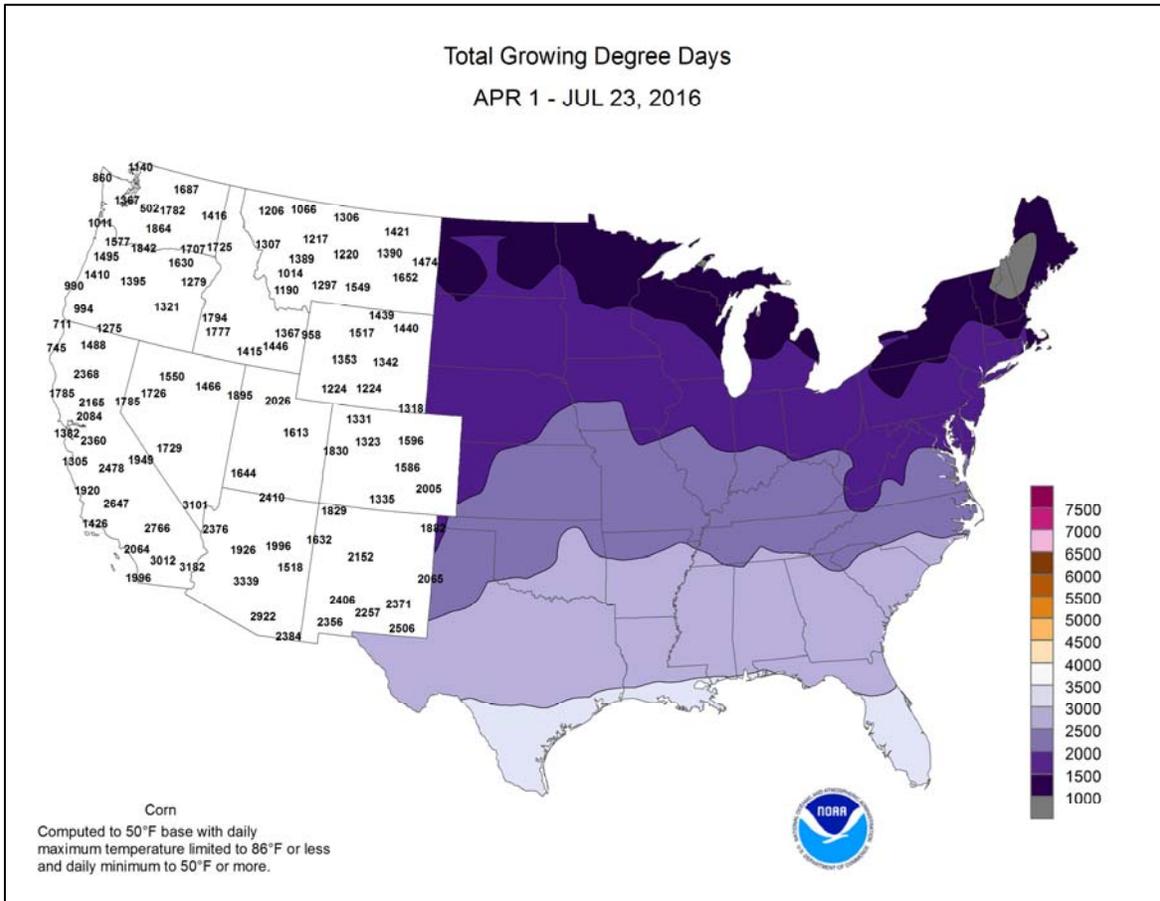


The U.S. Corn Condition Index (CCI) is shown for years when late-July conditions were better than those observed this year (2000, 2004, and 2014) and/or years when the final CCI was 275 or greater (1998, 2009, 2010, and 2015). The worst modern year for corn condition, 2012, is shown for reference.



U.S. rangeland and pastures have begun their normal seasonal decline in condition (see red line in chart, above). Still, more than half (53%) of the rangeland and pastures were rated in good to excellent condition on July 24, 2016. The overall U.S. condition has been better in late July only four times in the last 22 years: 1995, 1999, 2010, and 2015. Similar conditions to those observed in late-July 2016 were noted in 2004 and 2014.





National Weather Data for Selected Cities

Weather Data for the Week Ending July 23, 2016

Data Provided by Climate Prediction Center

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION								RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
	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 JUN 1	PCT. NORMAL SINCE JUN 1	TOTAL, IN, SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. °F		PRECIP		
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
AL BIRMINGHAM	94	75	98	73	84	3	1.78	0.59	1.29	9.70	128	31.31	95	94	49	7	0	2	1	
AL HUNTSVILLE	97	73	100	70	85	5	0.37	-0.63	0.20	8.73	115	27.02	78	85	46	7	0	3	0	
AL MOBILE	91	74	95	73	83	1	3.18	1.66	1.56	12.88	132	41.04	105	94	70	5	0	4	3	
AK MONTGOMERY	96	75	99	74	85	3	1.35	0.14	1.32	7.80	95	30.17	90	89	52	7	0	2	1	
AK ANCHORAGE	74	58	79	55	66	7	0.55	0.16	0.40	2.91	136	5.07	94	80	57	0	0	2	0	
AK BARROW	42	32	50	30	37	-4	0.00	-0.20	0.00	0.84	98	2.18	154	89	72	0	4	0	0	
AK FAIRBANKS	64	54	71	50	59	-3	1.77	1.38	0.80	6.29	241	8.17	177	96	86	0	0	6	2	
AK JUNEAU	66	55	82	51	60	3	1.46	0.52	0.90	5.53	88	28.32	113	90	79	0	0	4	1	
AK KODIAK	75	60	80	54	67	12	0.03	-0.84	0.03	4.59	54	47.36	120	76	58	0	0	1	0	
AK NOME	55	49	58	47	52	-1	1.58	1.08	0.56	2.56	101	5.64	91	99	92	0	0	7	1	
AZ FLAGSTAFF	82	53	87	49	67	0	0.52	-0.08	0.25	2.10	108	9.12	80	85	31	0	0	4	0	
AZ PHOENIX	109	87	112	84	98	5	0.36	0.12	0.36	0.37	54	2.25	60	41	26	7	0	1	0	
AZ PRESCOTT	91	67	97	60	79	5	0.40	-0.32	0.23	0.99	45	4.77	53	71	25	4	0	3	0	
AZ TUCSON	103	78	107	74	90	4	0.37	-0.15	0.25	2.79	182	5.32	112	49	28	7	0	2	0	
AR FORT SMITH	97	77	101	75	87	4	0.28	-0.41	0.28	5.51	82	22.72	91	89	44	7	0	1	0	
AR LITTLE ROCK	99	80	105	77	89	6	0.59	-0.12	0.35	8.40	129	37.59	130	85	45	7	0	4	0	
CA BAKERSFIELD	98	69	101	66	83	-1	0.00	0.00	0.00	0.00	0	4.10	89	44	25	7	0	0	0	
CA FRESNO	98	65	101	63	81	-1	0.00	0.00	0.00	0.06	26	9.08	116	53	29	7	0	0	0	
CA LOS ANGELES	80	67	84	64	73	4	0.00	0.00	0.00	0.00	0	6.00	64	79	58	0	0	0	0	
CA REDDING	94	63	106	59	79	-3	0.00	0.00	0.00	2.46	357	30.63	140	57	32	6	0	0	0	
CA SACRAMENTO	90	57	102	56	74	-2	0.00	0.00	0.00	0.00	0	12.75	107	80	21	4	0	0	0	
CA SAN DIEGO	78	66	85	65	72	1	0.00	0.00	0.00	0.00	0	5.01	66	90	72	0	0	0	0	
CA SAN FRANCISCO	70	55	72	54	63	0	0.00	0.00	0.00	0.00	0	12.44	93	84	65	0	0	0	0	
CA STOCKTON	93	57	102	54	75	-3	0.00	0.00	0.00	0.00	0	12.12	135	68	36	5	0	0	0	
CO ALAMOSA	87	50	89	43	68	4	0.02	-0.19	0.02	0.82	69	5.19	155	77	37	0	0	1	0	
CO CO SPRINGS	94	63	96	59	78	8	0.31	-0.34	0.13	2.65	63	10.58	107	66	18	7	0	4	0	
CO DENVER INTL	95	64	99	58	79	6	0.28	-0.26	0.17	2.68	83	10.50	126	64	20	7	0	2	0	
CO GRAND JUNCTION	93	67	100	65	80	3	0.38	0.23	0.34	0.76	95	5.73	121	55	31	6	0	2	0	
CO PUEBLO	102	66	104	62	84	8	0.09	-0.39	0.09	1.33	50	8.51	122	60	21	7	0	1	0	
CT BRIDGEPORT	90	71	97	64	80	6	0.53	-0.32	0.53	4.84	77	20.38	81	73	46	4	0	1	1	
CT HARTFORD	92	63	99	54	78	4	0.10	-0.71	0.09	3.23	50	17.17	67	76	33	5	0	2	0	
DC WASHINGTON	93	73	98	70	83	4	0.91	0.06	0.47	6.21	107	21.55	99	87	44	6	0	2	0	
DE WILMINGTON	91	70	95	66	80	3	1.14	0.16	1.14	6.77	100	24.63	100	89	45	4	0	1	1	
DE DAYTONA BEACH	93	75	93	73	84	2	0.08	-1.02	0.08	4.28	45	24.28	97	99	55	7	0	1	0	
FL JACKSONVILLE	94	72	96	69	83	1	0.00	-1.31	0.00	4.70	48	19.16	70	100	50	7	0	0	0	
FL KEY WEST	88	78	90	76	83	-2	2.35	1.68	0.84	4.07	59	15.72	87	87	73	3	0	7	2	
FL MIAMI	91	78	92	76	84	0	1.44	0.28	0.80	12.45	97	32.84	116	84	61	6	0	5	2	
FL ORLANDO	93	75	94	73	84	2	1.47	-0.07	0.72	10.26	80	30.35	111	88	65	7	0	5	2	
FL PENSACOLA	90	79	93	77	85	2	0.27	-1.56	0.12	9.57	77	33.83	91	88	60	4	0	3	0	
FL TALLAHASSEE	95	75	98	74	85	3	0.61	-1.21	0.44	15.26	119	38.65	102	89	65	7	0	4	0	
FL TAMPA	93	76	96	74	85	2	0.68	-0.76	0.52	13.41	131	29.31	129	90	54	6	0	3	1	
FL WEST PALM BEACH	92	81	93	76	86	3	1.09	-0.15	0.49	6.02	49	27.39	88	77	61	7	0	5	0	
GA ATHENS	97	70	99	68	84	4	0.18	-0.81	0.10	4.44	62	19.61	69	95	58	7	0	3	0	
GA ATLANTA	95	73	98	70	84	4	0.44	-0.75	0.40	5.31	71	24.45	81	90	52	7	0	3	0	
GA AUGUSTA	95	70	98	69	83	2	0.03	-0.86	0.02	3.92	55	22.65	86	94	53	7	0	2	0	
GA COLUMBUS	96	73	99	71	85	3	0.00	-1.18	0.00	3.01	42	22.45	76	93	40	7	0	0	0	
GA MACON	96	72	98	70	84	3	0.94	-0.04	0.46	3.41	51	21.37	78	92	47	7	0	3	0	
GA SAVANNAH	95	74	97	73	85	3	0.34	-1.00	0.10	7.38	75	30.05	110	88	60	7	0	4	0	
HI HILO	85	73	87	70	79	3	2.78	0.30	1.61	17.59	115	42.53	62	90	75	0	0	5	2	
HI HONOLULU	87	76	90	75	82	1	0.45	0.34	0.32	0.87	119	4.92	51	74	66	1	0	2	0	
HI KAHULUI	89	73	93	71	81	2	0.65	0.54	0.51	1.67	321	9.40	83	86	74	3	0	5	1	
HI LIHUE	84	73	85	70	79	0	0.49	0.00	0.37	2.41	73	8.84	43	91	81	0	0	6	0	
ID BOISE	93	61	100	56	77	2	0.00	-0.07	0.00	0.46	45	4.98	66	43	24	6	0	0	0	
ID LEWISTON	89	59	100	55	74	0	0.02	-0.12	0.01	2.58	154	9.39	121	66	36	2	0	2	0	
ID POCATELLO	92	53	97	46	73	3	0.00	-0.14	0.00	0.19	14	7.00	92	53	18	6	0	0	0	
IL CHICAGO/O'HARE	89	69	91	61	79	5	2.40	1.64	1.11	7.37	121	21.00	109	86	56	4	0	4	2	
IL MOLINE	89	70	94	67	80	4	2.54	1.67	1.08	11.21	148	21.21	98	89	68	3	0	5	2	
IL PEORIA	90	71	93	67	80	5	1.69	0.79	0.48	8.44	123	17.55	85	96	66	2	0	5	0	
IL ROCKFORD	87	68	94	64	78	5	3.40	2.53	1.64	7.15	91	19.21	93	92	63	1	0	4	2	
IL SPRINGFIELD	91	73	94	71	82	5	1.88	1.11	0.52	7.20	114	20.79	102	94	60	6	0	5	1	
IN EVANSVILLE	90	72	94	68	81	2	0.67	-0.16	0.30	11.03	159	32.78	123	93	74	4	0	3	0	
IN FORT WAYNE	88	65	92	55	76	2	0.45	-0.32	0.26	6.10	91	20.29	97	92	54	2	0	2	0	
IN INDIANAPOLIS	88	71	90	65	79	3	2.76	1.77	2.71	9.90	134	27.40	116	92	59	3	0	3	1	
IN SOUTH BEND	87	64	91	54	76	3	1.61	0.82	1.18	5.67	81	20.78	98	91	60	1	0	4	1	
IA BURLINGTON	88	70	92	65	79	2	2.05	1.06	1.22	7.47	96	18.32	85	100	72	2	0	3	2	
IA CEDAR RAPIDS	85	68	92	64	77	2	2.16	1.28	1.78	12.08	161	22.60	119	100	78	1	0	6	2	
IA DES MOINES	90	73	97	67	81	5	4.08	3.17	3.53	8.46	111	19.70	99	89	71	4	0	4	1	
IA DUBUQUE	84	67	91	63	75	2	4.10	3.29	1.45	13.65	202	24.60	125	96	79	1	0	5	3	
IA SIOUX CITY	92	74	97	66	83	8	0.95	0.23	0.91	3.57	59	19.30	122	88	69	4	0	3	1	
IA WATERLOO	86	69	93	64	78	4	2.16	1.25	0.98	12.98	163	23.41	121	92	81	1	0	3	2	
KS CONCORDIA	96	75	100	71	86	6	0.76	-0.20	0.37	5.00	71	17.87	102	76	50	7	0	3	0	
KS DODGE CITY	98	70	101	69	84	4	0.00	-0.72	0.00	7.53	138	18.65	135	81	31	7	0	0	0	
KS GOODLAND	100	67	104	64	84	9	0.38	-0.42	0.18	2.96	50	10.32	80	79	35	7	0	3	0	
KS TOPEKA	96	77	100	72	86	7	0.00	-0.82	0.00	6.89	89	26.20	128	81	52	7	0	0	0	

Based on 1971-2000 normals

*** Not Available

Weather Data for the Week Ending July 23, 2016

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION								RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS				
	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 JUN 1	PCT. NORMAL SINCE JUN 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
																90 AND ABOVE	32 AND BELOW	90 AND ABOVE	32 AND BELOW		
WICHITA	101	75	105	73	88	7	0.00	-0.71	0.00	11.23	166	26.79	148	82	41	7	0	0	0	0	0
KY JACKSON	89	69	92	66	79	4	0.06	-0.96	0.05	9.32	115	32.12	112	91	51	3	0	2	0	0	0
LEXINGTON	91	69	93	65	80	4	0.00	-1.09	0.00	7.49	92	26.42	96	87	51	4	0	0	0	0	0
LOUISVILLE	92	75	95	71	83	4	0.54	-0.45	0.54	7.37	107	26.43	99	84	50	6	0	1	1	1	1
PADUCAH	93	74	95	71	83	5	0.01	-0.96	0.01	7.74	97	31.94	109	93	57	6	0	1	1	0	0
LA BATON ROUGE	94	75	96	73	85	3	0.20	-1.13	0.19	10.83	111	41.03	111	92	51	7	0	2	0	0	0
LAKE CHARLES	94	76	97	75	85	2	0.46	-0.65	0.45	10.83	108	41.15	128	95	59	7	0	2	0	0	0
NEW ORLEANS	95	80	99	78	87	4	0.64	-0.67	0.34	13.32	114	42.64	113	84	65	7	0	3	0	0	0
SHREVEPORT	99	77	101	75	88	4	0.10	-0.75	0.06	6.47	79	40.70	132	92	47	7	0	2	0	0	0
ME CARIBOU	79	57	85	52	68	2	0.54	-0.34	0.37	8.06	133	23.98	123	90	52	0	0	2	0	0	0
PORTLAND	85	61	95	55	73	4	0.20	-0.54	0.19	5.71	100	21.22	84	88	44	1	0	2	0	0	0
MD BALTIMORE	92	68	98	63	80	3	0.20	-0.68	0.12	6.42	103	24.26	103	86	43	6	0	2	0	0	0
MA BOSTON	89	68	98	65	79	5	0.01	-0.65	0.01	1.99	37	18.33	78	76	37	4	0	1	0	0	0
WORCESTER	85	63	92	56	74	3	0.35	-0.59	0.32	3.18	45	18.89	71	82	36	1	0	2	0	0	0
MI ALPENA	85	57	93	49	71	4	0.47	-0.25	0.32	3.43	72	18.21	122	87	40	2	0	2	0	0	0
GRAND RAPIDS	88	65	92	57	76	4	0.58	-0.18	0.58	2.78	44	19.79	102	85	48	2	0	1	1	1	1
HOUGHTON LAKE	84	57	92	49	71	4	0.12	-0.47	0.09	5.32	109	19.39	133	87	51	2	0	2	0	0	0
LANSING	89	64	94	53	77	6	0.41	-0.13	0.41	2.92	52	15.83	94	82	46	3	0	1	0	0	0
MUSKOGON	84	64	90	55	74	4	0.24	-0.26	0.23	3.43	82	17.37	107	88	60	1	0	2	0	0	0
TRVERSE CITY	85	64	92	57	74	4	0.82	0.16	0.48	3.99	70	15.58	89	87	41	3	0	2	0	0	0
MN DULUTH	83	60	90	56	72	6	0.89	-0.02	0.75	8.80	119	18.91	117	89	65	1	0	2	1	1	1
INT'L FALLS	82	56	89	46	69	3	0.67	-0.04	0.57	9.34	142	17.12	132	95	52	0	0	2	1	1	1
MINNEAPOLIS	89	70	97	66	80	6	2.50	1.62	2.17	9.13	125	18.05	109	83	56	3	0	4	1	1	1
ROCHESTER	84	68	90	61	76	6	2.92	1.87	1.81	10.69	145	22.38	128	97	77	2	0	2	2	2	2
ST. CLOUD	86	64	93	59	75	5	2.15	1.46	1.76	10.03	143	16.40	110	100	57	2	0	3	1	1	1
MS JACKSON	97	75	99	73	86	5	3.21	2.14	3.08	9.33	128	41.77	123	91	47	7	0	3	1	1	1
MERIDIAN	98	74	102	73	86	4	0.22	-1.04	0.18	6.31	78	31.30	85	89	49	7	0	3	0	0	0
TUPELO	94	75	98	72	84	3	0.87	0.08	0.67	8.14	106	30.24	88	87	55	6	0	2	1	1	1
MO COLUMBIA	93	74	95	71	83	5	0.39	-0.45	0.38	9.96	146	20.10	87	93	58	7	0	2	0	0	0
KANSAS CITY	93	76	96	73	84	5	0.00	-0.99	0.00	8.67	111	29.20	136	86	58	7	0	0	0	0	0
SAINT LOUIS	94	76	98	72	85	4	1.74	0.87	0.97	7.32	109	20.36	90	80	61	6	0	3	2	2	2
SPRINGFIELD	95	75	98	73	85	6	0.00	-0.72	0.00	7.66	97	18.91	76	86	54	7	0	0	0	0	0
MT BILLINGS	93	61	99	54	77	4	0.00	-0.26	0.00	0.39	14	5.79	60	64	20	5	0	0	0	0	0
BUTTE	85	45	90	41	65	2	0.00	-0.30	0.00	1.85	59	5.38	67	75	15	1	0	0	0	0	0
CUT BANK	83	50	88	41	66	2	0.15	-0.16	0.11	2.05	56	6.53	82	75	23	0	0	2	0	0	0
GLASGOW	87	59	93	51	73	2	0.47	0.10	0.44	5.88	165	14.16	199	82	45	3	0	2	0	0	0
GREAT FALLS	88	52	95	44	70	3	0.29	-0.01	0.28	2.16	66	8.18	87	78	19	4	0	2	0	0	0
HAVRE	88	57	97	49	73	4	0.51	0.19	0.45	4.03	133	11.92	164	84	40	3	0	3	0	0	0
MISSOULA	86	52	93	45	69	1	0.01	-0.21	0.01	2.82	111	7.95	95	77	40	2	0	1	0	0	0
NE GRAND ISLAND	94	71	99	66	83	7	0.00	-0.69	0.00	2.25	37	16.93	106	87	55	5	0	0	0	0	0
LINCOLN	94	75	99	71	84	6	0.03	-0.77	0.03	4.79	79	17.10	102	83	58	6	0	1	0	0	0
NORFOLK	89	72	93	67	81	6	0.05	-0.76	0.03	5.91	83	22.36	132	90	63	4	0	3	0	0	0
NORTH PLATTE	93	68	98	66	80	5	1.62	0.91	0.95	6.01	109	17.19	133	89	53	5	0	4	1	1	1
OMAHA	91	76	98	68	84	7	2.65	1.79	1.69	7.54	110	20.53	115	83	67	4	0	4	2	2	2
SCOTTSBLUFF	96	62	104	59	79	5	0.00	-0.45	0.00	1.55	36	10.66	96	84	44	6	0	0	0	0	0
VALENTINE	95	65	102	58	80	6	0.18	-0.58	0.18	5.70	103	19.62	156	84	42	6	0	1	0	0	0
NV ELY	91	51	94	41	71	3	0.00	-0.13	0.00	1.61	161	8.41	147	33	13	5	0	0	0	0	0
LAS VEGAS	109	85	113	84	97	5	0.00	-0.11	0.00	0.66	206	3.51	136	12	9	7	0	0	0	0	0
RENO	92	56	96	52	74	2	0.00	-0.03	0.00	0.00	0	5.21	114	35	14	5	0	0	0	0	0
WINNEMUCCA	93	44	98	41	69	-4	0.00	-0.03	0.00	0.01	1	4.58	90	39	12	7	0	0	0	0	0
NH CONCORD	88	58	97	49	73	3	0.36	-0.38	0.19	3.12	56	15.85	78	88	36	3	0	3	0	0	0
NJ NEWARK	92	72	98	66	82	4	0.23	-0.87	0.23	4.70	69	19.91	76	71	38	5	0	1	0	0	0
NM ALBUQUERQUE	97	68	100	65	83	4	0.16	-0.14	0.16	0.36	25	1.55	38	51	16	7	0	1	0	0	0
NY ALBANY	86	62	94	53	74	2	0.12	-0.62	0.06	5.50	87	16.25	77	84	41	2	0	3	0	0	0
BINGHAMTON	84	60	93	52	72	3	0.09	-0.66	0.09	3.66	57	16.45	77	77	43	1	0	1	0	0	0
BUFFALO	84	64	91	55	74	3	0.01	-0.65	0.01	2.07	34	13.31	63	81	39	1	0	1	0	0	0
ROCHESTER	87	60	92	53	74	3	0.10	-0.51	0.10	1.83	33	13.44	75	80	44	3	0	1	0	0	0
SYRACUSE	84	62	91	54	73	2	0.02	-0.86	0.02	3.28	48	18.04	85	83	44	1	0	1	0	0	0
NC ASHEVILLE	88	66	91	63	77	4	0.27	-0.58	0.23	6.23	86	21.11	76	90	49	1	0	4	0	0	0
CHARLOTTE	93	70	96	67	82	2	0.38	-0.47	0.38	4.37	71	19.66	80	88	45	7	0	1	0	0	0
GREENSBORO	92	71	95	69	82	4	0.00	-1.02	0.00	6.09	89	25.06	102	91	44	6	0	0	0	0	0
HATTERAS	87	75	89	71	81	2	0.84	-0.31	0.80	12.38	173	46.44	160	92	65	0	0	2	1	1	1
RALEIGH	92	71	95	68	81	2	0.00	-0.99	0.00	13.84	211	33.44	135	90	55	6	0	0	0	0	0
WILMINGTON	90	71	92	70	81	0	1.95	0.19	1.95	11.08	102	33.76	110	96	56	5	0	1	1	1	1
ND BISMARCK	89	65	97	55	77	6	0.56	0.00	0.32	8.32	185	15.50	155	88	58	4	0	2	0	0	0
DICKINSON	88	59	98	53	74	4	0.50	0.09	0.50	5.66	112	10.39	98	89	34	3	0	1	1	1	1
FARGO	87	65	92	57	76	5	0.20	-0.41	0.15	7.07	124	12.54	103	88	54	2	0	3	0	0	0
GRAND FORKS	84	63	89	58	73	3	1.89	1.22	0.89	8.50	161	15.39	142	93	56	0	0	3	2	2	2
JAMESTOWN	86	64	92	56	75	4	0.01	-0.70	0.01	6.33	116	12.24	111	96	54	1	0	1	0	0	0
WILLISTON	90	62	96	56	76	6	0.52	0.03	0.33	5.15	126	10.22	117	84	39	4	0	5	0	0	0
OH AKRON-CANTON	89	64	95	56	77	5	0.36	-0.55	0.34	4.93	76	19.60	90	81	46	3	0	2	0	0	

Weather Data for the Week Ending July 23, 2016

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
	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 JUN 1	PCT. NORMAL SINCE JUN 1	TOTAL IN., SINCE JAN 01	PCT. NORMAL SINCE JAN 01	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	PRECIP	
																		.01 INCH OR MORE	.50 INCH OR MORE
OK TOLEDO	89	64	93	56	76	3	1.07	0.51	1.04	4.13	70	17.89	95	92	61	4	0	2	1
OK YOUNGSTOWN	87	59	92	51	73	3	0.90	0.00	0.56	5.68	81	20.78	98	88	48	2	0	2	1
OK OKLAHOMA CITY	97	72	100	70	84	2	0.00	-0.61	0.00	4.74	68	17.15	81	88	39	7	0	0	0
OR TULSA	98	79	101	78	89	5	0.00	-0.61	0.00	2.77	39	16.62	69	77	46	7	0	0	0
OR ASTORIA	70	57	73	54	63	3	0.02	-0.17	0.01	3.12	88	40.35	110	89	73	0	0	2	0
OR BURNS	86	42	93	39	64	-3	0.00	-0.08	0.00	0.54	58	4.39	69	72	26	1	0	0	0
OR EUGENE	78	54	86	47	66	-1	0.00	-0.11	0.00	1.03	51	20.96	74	82	53	0	0	0	0
OR MEDFORD	87	57	93	54	72	-1	0.00	-0.06	0.00	1.02	115	10.00	102	69	28	3	0	0	0
OR PENDLETON	85	57	95	53	71	-2	0.00	-0.08	0.00	1.73	163	7.32	100	65	39	1	0	0	0
OR PORTLAND	78	61	89	57	69	0	0.30	0.18	0.30	2.08	97	21.82	108	79	63	0	0	1	0
OR SALEM	79	57	85	52	68	1	0.00	-0.09	0.00	1.45	75	21.74	99	81	56	0	0	0	0
PA ALLENTOWN	91	64	96	58	77	3	0.65	-0.31	0.65	3.36	47	20.09	81	79	39	5	0	1	1
PA ERIE	84	63	89	57	74	2	0.63	-0.04	0.61	4.98	74	18.75	88	80	55	0	0	2	1
PA MIDDLETOWN	91	69	98	64	80	4	0.03	-0.76	0.03	7.88	120	25.07	109	87	37	5	0	1	0
PA PHILADELPHIA	92	73	97	69	82	4	0.58	-0.44	0.58	3.08	47	21.08	88	77	41	4	0	1	1
PA PITTSBURGH	88	65	92	58	77	4	0.51	-0.36	0.50	4.53	64	18.15	82	81	38	2	0	2	1
PA WILKES-BARRE	89	63	97	55	76	3	0.11	-0.70	0.11	2.51	37	15.33	73	84	34	3	0	1	0
PA WILLIAMSPORT	91	62	99	56	77	4	0.34	-0.53	0.33	5.63	74	17.57	74	77	39	3	0	2	0
RI PROVIDENCE	89	66	93	59	77	3	2.10	1.41	1.70	4.82	85	22.96	89	78	41	4	0	3	1
SC BEAUFORT	95	75	97	74	85	3	0.21	-1.02	0.14	5.39	55	23.78	89	94	54	7	0	3	0
SC CHARLESTON	92	74	95	73	83	1	3.37	2.02	1.69	7.23	69	27.98	100	91	60	5	0	5	2
SC COLUMBIA	96	74	100	72	85	3	0.00	-1.24	0.00	3.92	43	17.84	63	85	48	7	0	0	0
SC GREENVILLE	93	70	94	68	82	3	1.86	0.79	1.25	4.34	60	21.87	75	93	49	7	0	4	1
SD ABERDEEN	90	66	96	55	78	5	0.12	-0.50	0.12	4.23	74	11.17	89	92	62	5	0	1	0
SD HURON	93	68	99	56	81	7	0.51	-0.11	0.51	2.92	53	11.73	87	90	45	5	0	1	1
SD RAPID CITY	95	63	102	57	79	7	0.42	0.00	0.42	2.14	49	6.78	61	78	31	6	0	1	0
SD SIOUX FALLS	90	71	93	59	80	6	1.52	0.89	0.98	4.06	72	15.55	107	88	62	4	0	4	1
TN BRISTOL	93	65	98	62	79	5	0.00	-0.95	0.00	2.86	40	19.77	78	94	35	7	0	0	0
TN CHATTANOOGA	97	74	100	71	86	6	0.08	-0.99	0.05	2.44	32	19.68	60	84	48	7	0	2	0
TN KNOXVILLE	95	72	96	67	84	6	0.05	-1.03	0.00	7.96	105	27.23	91	86	45	7	0	1	0
TN MEMPHIS	96	77	100	76	87	4	1.32	0.39	0.95	5.25	69	40.34	124	84	53	6	0	5	1
TN NASHVILLE	95	74	97	70	84	5	0.00	-0.84	0.00	9.41	136	23.85	84	88	48	7	0	0	0
TX ABILENE	98	75	100	74	87	3	0.00	-0.33	0.00	3.53	82	21.33	173	71	40	7	0	0	0
TX AMARILLO	97	69	99	66	83	5	0.00	-0.58	0.00	2.93	56	8.82	78	65	26	7	0	0	0
TX AUSTIN	99	72	100	71	86	2	0.00	-0.39	0.00	2.67	51	30.96	165	87	50	7	0	0	0
TX BEAUMONT	93	76	97	75	85	2	2.71	1.60	2.43	12.84	120	42.34	128	97	55	6	0	6	1
TX BROWNSVILLE	95	77	96	76	86	2	0.18	-0.14	0.18	3.16	73	13.15	107	94	60	7	0	1	0
TX CORPUS CHRISTI	95	77	96	75	86	2	0.00	-0.39	0.00	2.95	59	21.17	135	93	54	7	0	0	0
TX DEL RIO	101	78	103	76	90	5	0.00	-0.43	0.00	2.93	76	11.54	111	74	40	7	0	0	0
TX EL PASO	102	76	105	74	89	6	0.08	-0.25	0.04	0.46	24	1.10	31	41	17	7	0	2	0
TX FORT WORTH	98	80	100	79	89	4	0.00	-0.46	0.00	6.80	144	23.56	116	72	39	7	0	0	0
TX GALVESTON	92	81	94	78	86	1	0.47	-0.26	0.32	8.41	126	28.94	129	88	66	7	0	3	0
TX HOUSTON	97	76	100	75	87	3	0.47	-0.16	0.24	13.87	178	42.82	161	93	57	7	0	3	0
TX LUBBOCK	98	71	99	67	84	4	0.00	-0.43	0.00	1.62	35	6.89	68	63	32	7	0	0	0
TX MIDLAND	100	74	101	72	87	5	0.00	-0.41	0.00	3.19	104	6.93	97	61	32	7	0	0	0
TX SAN ANGELO	101	74	102	73	87	4	0.00	-0.19	0.00	7.02	212	22.65	206	73	36	7	0	0	0
TX SAN ANTONIO	97	77	98	76	87	2	0.01	-0.38	0.01	2.40	41	24.22	131	86	40	7	0	1	0
TX VICTORIA	98	74	100	72	86	2	0.02	-0.55	0.02	3.22	44	23.44	106	94	50	7	0	1	0
TX WACO	99	76	101	75	88	2	0.00	-0.48	0.00	4.59	97	27.24	143	83	42	7	0	0	0
TX WICHITA FALLS	98	73	101	71	85	0	0.00	-0.28	0.00	5.01	102	21.50	131	82	43	7	0	0	0
UT SALT LAKE CITY	99	75	102	64	87	9	0.00	-0.17	0.00	0.52	42	8.17	82	35	12	7	0	0	0
VT BURLINGTON	84	61	94	53	73	2	1.22	0.34	0.65	6.08	96	16.93	90	85	42	1	0	3	1
VA LYNCHBURG	90	67	93	64	78	3	0.53	-0.47	0.53	7.79	110	27.44	109	97	48	5	0	1	1
VA NORFOLK	92	73	98	70	83	3	0.04	-1.16	0.03	7.84	105	30.07	116	90	52	5	0	2	0
VA RICHMOND	90	69	93	66	80	2	1.80	0.71	0.91	11.10	161	31.73	129	90	54	3	0	2	2
VA ROANOKE	92	68	96	64	80	3	0.00	-0.91	0.00	8.27	125	26.00	106	83	43	7	0	0	0
VA WASH/DULLES	92	67	98	60	79	3	0.24	-0.53	0.21	7.69	115	25.35	108	88	40	6	0	2	0
WA OLYMPIA	76	54	86	50	65	2	0.18	0.05	0.10	1.86	76	27.24	100	90	62	0	0	2	0
WA QUILLAYUTE	69	56	72	53	62	3	0.05	-0.45	0.03	5.68	108	57.51	104	97	81	0	0	2	0
WA SEATTLE-TACOMA	77	59	84	58	68	2	0.34	0.20	0.33	2.50	118	23.57	121	89	69	0	0	2	0
WA SPOKANE	82	56	90	51	69	0	0.07	-0.08	0.07	0.78	45	8.64	91	70	28	1	0	1	0
WA YAKIMA	87	55	94	49	71	1	0.07	0.04	0.04	0.46	60	5.91	132	73	38	2	0	2	0
WV BECKLEY	85	62	89	57	73	2	0.00	-1.09	0.00	12.70	170	31.73	126	89	50	0	0	0	0
WV CHARLESTON	90	66	94	62	78	4	0.17	-0.93	0.17	7.44	97	27.34	107	95	47	4	0	1	0
WV ELKINS	86	59	90	53	72	2	0.24	-0.85	0.22	8.34	102	26.76	99	93	43	1	0	2	0
WV HUNTINGTON	90	67	93	63	79	3	0.01	-1.01	0.01	10.69	151	30.40	122	94	50	5	0	1	0
WI EAU CLAIRE	87	65	93	59	76	4	0.75	-0.10	0.32	9.32	131	21.73	125	97	52	1	0	3	0
WI GREEN BAY	86	63	90	58	74	4	0.92	0.18	0.45	6.59	111	17.77	114	98	63	1	0	3	0
WI LA CROSSE	88	69	94	64	79	5	3.07	2.13	1.35	11.74	164	24.34	135	94	57	2	0	3	3
WI MADISON	87	67	94	61	77	5	2.81	1.96	1.29	8.81	127	22.74	124	93	64	2	0	3	2
WI MILWAUKEE	89	69	93	64	79	7	1.54	0.77	0.84	5.18	84	16.99	89	80	58	3	0	3	2
WY CASPER	95	59	96	48	77	6	0.07	-0.22	0.07	1.24	52	10.70	127	62	25	7	0	1	0
WY CHEYENNE	92	60	95	57	76	8	0.04	-0.46	0.02	2.66	71	12.52	129	63	24	5	0	2	0
WY LANDER	94	58	97	54	76	4	0.00	-0.18	0.00	0.57	32	16.72	196	49	11	7	0	0	0
WY SHERIDAN	97	55	102	51	76	7	0.01	-0.20	0.01	0.57	20	9.92	105	69	27	6	0	1	0

Based on 1971-2000 normals

*** Not Available

National Agricultural Summary

July 18 – 24, 2016

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Weekly precipitation across much of the nation was within an inch of normal, except for the Corn Belt and parts of the Southeast. Some locations in Illinois, Iowa, and Wisconsin recorded more than 4 inches of rain during the week. From the Rockies to the Appalachian

Mountains, weekly temperatures were well above normal. Some locations in the Great Plains and Mississippi Valley recorded average temperatures more than 6°F above normal. Conversely, temperatures in the Northwest were below average.

Corn: Seventy-nine percent of the corn was at or beyond the silking stage by July 24, eight percentage points ahead of last year and 9 points ahead of the 5-year average. Above-average temperatures in the northern Corn Belt advanced silking progress at least 30 percentage points during the week in Minnesota, South Dakota, and Wisconsin. By week's end, 13 percent of the corn was at or beyond the dough stage, slightly ahead of last year but equal to the 5-year average. In 12 of the 18 estimating states, the percentage of the crop in the dough stage was at or ahead of the 5-year average. Overall, 76 percent of the corn was reported in good to excellent condition, unchanged from last week but 6 percentage points above the same time last year.

Soybeans: By week's end, 76 percent of this year's soybean crop was at or beyond the blooming stage, 9 percentage points ahead of last year and 10 points ahead of the 5-year average. By July 24, thirty-five percent of the soybeans were at or beyond the pod-setting stage, 6 percentage points ahead of last year and 9 points ahead of the 5-year average. Pod setting advanced by more than 20 percentage points during the week in Iowa, Minnesota, South Dakota, and Wisconsin. Overall, 71 percent of the soybean crop was reported in good to excellent condition, unchanged from last week but 9 percentage points above the same time last year.

Winter Wheat: By July 24, eighty-three percent of the winter wheat was harvested, slightly ahead of last year and 4 percentage points ahead of the 5-year average. In Michigan, hot, dry weather allowed producers to harvest 38 percent of the winter wheat during the week.

Cotton: Nationally, 85 percent of the cotton was at or beyond the squaring stage by week's end, 3 percentage points ahead of last year and slightly ahead of the 5-year average. Square development was nearing completion in the Delta. By July 24, bolls were setting on 46 percent of the nation's acreage, 5 percentage points ahead of last year and 3 points ahead of the 5-year average. Bolls were opening in some areas of South Texas. Overall, 52 percent of the cotton was reported in good to excellent condition, down 2 percentage points from last week and 5 points lower than at the same time last year.

Sorghum: By week's end, 49 percent of the nation's sorghum was at or beyond the heading stage, 7 percentage points ahead of last year and 8 points ahead of the 5-year average. With the above-normal temperatures, 27 percent of the sorghum in

Kansas was headed by week's end, 16 percentage points ahead of the state's 5-year average. Nationally, 23 percent of this year's crop was at or beyond the coloring stage, slightly ahead of last year but 3 percentage points behind the 5-year average. Overall, 65 percent of the sorghum was reported in good to excellent condition, 3 percentage points lower than both last week and at the same time last year.

Rice: Heading of the nation's rice advanced to 57 percent complete by July 24, nine percentage points ahead of last year and 16 points ahead of the 5-year average. Heading was ahead of average in all of the major rice-producing states except Mississippi and Missouri. Overall, 67 percent of the rice was reported in good to excellent condition, slightly below last week and 2 percentage points below the same time last year.

Small Grains: Oat producers had harvested 37 percent of this year's crop by week's end, 13 percentage points ahead of last year and 7 points ahead of the 5-year average. Despite significant rain in the Corn Belt, double-digit harvest progress was evident in most estimating states. Overall, 64 percent of the oat crop was reported in good to excellent condition, down 2 percentage points from last week and 4 points below the same time last year.

Overall, 73 percent of the barley was reported in good to excellent condition, unchanged from last week but 4 percentage points above the same time last year. In Washington, barley condition ratings in these two categories were 70 percentage points above last year.

Overall, 68 percent of the spring wheat was reported in good to excellent condition, down slightly from last week and 3 percentage points below the same time last year. Hot, dry conditions returned to South Dakota, stressing spring wheat and causing a 3 percentage point decrease in the good to excellent categories compared to the previous week.

Other Crops: Eighty-four percent of the peanut crop was pegging by week's end, 5 percentage points ahead of last year and 9 points ahead of the 5-year average. Pegging in both Florida and Georgia was 94 percent complete. Overall, 66 percent of the peanut crop was reported in good to excellent condition, down 3 percentage points from last week and 8 points lower than at the same time last year.

Crop Progress and Condition

Week Ending July 24, 2016

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

Corn Percent Silking				
	Prev Year	Prev Week	Jul 24 2016	5-Yr Avg
CO	38	16	28	38
IL	85	77	90	86
IN	66	50	78	74
IA	75	67	87	69
KS	75	63	86	76
KY	83	75	85	75
MI	54	22	54	56
MN	72	51	86	61
MO	80	92	97	84
NE	77	55	82	76
NC	94	93	96	97
ND	43	25	45	42
OH	60	31	58	62
PA	70	31	57	65
SD	63	37	67	51
TN	92	91	94	93
TX	81	74	92	88
WI	49	33	64	44
18 Sts	71	56	79	70
These 18 States planted 93% of last year's corn acreage.				

Corn Percent Dough				
	Prev Year	Prev Week	Jul 24 2016	5-Yr Avg
CO	0	NA	0	0
IL	28	5	18	23
IN	4	1	10	7
IA	8	2	11	8
KS	15	NA	13	26
KY	23	15	31	21
MI	0	NA	1	0
MN	1	NA	2	2
MO	25	11	37	33
NE	9	NA	13	13
NC	68	60	75	73
ND	0	NA	0	2
OH	2	NA	1	6
PA	15	NA	2	6
SD	1	NA	5	3
TN	51	35	60	54
TX	61	53	58	65
WI	0	NA	1	1
18 Sts	12	NA	13	13
These 18 States planted 93% of last year's corn acreage.				

Corn Condition by Percent					
	VP	P	F	G	EX
CO	1	2	18	64	15
IL	1	3	14	58	24
IN	2	5	18	54	21
IA	1	3	14	59	23
KS	1	6	26	57	10
KY	2	5	20	58	15
MI	3	10	31	46	10
MN	0	3	13	62	22
MO	2	4	20	55	19
NE	1	3	17	61	18
NC	3	6	25	50	16
ND	1	4	17	63	15
OH	2	7	31	51	9
PA	2	9	27	49	13
SD	3	8	29	51	9
TN	3	7	25	43	22
TX	2	9	30	47	12
WI	1	2	11	50	36
18 Sts	1	4	19	57	19
Prev Wk	1	4	19	57	19
Prev Yr	2	7	21	53	17

Soybeans Percent Blooming				
	Prev Year	Prev Week	Jul 24 2016	5-Yr Avg
AR	79	84	91	72
IL	67	60	76	71
IN	64	56	70	67
IA	73	66	83	73
KS	43	38	56	50
KY	50	31	47	48
LA	90	89	95	90
MI	71	43	67	67
MN	86	72	90	70
MS	83	77	83	86
MO	30	43	58	46
NE	72	54	75	75
NC	44	32	46	39
ND	82	67	81	72
OH	62	49	70	62
SD	66	65	82	72
TN	57	55	73	56
WI	62	70	86	56
18 Sts	67	59	76	66
These 18 States planted 95% of last year's soybean acreage.				

Soybeans Percent Setting Pods				
	Prev Year	Prev Week	Jul 24 2016	5-Yr Avg
AR	51	57	70	47
IL	27	15	33	27
IN	31	19	35	28
IA	31	20	44	27
KS	13	5	17	11
KY	22	8	18	21
LA	80	68	80	78
MI	21	8	20	20
MN	37	12	39	24
MS	59	50	65	60
MO	8	10	21	11
NE	28	1	19	28
NC	20	14	23	16
ND	43	19	36	31
OH	22	8	19	17
SD	23	17	42	21
TN	31	28	40	29
WI	23	23	44	15
18 Sts	29	18	35	26
These 18 States planted 95% of last year's soybean acreage.				

Soybean Condition by Percent					
	VP	P	F	G	EX
AR	7	7	29	44	13
IL	2	4	17	58	19
IN	2	5	20	52	21
IA	1	3	15	60	21
KS	2	8	34	50	6
KY	1	6	23	57	13
LA	0	6	24	63	7
MI	3	10	28	49	10
MN	1	3	18	60	18
MS	2	9	24	44	21
MO	2	5	25	57	11
NE	1	3	19	63	14
NC	1	5	25	53	16
ND	2	5	22	60	11
OH	2	6	28	54	10
SD	1	6	32	54	7
TN	1	4	24	47	24
WI	0	1	13	55	31
18 Sts	2	5	22	56	15
Prev Wk	2	5	22	57	14
Prev Yr	3	8	27	49	13

Crop Progress and Condition

Week Ending July 24, 2016

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

Cotton Percent Squaring				
	Prev Year	Prev Week	Jul 24 2016	5-Yr Avg
AL	94	90	92	87
AZ	97	90	95	93
AR	100	100	100	100
CA	96	85	90	92
GA	93	90	93	88
KS	51	44	53	66
LA	98	91	98	99
MS	91	82	90	94
MO	90	78	87	89
NC	93	83	90	92
OK	70	43	65	61
SC	90	75	85	85
TN	84	83	92	86
TX	76	71	82	80
VA	91	73	85	92
15 Sts	82	77	85	84
These 15 States planted 99% of last year's cotton acreage.				

Cotton Percent Setting Bolls				
	Prev Year	Prev Week	Jul 24 2016	5-Yr Avg
AL	70	51	66	55
AZ	62	50	65	63
AR	89	86	97	88
CA	89	15	60	73
GA	61	52	68	57
KS	4	5	8	11
LA	79	65	76	82
MS	68	51	72	64
MO	29	7	34	38
NC	57	24	50	60
OK	17	10	19	22
SC	59	24	40	47
TN	41	33	55	42
TX	27	18	36	30
VA	38	21	30	40
15 Sts	41	28	46	43
These 15 States planted 99% of last year's cotton acreage.				

Cotton Condition by Percent					
	VP	P	F	G	EX
AL	1	4	47	43	5
AZ	4	1	4	54	37
AR	5	3	16	46	30
CA	0	5	25	20	50
GA	2	7	30	50	11
KS	1	1	32	63	3
LA	0	5	21	70	4
MS	2	9	34	42	13
MO	2	8	46	39	5
NC	3	7	27	57	6
OK	0	0	46	47	7
SC	0	1	53	40	6
TN	1	2	20	58	19
TX	3	14	38	39	6
VA	0	4	24	71	1
15 Sts	3	10	35	43	9
Prev Wk	1	9	36	45	9
Prev Yr	1	7	35	47	10

Sorghum Percent Headed				
	Prev Year	Prev Week	Jul 24 2016	5-Yr Avg
AR	80	74	81	84
CO	6	6	24	16
IL	38	27	37	37
KS	9	13	27	11
LA	98	95	99	98
MO	39	24	46	34
NE	36	7	25	23
NM	4	10	11	4
OK	39	30	38	39
SD	47	23	42	32
TX	80	76	80	79
11 Sts	42	39	49	41
These 11 States planted 98% of last year's sorghum acreage.				

Sorghum Percent Coloring				
	Prev Year	Prev Week	Jul 24 2016	5-Yr Avg
AR	42	12	25	36
CO	1	0	0	2
IL	2	0	1	3
KS	0	1	1	0
LA	76	62	76	74
MO	1	1	5	3
NE	1	0	0	1
NM	0	0	0	0
OK	7	2	7	8
SD	0	1	3	1
TX	53	48	58	66
11 Sts	22	19	23	26
These 11 States planted 98% of last year's sorghum acreage.				

Sorghum Condition by Percent					
	VP	P	F	G	EX
AR	3	9	26	44	18
CO	0	1	35	59	5
IL	3	6	27	60	4
KS	1	3	25	62	9
LA	0	5	29	53	13
MO	0	3	28	62	7
NE	0	0	18	68	14
NM	0	2	78	19	1
OK	0	2	25	70	3
SD	0	2	36	62	0
TX	1	8	33	41	17
11 Sts	1	5	29	54	11
Prev Wk	0	3	29	57	11
Prev Yr	2	4	26	59	9

Crop Progress and Condition

Week Ending July 24, 2016

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

Oats Percent Harvested				
	Prev Year	Prev Week	Jul 24 2016	5-Yr Avg
IA	49	35	54	50
MN	8	2	10	14
NE	51	49	65	67
ND	0	3	26	5
OH	22	40	63	38
PA	15	3	24	20
SD	33	38	58	29
TX	99	100	100	99
WI	10	8	17	17
9 Sts	24	22	37	30
These 9 States harvested 70% of last year's oat acreage.				

Oat Condition by Percent					
	VP	P	F	G	EX
IA	0	2	19	65	14
MN	1	4	17	59	19
NE	2	1	26	63	8
ND	4	8	21	62	5
OH	1	2	25	65	7
PA	2	7	22	58	11
SD	1	7	38	51	3
TX	8	15	38	34	5
WI	0	1	13	56	30
9 Sts	3	7	26	53	11
Prev Wk	3	7	24	55	11
Prev Yr	4	7	21	55	13

Winter Wheat Percent Harvested				
	Prev Year	Prev Week	Jul 24 2016	5-Yr Avg
AR	100	100	100	100
CA	96	97	97	95
CO	81	70	90	85
ID	22	5	10	10
IL	94	97	99	97
IN	86	96	99	96
KS	99	98	99	99
MI	37	43	81	66
MO	94	98	98	99
MT	33	2	20	12
NE	76	75	92	74
NC	100	99	100	98
OH	74	96	100	92
OK	100	100	100	100
OR	63	22	35	30
SD	36	53	82	38
TX	98	100	100	100
WA	55	10	23	23
18 Sts	82	76	83	79
These 18 States harvested 90% of last year's winter wheat acreage.				

Peanuts Percent Pegging				
	Prev Year	Prev Week	Jul 24 2016	5-Yr Avg
AL	80	61	63	68
FL	90	85	94	80
GA	82	90	94	77
NC	77	65	79	86
OK	49	55	60	73
SC	94	84	90	84
TX	47	42	57	61
VA	59	37	48	69
8 Sts	79	77	84	75
These 8 States planted 97% of last year's peanut acreage.				

Peanut Condition by Percent					
	VP	P	F	G	EX
AL	0	0	53	41	6
FL	0	4	29	60	7
GA	2	5	24	52	17
NC	0	3	16	66	15
OK	0	0	8	90	2
SC	0	0	16	66	18
TX	0	7	39	49	5
VA	0	0	7	92	1
8 Sts	1	4	29	53	13
Prev Wk	0	3	28	57	12
Prev Yr	0	2	24	58	16

Spring Wheat Condition by Percent					
	VP	P	F	G	EX
ID	0	1	22	69	8
MN	3	5	23	55	14
MT	1	4	29	51	15
ND	3	7	19	63	8
SD	3	12	44	38	3
WA	0	1	13	79	7
6 Sts	2	6	24	58	10
Prev Wk	2	5	24	58	11
Prev Yr	1	6	22	56	15

Rice Percent Headed				
	Prev Year	Prev Week	Jul 24 2016	5-Yr Avg
AR	41	34	61	36
CA	19	25	26	11
LA	89	81	86	84
MS	67	43	57	60
MO	40	3	16	23
TX	74	83	91	77
6 Sts	48	41	57	41
These 6 States planted 100% of last year's rice acreage.				

Rice Condition by Percent					
	VP	P	F	G	EX
AR	3	8	27	43	19
CA	0	0	15	75	10
LA	0	5	31	56	8
MS	0	2	23	47	28
MO	1	3	24	51	21
TX	3	4	36	48	9
6 Sts	2	5	26	51	16
Prev Wk	2	5	25	53	15
Prev Yr	2	4	25	49	20

Barley Condition by Percent					
	VP	P	F	G	EX
ID	0	1	20	68	11
MN	6	7	25	53	9
MT	1	4	32	40	23
ND	2	4	17	67	10
WA	0	0	10	84	6
5 Sts	1	3	23	58	15
Prev Wk	1	3	23	58	15
Prev Yr	1	5	25	51	18

Crop Progress and Condition

Week Ending July 24, 2016

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

Pasture and Range Condition by Percent												
Week Ending Jul 24, 2016												
	VP	P	F	G	EX		VP	P	F	G	EX	
AL	9	17	31	39	4		NH	12	38	44	6	0
AZ	16	19	40	22	3		NJ	1	2	53	40	4
AR	3	10	35	44	8		NM	3	24	46	25	2
CA	15	25	20	35	5		NY	6	9	42	37	6
CO	3	5	24	57	11		NC	3	12	40	39	6
CT	4	65	31	0	0		ND	5	10	27	52	6
DE	5	12	38	40	5		OH	8	17	29	39	7
FL	3	6	26	48	17		OK	1	7	37	48	7
GA	14	22	37	23	4		OR	15	22	27	33	3
ID	1	7	33	47	12		PA	8	26	36	26	4
IL	1	4	19	59	17		RI	10	50	25	15	0
IN	2	5	22	59	12		SC	10	21	22	43	4
IA	1	7	30	50	12		SD	5	16	35	42	2
KS	1	5	26	60	8		TN	6	18	36	36	4
KY	1	6	22	60	11		TX	5	14	41	34	6
LA	1	10	35	48	6		UT	1	8	36	47	8
ME	0	32	37	31	0		VT	5	25	56	14	0
MD	1	7	27	58	7		VA	2	10	34	48	6
MA	10	25	40	25	0		WA	2	7	22	60	9
MI	7	19	34	32	8		WV	1	7	32	52	8
MN	1	5	15	63	16		WI	1	3	19	57	20
MS	2	11	34	46	7		WY	7	12	22	53	6
MO	1	6	37	50	6		48 Sts	4	11	32	46	7
MT	11	17	35	32	5							
NE	2	3	21	63	11		Prev Wk	4	10	30	47	9
NV	5	10	25	35	25		Prev Yr	3	9	27	49	12

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

NA - Not Available
* Revised

Crop Progress and Condition

Week Ending July 24, 2016

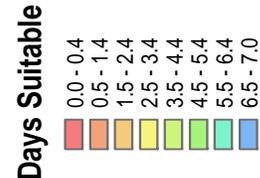
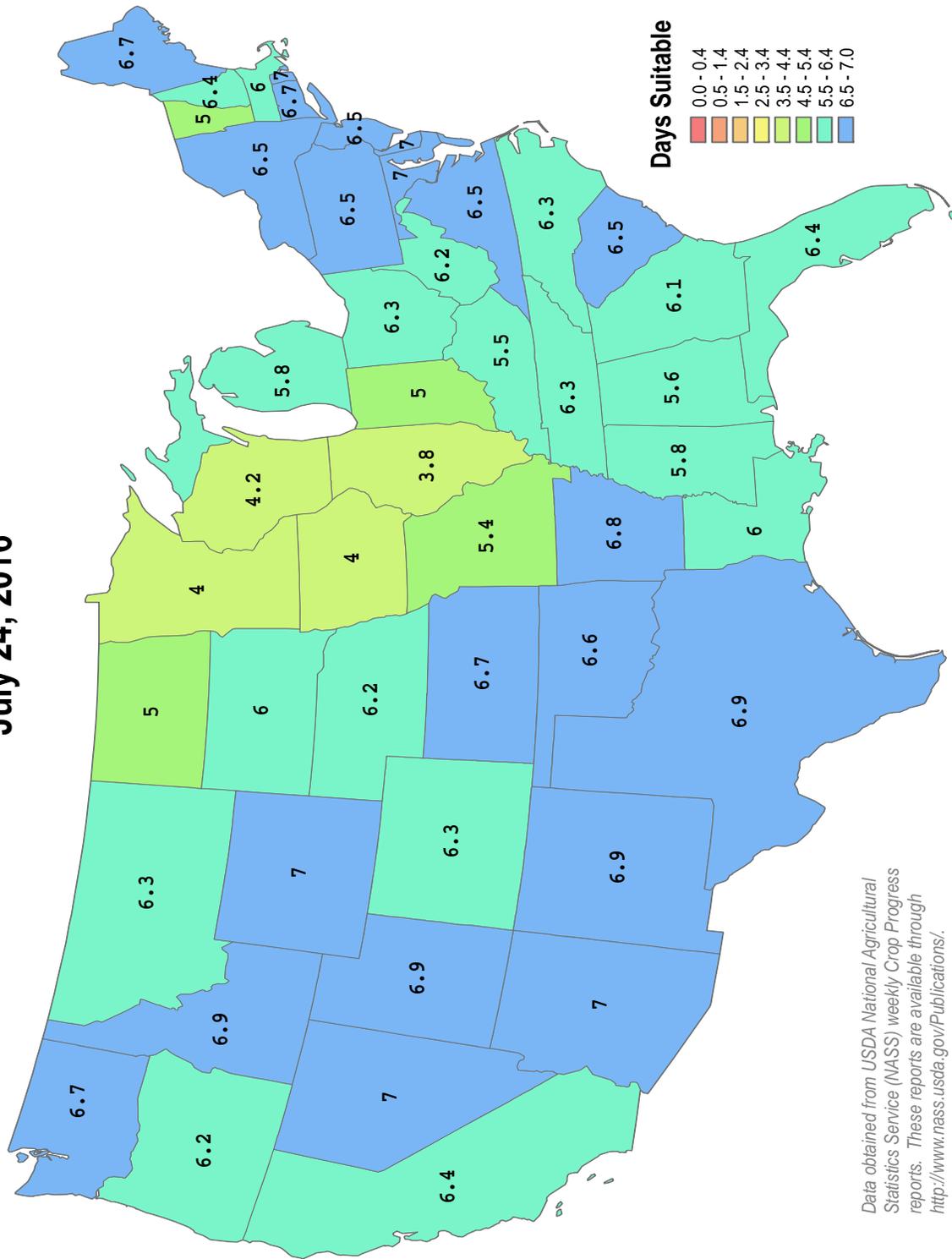
Weekly U.S. Progress and Condition Data provided by USDA/NASS

Days Suitable for Fieldwork

Week Ending July 24, 2016



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

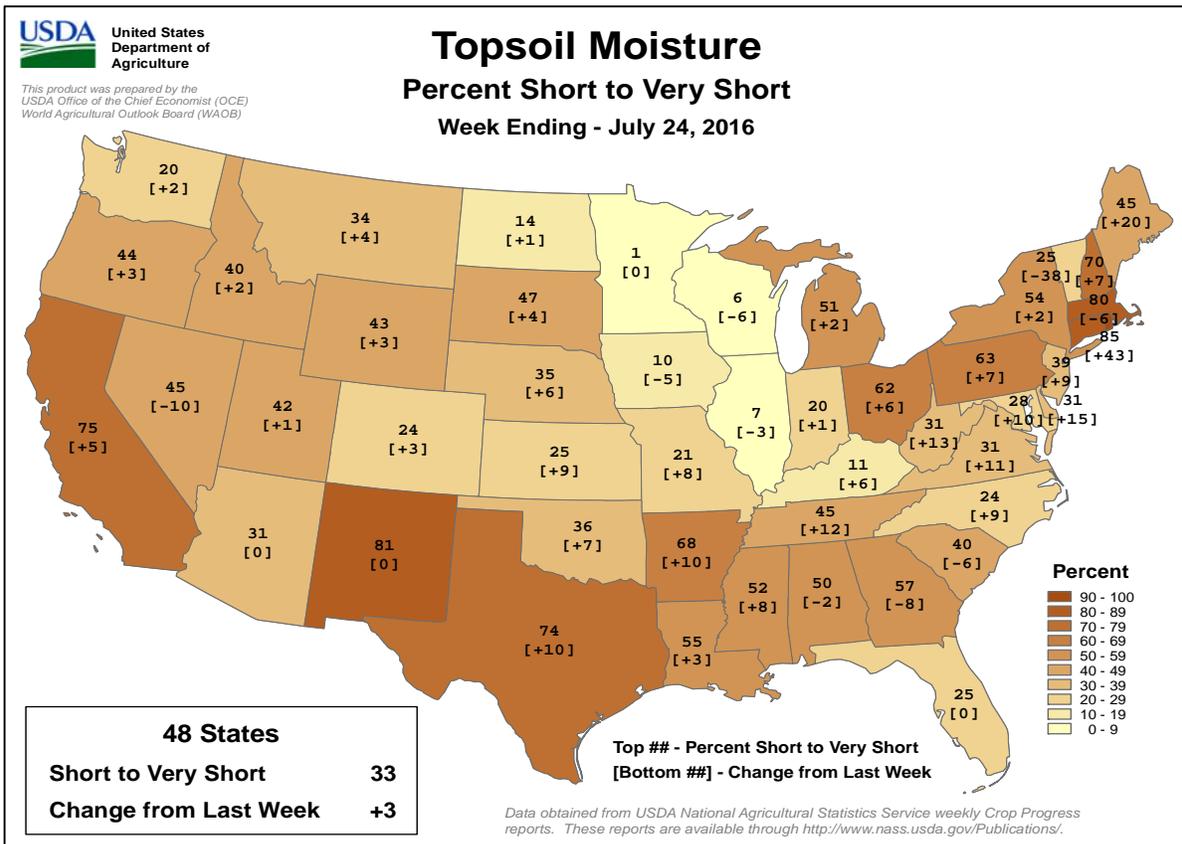
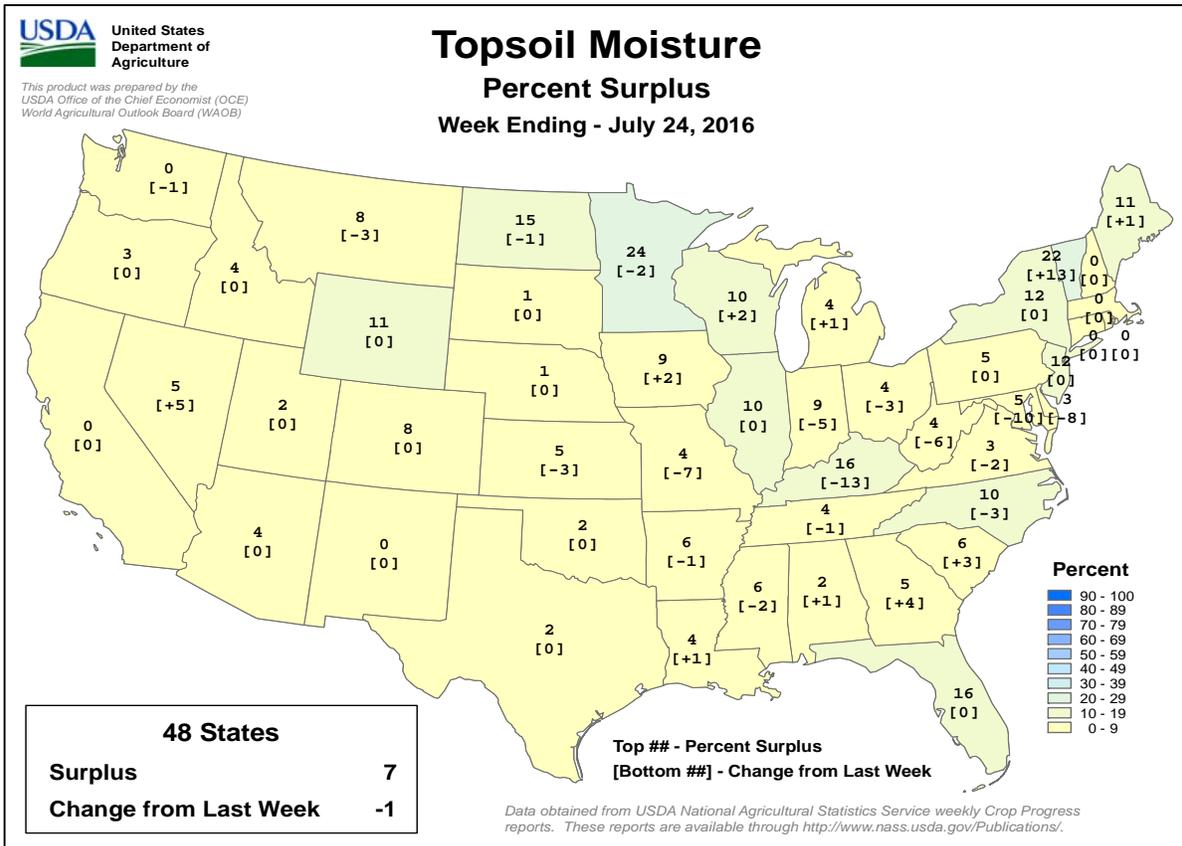


Data obtained from USDA National Agricultural Statistics Service (NASS) weekly Crop Progress reports. These reports are available through <http://www.nass.usda.gov/Publications/>.

Crop Progress and Condition

Week Ending July 24, 2016

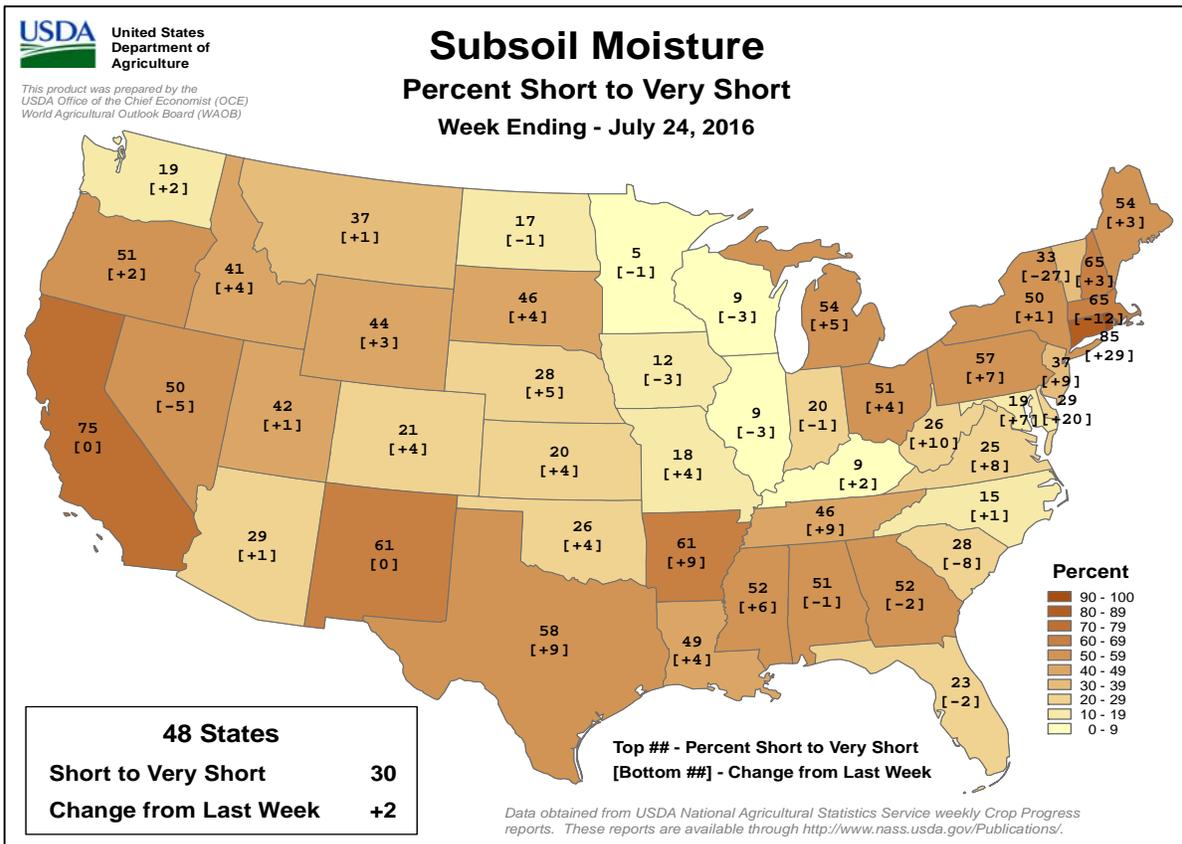
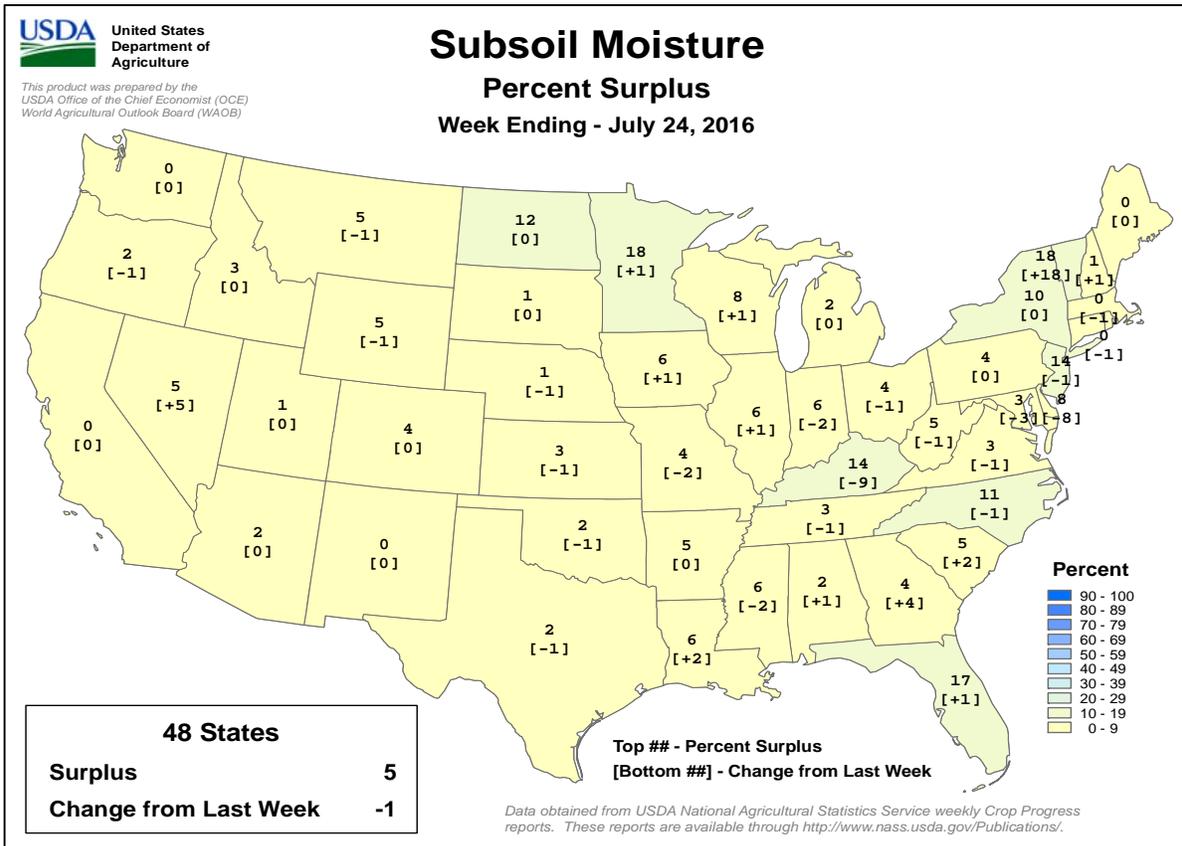
Weekly U.S. Progress and Condition Data provided by USDA/NASS



Crop Progress and Condition

Week Ending July 24, 2016

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



July 14 ENSO Update

EQ. Upper-Ocean Heat Anoms. (deg C) for 180–100W

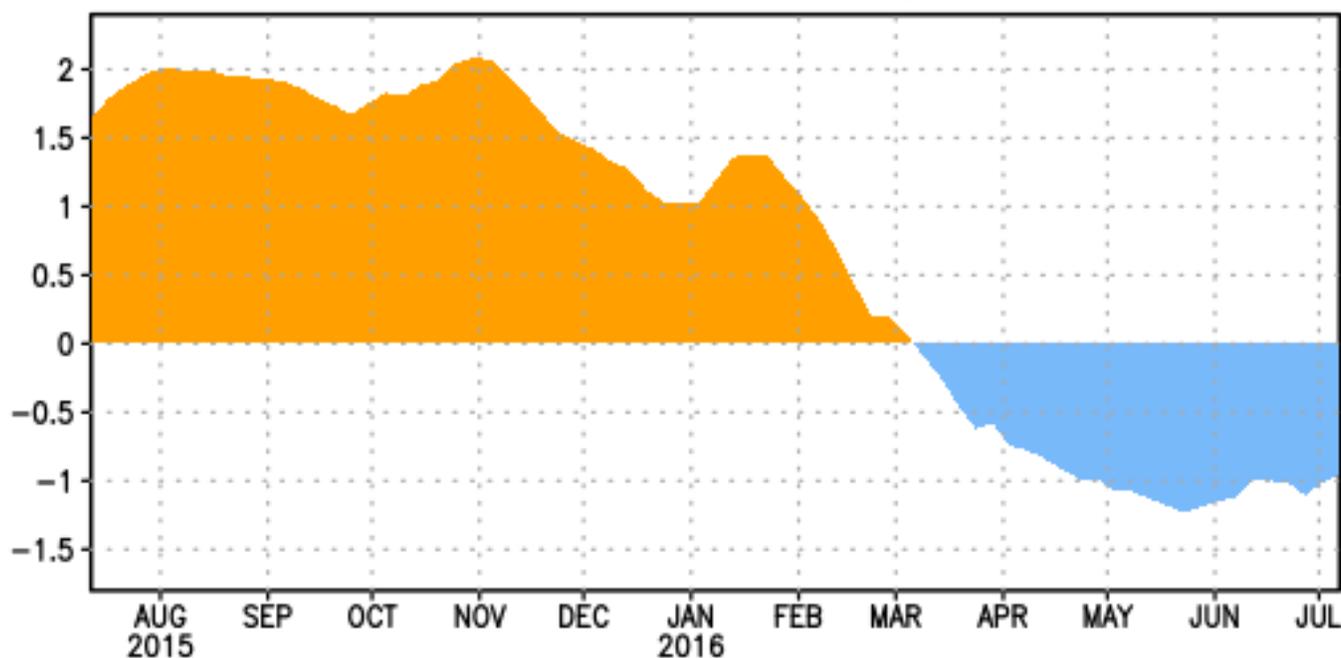


Figure 1: Area-averaged upper-ocean heat content anomaly ($^{\circ}\text{C}$) in the equatorial Pacific (5°N - 5°S , 180° - 100°W). The heat content anomaly is computed as the departure from the 1981-2010 base period pentad means.

ENSO Alert System Status: **La Niña Watch**

Synopsis: La Niña is favored to develop during August - October 2016, with about a 55-60% chance of La Niña during the fall and winter 2016-17.

ENSO-neutral conditions were observed during the past month, as indicated by near-to-below average surface temperatures (SST) across the eastern equatorial Pacific Ocean. While the Niño-4 region was slightly above average, the other Niño indices were either slightly below average or near zero during June. Below-average subsurface temperatures continued (Fig. 1) and extended to the surface in parts of the central and eastern equatorial Pacific. Atmospheric anomalies over the tropical Pacific Ocean also indicated ENSO-neutral conditions. The traditional Southern Oscillation index was slightly positive while the equatorial Southern Oscillation index was near zero. The upper and lower-level winds were both near average across most of the tropical Pacific. Convection was slightly suppressed over portions of the western tropical Pacific and enhanced over part of Indonesia. Collectively, these atmospheric and oceanic anomalies reflect ENSO-neutral conditions.

Many models favor La Niña (3-month average Niño-3.4 index less than or equal to -0.5°C) by the end of the Northern Hemisphere summer, continuing during fall and lasting into winter. Statistical models predict a later onset time (i.e., mid-fall) than dynamical models, and also predict a relatively

weaker event. The forecaster consensus is somewhat of a compromise between the two model types, favoring La Niña onset during the August-October season, and predicting a weak event (Niño-3.4 index between -0.5°C and -1.0°C), if an event were to form. Overall, ENSO-neutral conditions currently prevail and La Niña is favored to develop by August - October 2016, with about a 55-60% chance of La Niña during the fall and winter 2016-17 (click [CPC/IRI consensus forecast](#) for the chance of each outcome for each 3-month period).

This discussion is a consolidated effort of the National Oceanic and Atmospheric Administration (NOAA), NOAA's National Weather Service, and their funded institutions. Oceanic and atmospheric conditions are updated weekly on the Climate Prediction Center web site ([El Niño/La Niña Current Conditions and Expert Discussions](#)). Forecasts are also updated monthly in the [Forecast Forum](#) of CPC's Climate Diagnostics Bulletin. Additional perspectives and analysis are also available in an [ENSO blog](#). The next ENSO Diagnostics Discussion is scheduled for **11 August 2016**. To receive an e-mail notification when the monthly ENSO Diagnostic Discussions are released, please send an e-mail message to: ncep.list.ensu-update@noaa.gov.

International Weather and Crop Summary

July 17-23, 2016

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

HIGHLIGHTS

EUROPE: Early-week heat stressed summer crops in Spain and France, while sunny skies promoted winter crop harvesting and summer crop development over much of northern and eastern Europe.

WESTERN FSU: Stressful heat for reproductive summer crops early in the period contrasted with favorably cooler, wetter weather by mid-week.

EASTERN FSU: Widespread showers maintained abundant moisture supplies for heading to flowering spring wheat, while subsiding heat in the south eased concerns for flowering cotton.

MIDDLE EAST: Heat abated in Turkey, reducing stress on reproductive cotton and corn.

SOUTH ASIA: The monsoon remained active across most of India, ensuring adequate to excessive soil moisture for crops.

EAST ASIA: Untimely dry weather continued to plague reproductive corn and soybeans in northeastern China, as heavy showers maintained flooding along the Yangtze River.

SOUTHEAST ASIA: Seasonal rainfall maintained good moisture conditions in Thailand and environs, while short-term dryness continued in the Philippines.

AUSTRALIA: Widespread showers continued a season-long pattern of near ideal weather for winter grains and oilseeds.

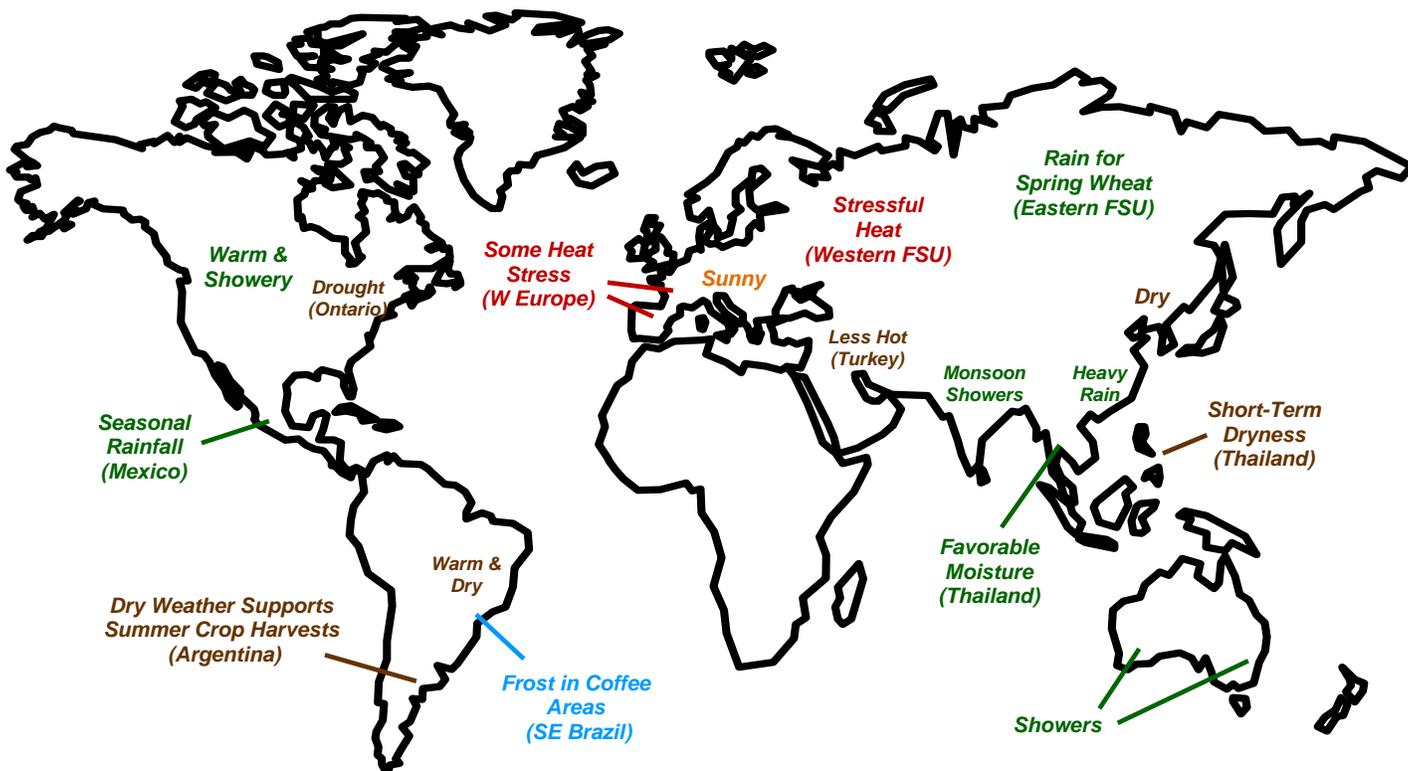
ARGENTINA: Dry weather supported the final stages of corn and cotton harvesting.

BRAZIL: Frost may have caused localized damage to coffee and sugarcane.

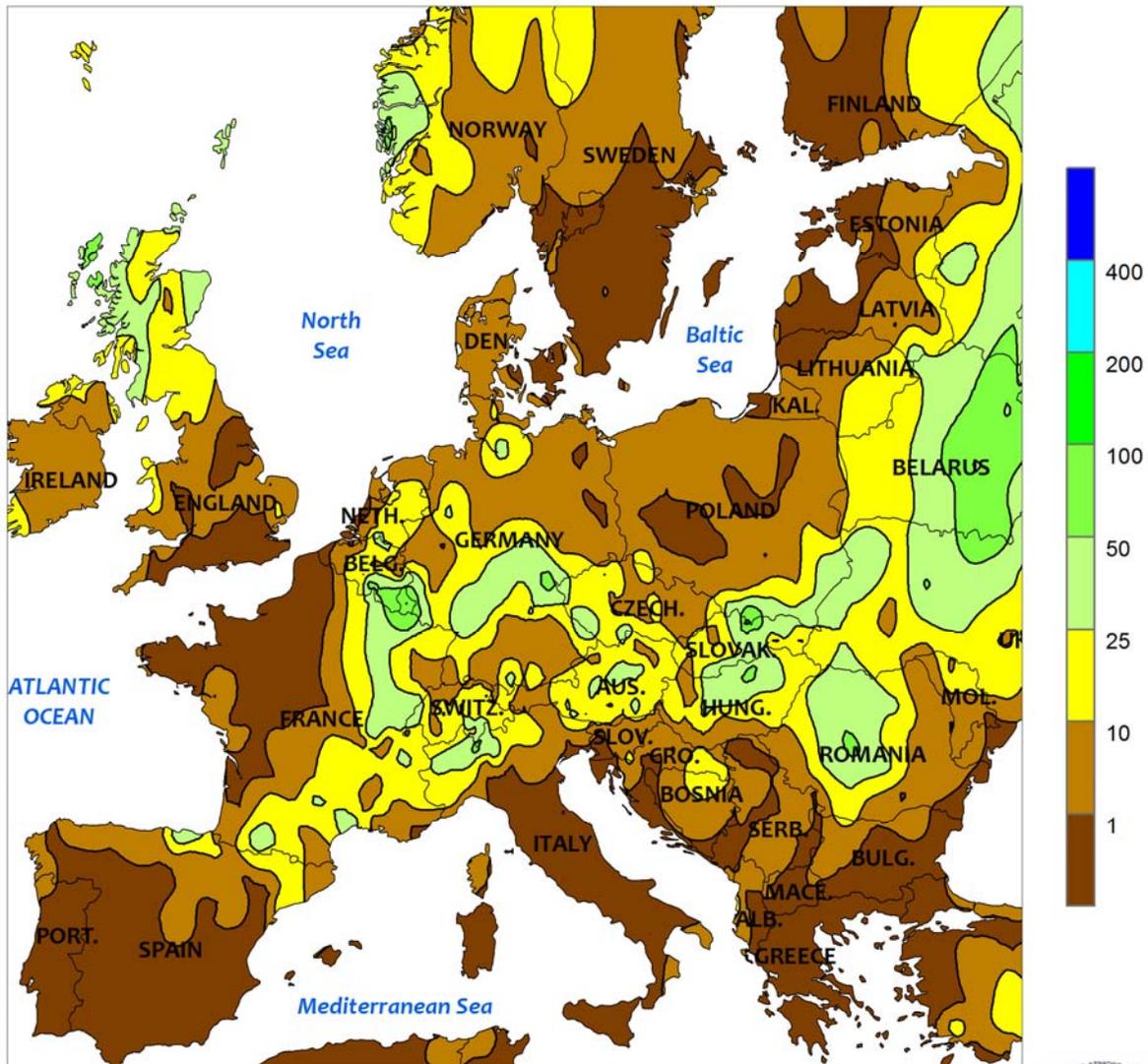
MEXICO: Seasonal showers continued across southern summer crop areas and northwestern watersheds.

CANADIAN PRAIRIES: Warm, showery weather fostered rapid growth of spring grains and oilseeds.

SOUTHEASTERN CANADA: Intensifying drought in Ontario further reduced moisture for corn and soybeans.



EUROPE
Total Precipitation (mm)
JUL 17 - 23, 2016



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

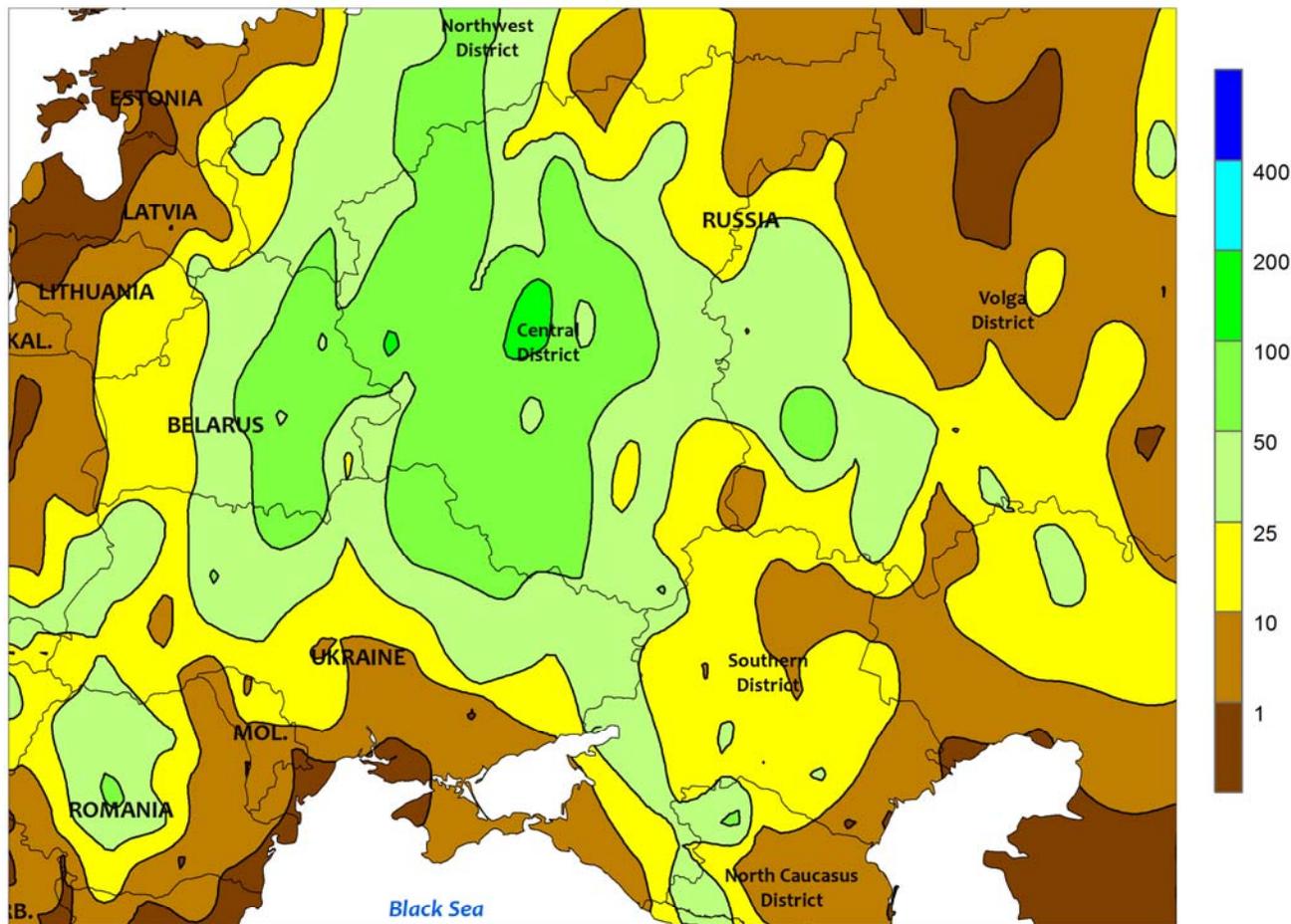


EUROPE

Early-week heat stressed reproductive summer crops in western Europe, while sunny skies favored winter crop harvesting over northern and eastern growing areas. A brief incursion of high heat (35-40°C) stressed tasseling and silking corn in Spain and southwestern France. However, cooler conditions arrived by July 19, keeping the number of high heat days (readings at or above 35°C) well behind last year’s pace, limiting the potential yield loss as corn progressed through the temperature-sensitive tassel and silk stages of development. Across corn areas of northern Italy and the Balkans, scattered,

mostly light showers (2-10 mm, locally more) as well as daytime highs in the lower 30s (degrees C) maintained favorable crop prospects. Unlike last year, corn has experienced few — if any — days of damaging heat (35°C or greater) across southeastern Europe, resulting in vastly improved yield prospects over last year. Meanwhile, sunny skies and above-normal temperatures (2-5°C above normal) accelerated winter crop maturation and harvesting over much of northern Europe, though near-normal temperatures were noted over Poland and the Baltic States.

WESTERN FSU
Total Precipitation (mm)
JUL 17 - 23, 2016



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

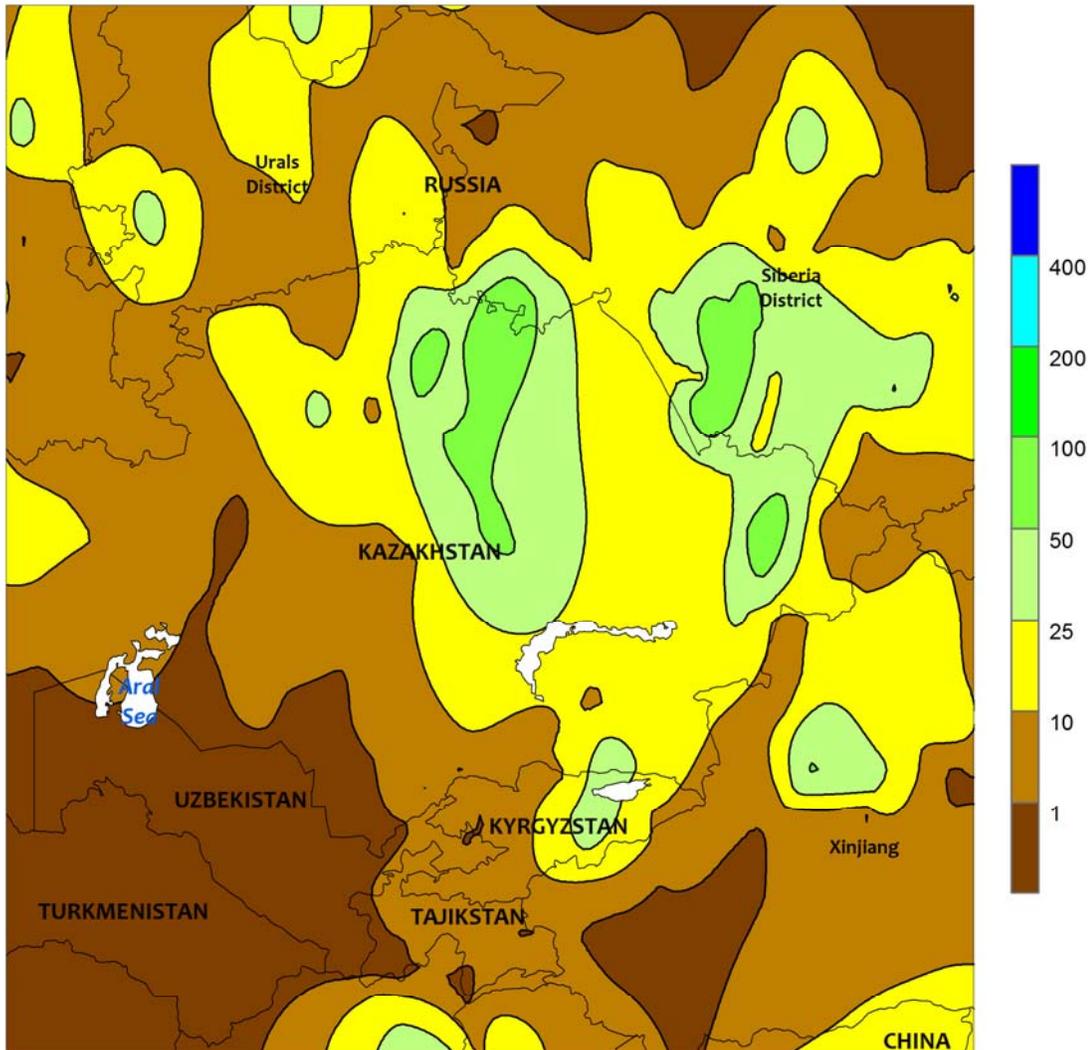


WESTERN FSU

Excessive early-week heat likely trimmed yield prospects for reproductive summer crops, though rainy, cooler conditions by mid-week prevented further yield losses. A continuation of the brief but intense heat wave which began on or about July 14 lingered into the early part of the week, with highs approaching or topping 40°C in key corn and sunflower areas of Russia and Ukraine through July 18. Impacts varied considerably from region to region, largely based on planting dates and the resultant crop development stage. In northern Ukraine and Russia’s Central District, where corn is typically planted in early to mid-May, the heat had little impact as corn was still in the vegetative stages of development. From

southern Ukraine into Russia’s Southern district — where corn is planted somewhat earlier (mean planting date is late April) — corn was in the tassel and silk stages of development when the heat arrived; as a result, corn in southern portions of the region likely suffered some loss of yield potential. However, widespread, locally heavy showers and thunderstorms (10-80 mm) signaled the arrival of cooler weather, limiting the deleterious impacts of the heat on reproductive corn (and to lesser extent sunflowers) to 6 days or less. While potentially harmful for summer crops, the sunny, hot weather enabled a rapid winter wheat harvest pace before the rainy weather slowed fieldwork by mid-week.

EASTERN FSU
 Total Precipitation (mm)
 JUL 17 - 23, 2016



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

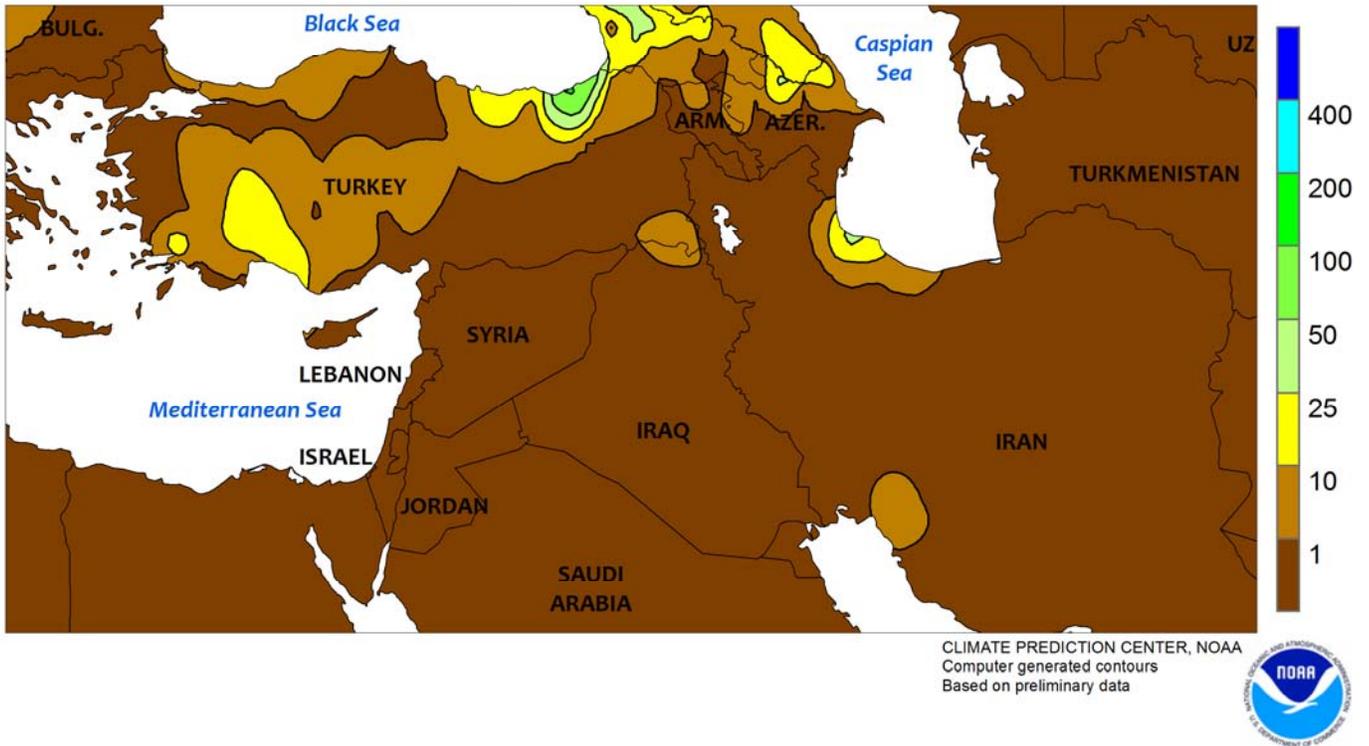


EASTERN FSU

Widespread rain and near-normal temperatures maintained favorable prospects for spring wheat, while somewhat cooler conditions in Uzbekistan eased stress on flowering cotton. With spring wheat in the heading to flowering stages of development, a soaking rainfall (10-90 mm, locally more) over northern Kazakhstan and adjacent portions of central Russia maintained good to excellent yield prospects.

Showers were somewhat lighter (less than 10 mm) in the southern Urals District, but soil moisture was in good supply for flowering spring wheat. Farther south, the return of near-normal temperatures (daytime highs 35-40°C) in Uzbekistan reduced stress caused by last week's heat on irrigated cotton, which continued to progress through the flowering stage of development.

MIDDLE EAST
Total Precipitation (mm)
JUL 17 - 23, 2016

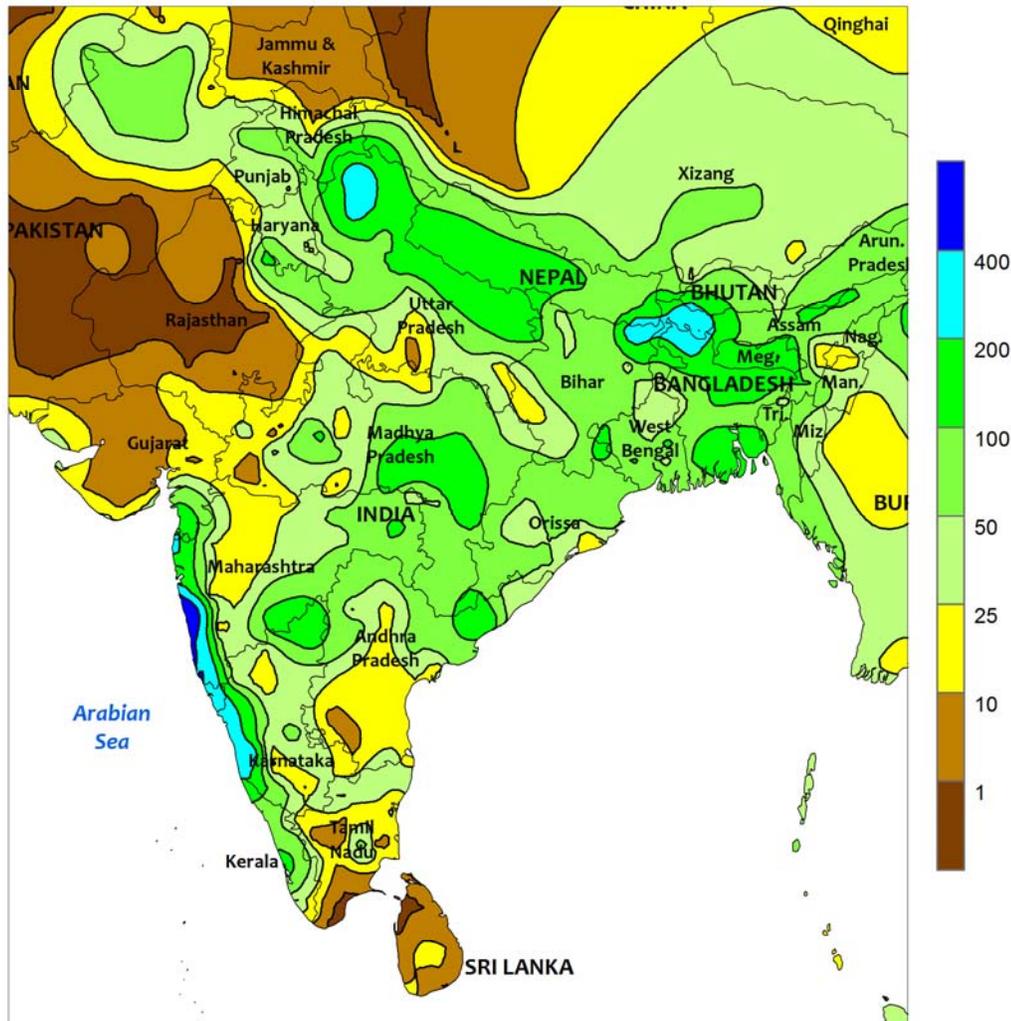


MIDDLE EAST

Despite the continuation of above-normal temperatures, excessive heat subsided in summer crop areas of Turkey. Following last week's 40-degree readings in western Turkey, daytime highs closer to normal (upper 30s degrees C) eased stress on flowering cotton. Likewise, somewhat cooler conditions (32-34°C) arrived over southeastern Turkey's corn

areas; corn in southeastern Turkey was subjected to a week or more of potentially damaging heat (35-38°C) during the reproductive and early filling stages of development in early to mid-July. In contrast, northwestern Turkey's sunflower areas have escaped damaging heat, with daytime highs remaining in the lower to middle 30s (degrees C).

SOUTH ASIA
Total Precipitation (mm)
JUL 17 - 23, 2016



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

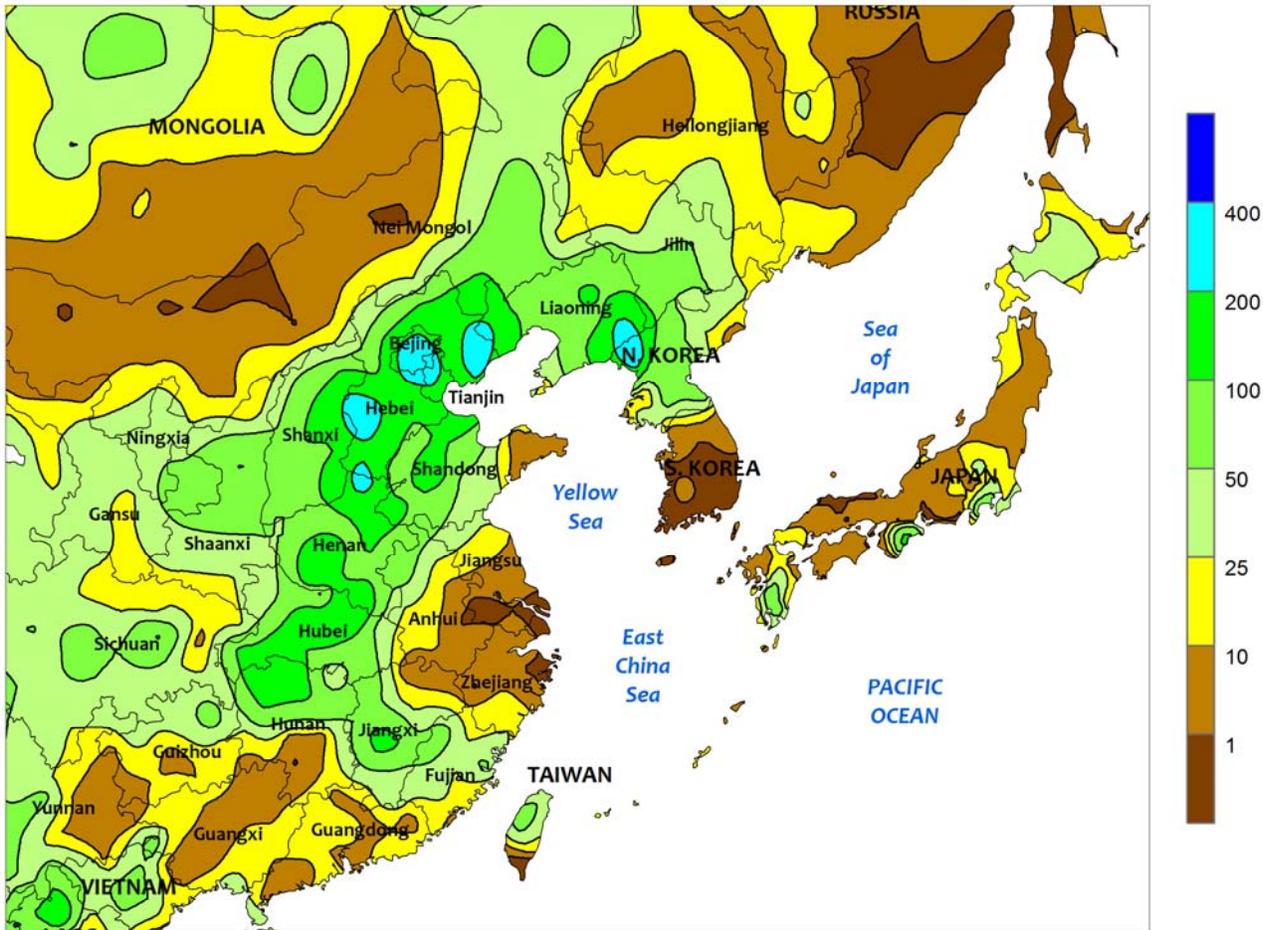


SOUTH ASIA

Monsoon showers continued throughout most of India, with over 80 percent of the country experiencing near- to above-normal rainfall for the season (as reported by the Indian Meteorological Department). For the week though, drier weather was reported in western crop areas of India, easing excessive wetness for soybeans in Madhya Pradesh but exacerbating dryness for cotton in parts of Gujarat. The remainder of India was seasonably

wet, with most eastern rice areas receiving 50 to 100 mm of rain. In addition, 25 mm or more of rainfall in Maharashtra benefited cotton but maintained excessively wet conditions for groundnuts and soybeans. Elsewhere in the region, rainfall continued to keep rice and other crops well watered in Bangladesh and Pakistan, while unseasonable dryness since late June persisted for rice in Sri Lanka.

EASTERN ASIA
Total Precipitation (mm)
JUL 17 - 23, 2016



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

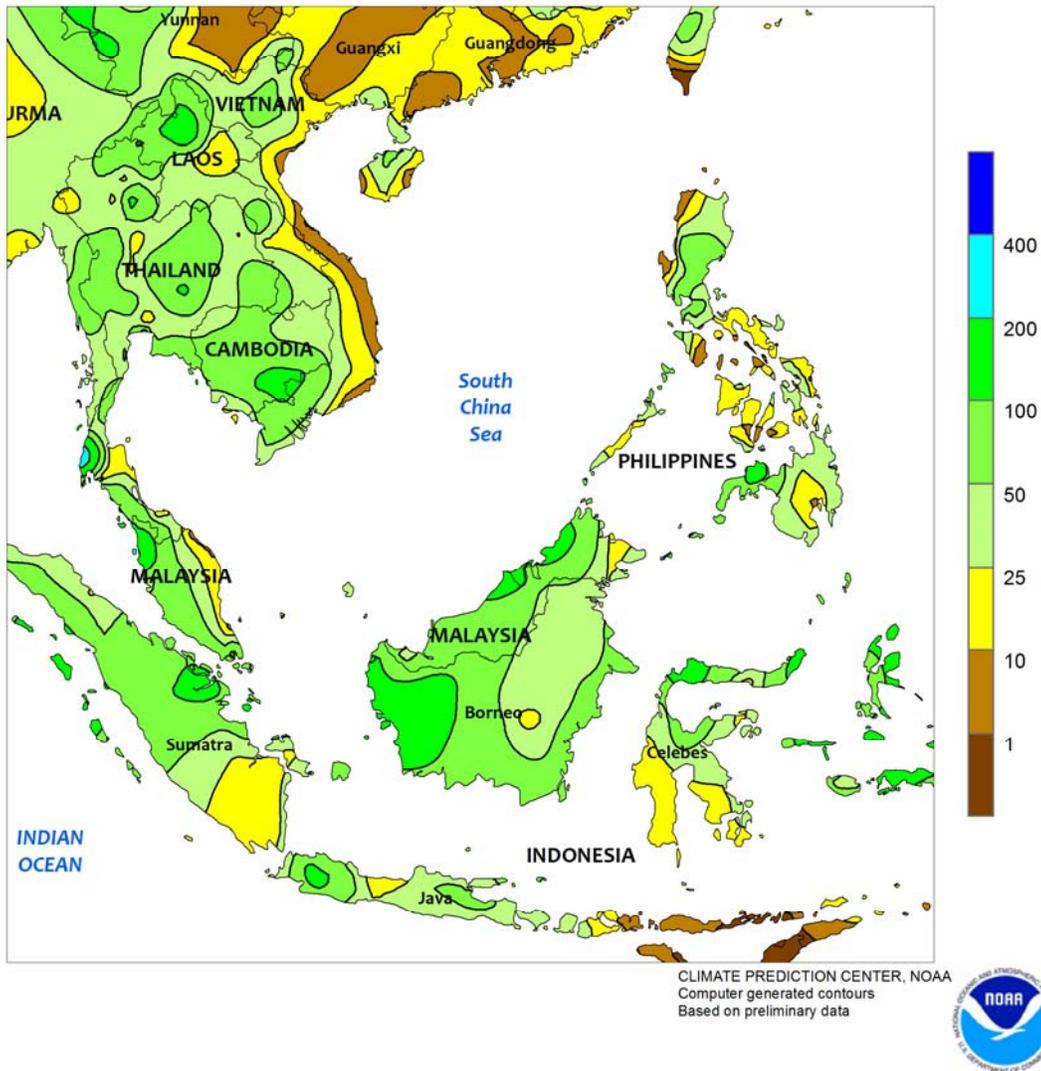


EASTERN ASIA

Untimely dryness continued in parts of northeastern China, as corn and soybeans progressed through the moisture-sensitive reproductive stages of development. Less than 10 mm of rain was reported in key growing areas of Heilongjiang, exacerbating short-term rainfall deficits. Rainfall has averaged little more than 25 mm for the month thus far and crop conditions have begun to decline. In other parts of the northeast, 10 to 25 mm of rain improved moisture conditions in Jilin but monthly deficits remained significant, while heavy showers (50-100 mm) in Liaoning all but eliminated short-

term dryness. Farther south, heavy showers across the North China Plain improved soil moisture and irrigation supplies for summer crops following a dry start to the month. Meanwhile wet weather continued in central portions of the Yangtze River Basin, maintaining flooding and declining crop conditions. Elsewhere in the region, heavy showers increased water supplies for rice in northern North Korea but caused some localized flooding. In contrast, unfavorably dry weather in South Korea and Japan extended a period of unseasonable dryness dating back to the beginning of the month.

SOUTHEAST ASIA
Total Precipitation (mm)
JUL 17 - 23, 2016

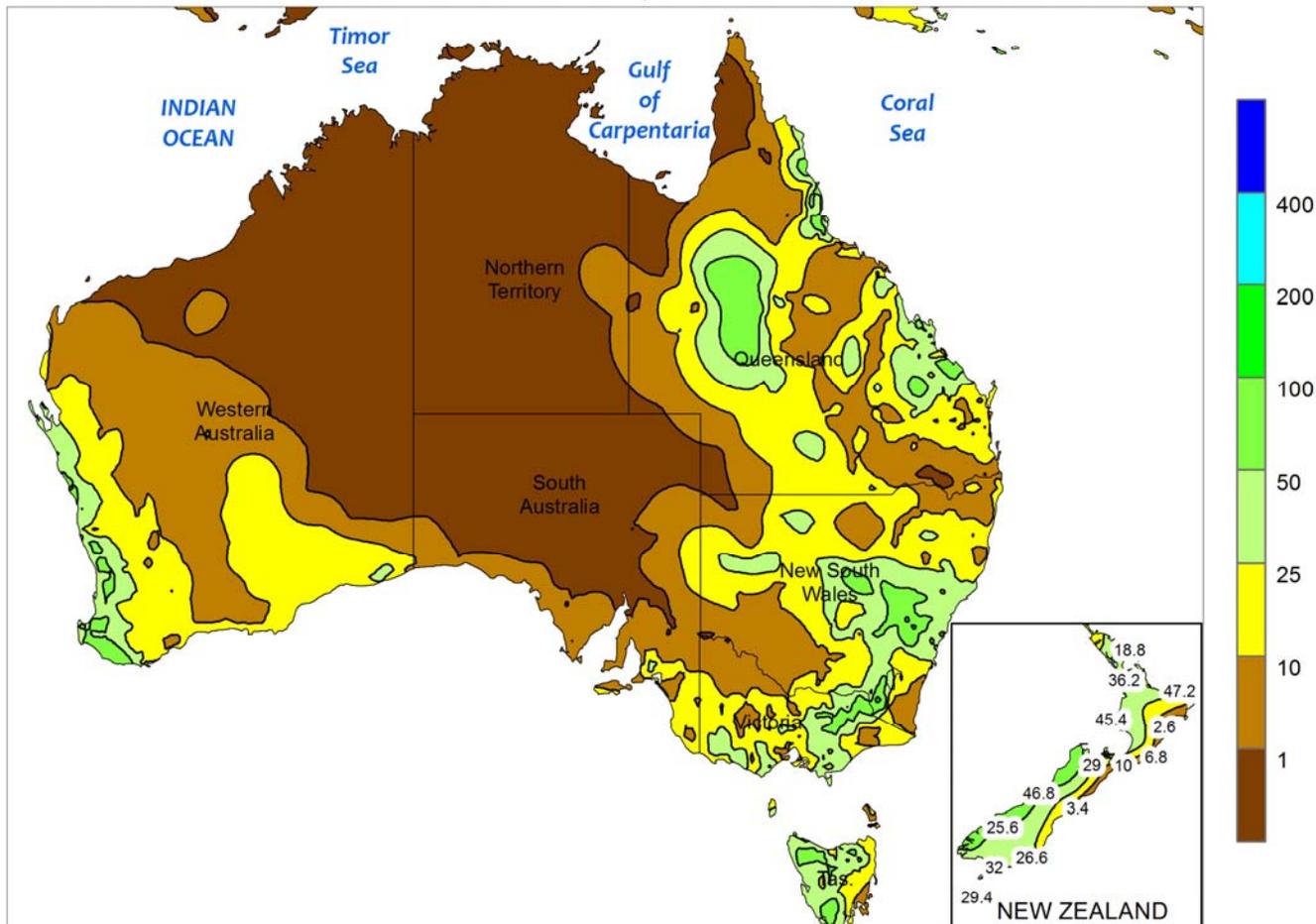


SOUTHEAST ASIA

Seasonably heavy showers continued across Indochina, with most areas receiving 25 to over 100 mm of rain (based on a combination of satellite-derived estimates and surface reports). The consistency of rainfall has maintained good to excellent soil moisture and irrigation supplies for rice across Thailand and environs. To the east, rainfall was unseasonably light throughout the Philippines, extending a period of drier-than-

normal weather that began earlier in the month. Longer-term moisture conditions remained favorable, though, with near-normal total rainfall since June 1 in most crop areas. Meanwhile in oil palm areas of Malaysia and Indonesia, widespread showers (25-100 mm or more) maintained or improved moisture conditions for trees, while exceptionally wet weather continued in Java, Indonesia.

AUSTRALIA
Total Precipitation (mm)
JUL 17 - 23, 2016



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

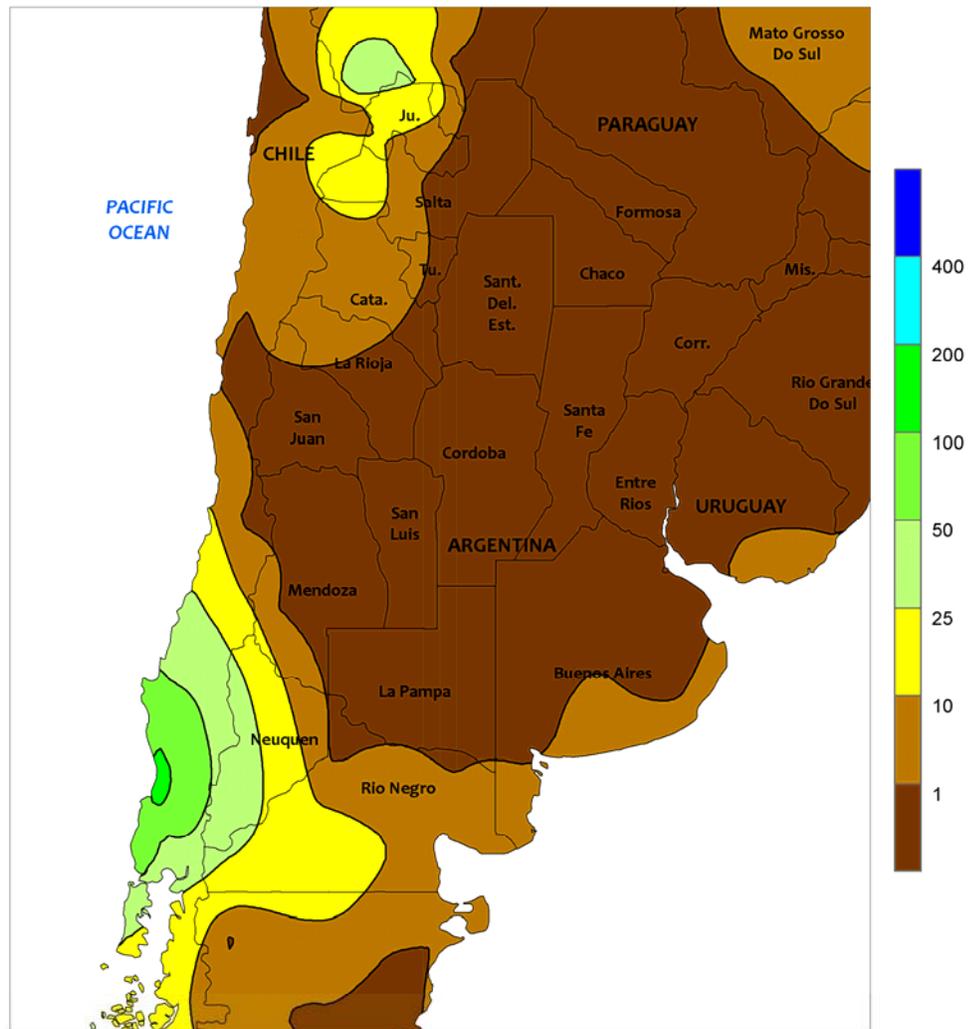


AUSTRALIA

Continuing a season-long pattern of near ideal weather, widespread showers fell across most of the wheat belt, maintaining adequate to abundant moisture supplies for winter grains and oilseeds. Most major crop producing areas in western and southeastern Australia received between 5 and 25 mm of rain. A large portion of New South Wales, however, received between 25 and 50 mm of rain, with locally higher amounts. In contrast to the

majority of the wheat belt, warm, generally dry weather covered southern Queensland. The combination of sunny skies and favorable topsoil moisture benefited wheat and other winter crops, maintaining good to excellent early-season yield prospects. Temperatures in southern and eastern Australia averaged about 2 to 5°C above normal, accelerating crop development. In Western Australia, temperatures averaged near normal.

ARGENTINA
Total Precipitation (mm)
JUL 17 - 23, 2016



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

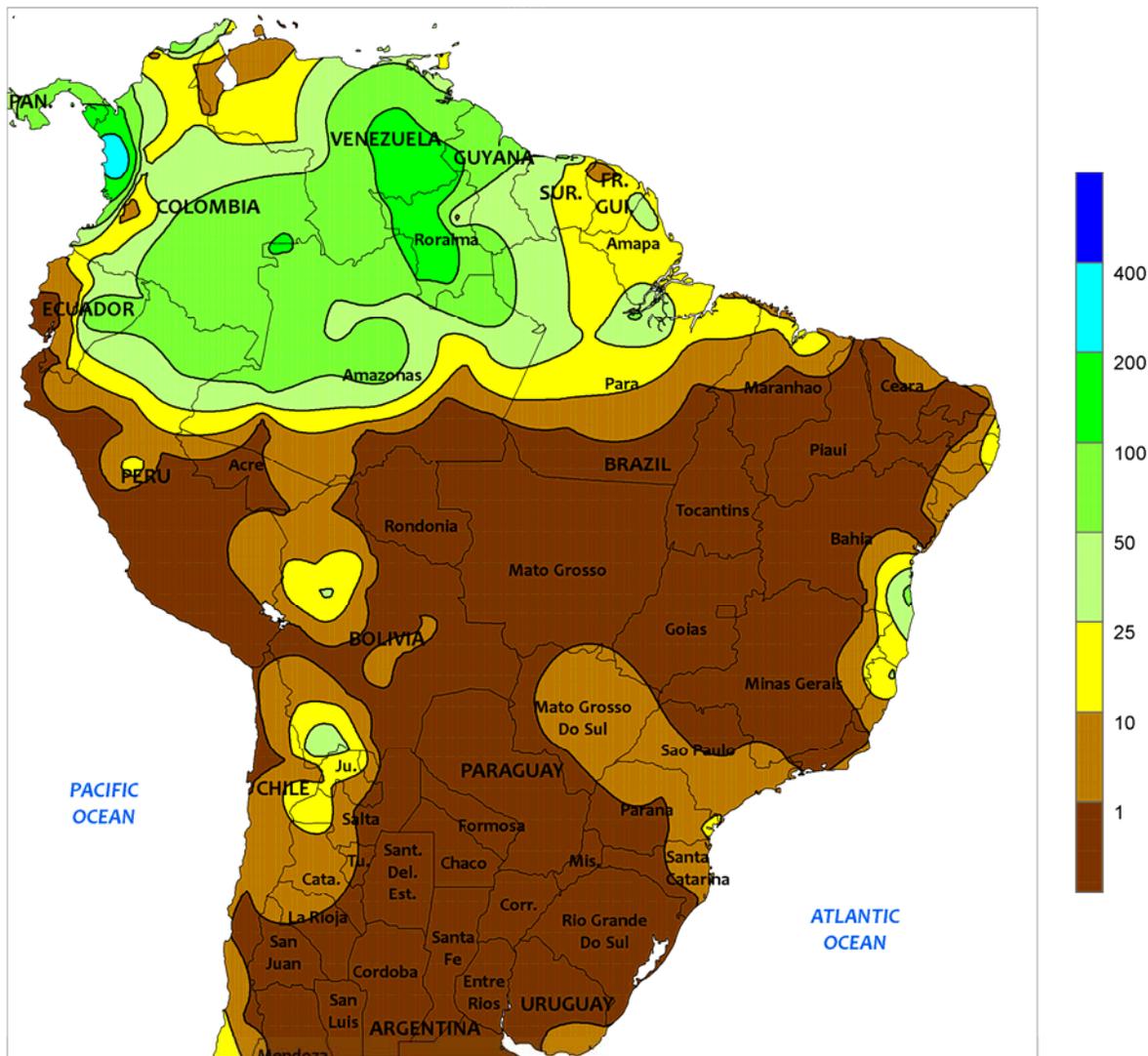


ARGENTINA

Cool, dry weather dominated the region, aiding the latter stages of autumn fieldwork. Aside from some light showers (5 mm or less) along the southern coast of Buenos Aires, no rain fell in areas of agricultural importance. Below-normal temperatures accompanied the dryness, with weekly average temperatures were as much as 4°C below normal in the northeast (Corrientes

and neighboring locations in Entre Rios, Chaco, and Formosa). Nighttime temperatures fell as low as -5°C in southern Buenos Aires, slowing emergence of late-planted wheat. According to Argentina’s Ministry of Agriculture, corn was 61 harvested as of July 21, compared with 84 percent last year. Wheat was 81 percent planted, 9 points behind last year’s pace.

BRAZIL
Total Precipitation (mm)
JUL 17 - 23, 2016



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

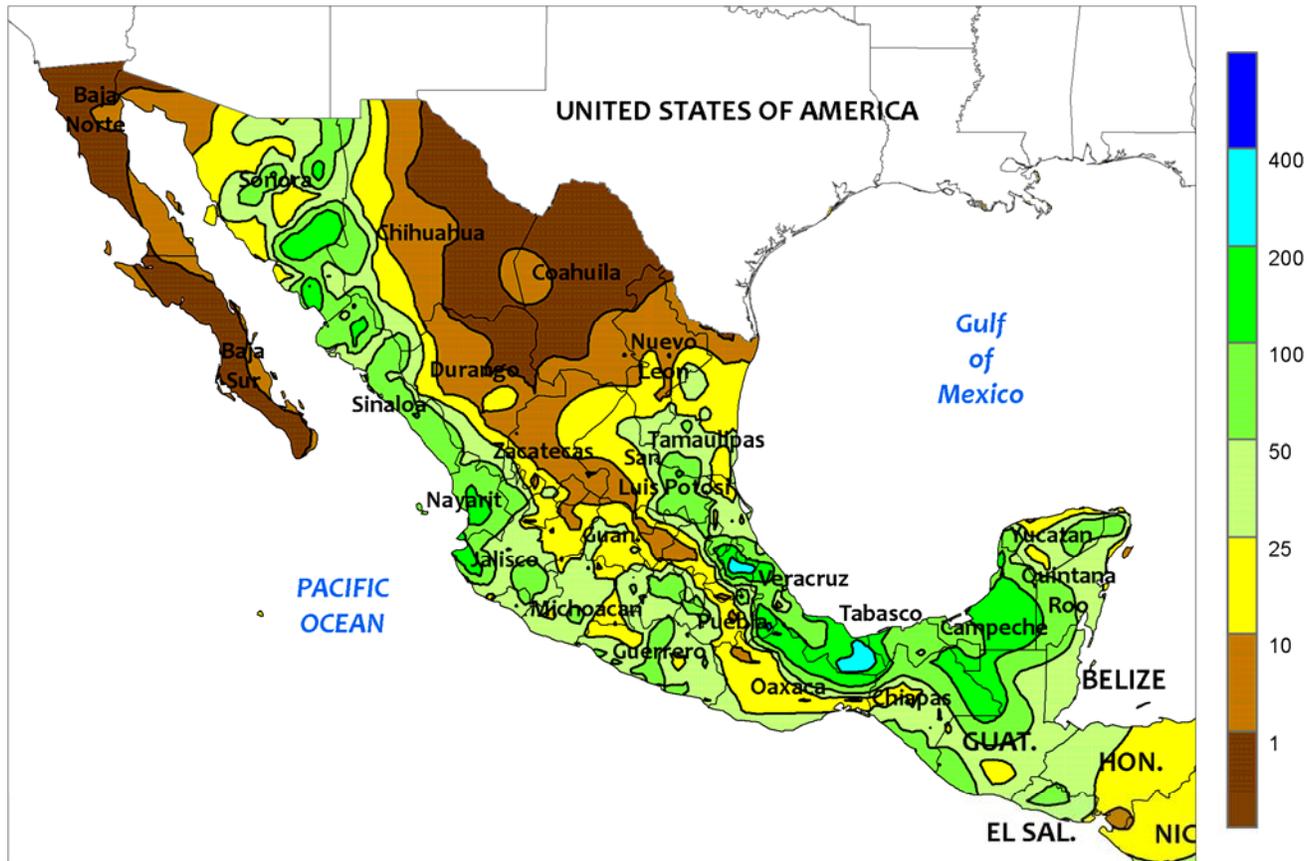


BRAZIL

Frosty weather raised concern for potential damage to coffee and sugarcane in key southeastern production areas. Near-freezing nighttime lows (1-2°C) were recorded in Sao Paulo and southern Minas Gerais, creating the potential for freezes in nearby farming areas. Sub-freezing temperatures (nighttime lows of -3 to 0°C) were recorded from northeastern Rio Grande do Sul to southeastern Parana; though patchy frost was possible elsewhere in the region, secondary crops were likely advanced past the point of possible damage. According

to recent government reports, only a relatively small portion of Parana's total second-crop corn was vulnerable to freeze damage. Temperatures moderated for the remainder of the week, eliminating the risk of further freezes. Dryness accompanied the cool weather, aiding planting and early development of wheat. Farther north, warm, dry weather fostered rapid maturation and drydown of corn and cotton. Light to moderate showers (1-25 mm at most locations) were scattered along the northeastern coast, boosting local moisture reserves.

MEXICO
Total Precipitation (mm)
JUL 17 - 23, 2016



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

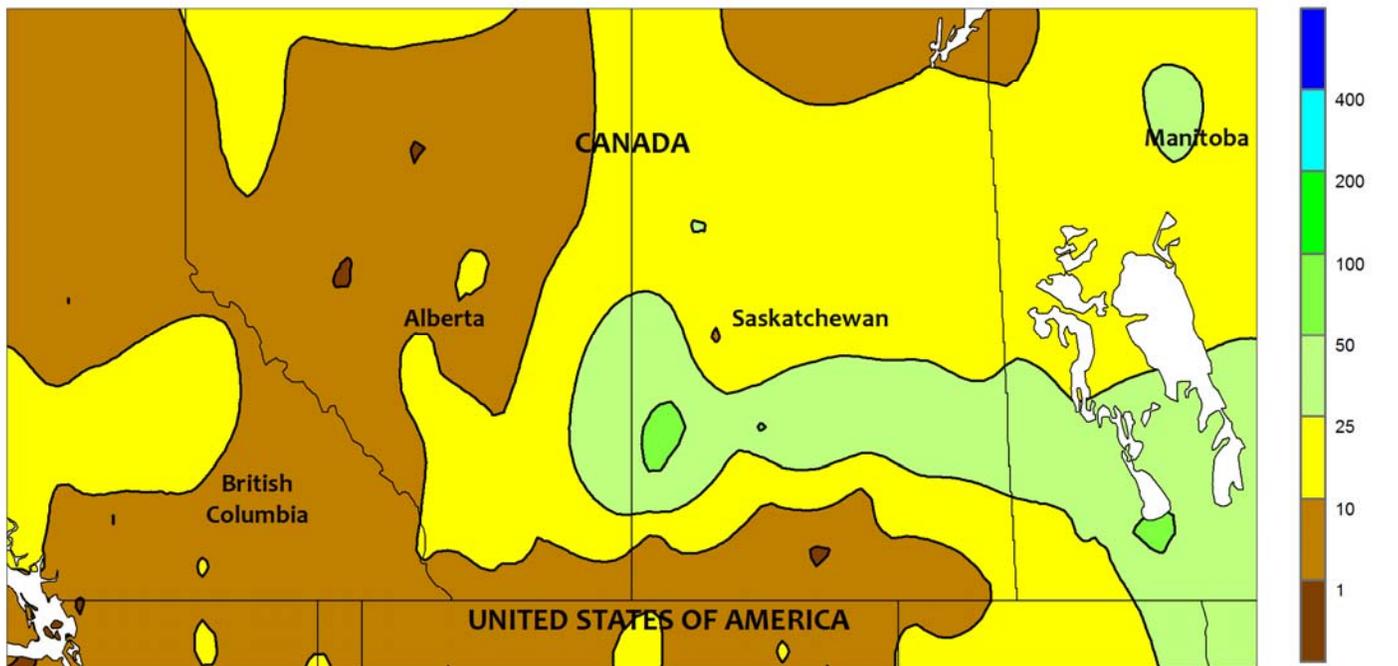


MEXICO

Showers benefited rain-fed summer crops across major southern production areas. Rainfall totaled 10 to 50 mm across the southern plateau corn belt (Jalisco to Puebla), and in corn production areas along the southern Pacific Coast (Michoacan to Oaxaca). Meanwhile, showers intensified from the previous week along the Gulf Coast; the increase was particularly pronounced in Veracruz, benefiting sugarcane but resulting in

flooding where local totals exceeded 100 mm. In Tamaulipas, lighter rain (10-25 mm) brought temporary relief from heat (daytime highs near or above 40°C) stressing livestock and irrigated crops. In the northwest, monsoon showers (10-50 mm, locally higher) continued over mountain watersheds. However, seasonably hot weather (daytime highs from the middle 30s to lower 40s degrees C) sustained high evaporative losses.

CANADIAN PRAIRIES
Total Precipitation (mm)
JUL 17 - 23, 2016



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

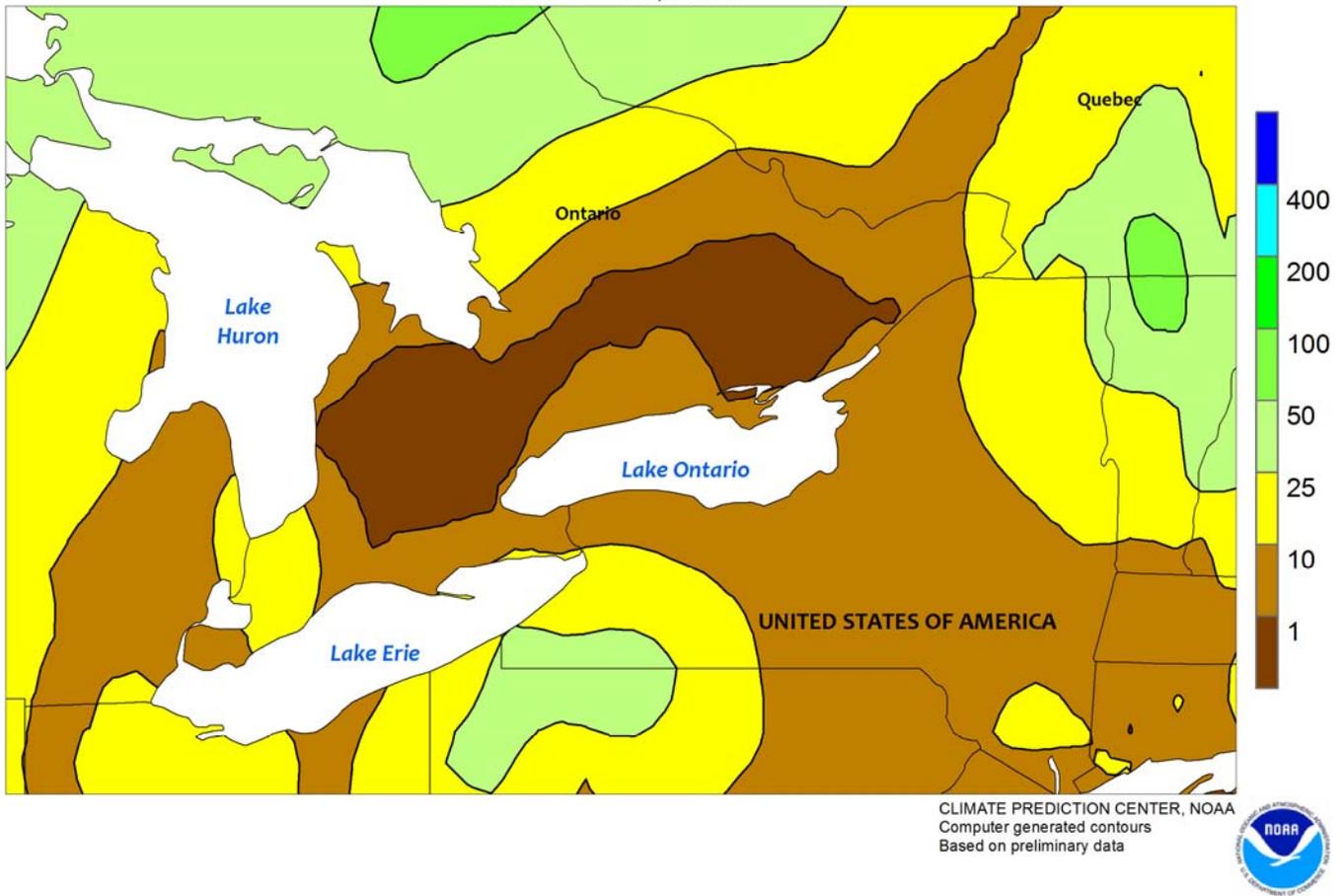


CANADIAN PRAIRIES

Warm, showery weather maintained overall favorable conditions for vegetative to reproductive spring crops. Most locations recorded 5 to 25 mm, although higher amounts (locally greater than 50 mm) were scattered across Saskatchewan and Manitoba. While lower than in recent weeks, the rainfall was generally sufficient for most areas given the current favorable prospects. Weekly temperatures

averaged 1 to 3°C above normal, with daytime highs exceeding 30°C on several days; the summer warmth hastened development of well watered spring grains and oilseeds without posing undue stress. Nighttime temperatures commonly dropped into the 10s (degrees C), even lower in western and northern agricultural areas, offering recovery from the unseasonable warmth for corn and other crops.

SOUTHEASTERN CANADA
Total Precipitation (mm)
JUL 17 - 23, 2016



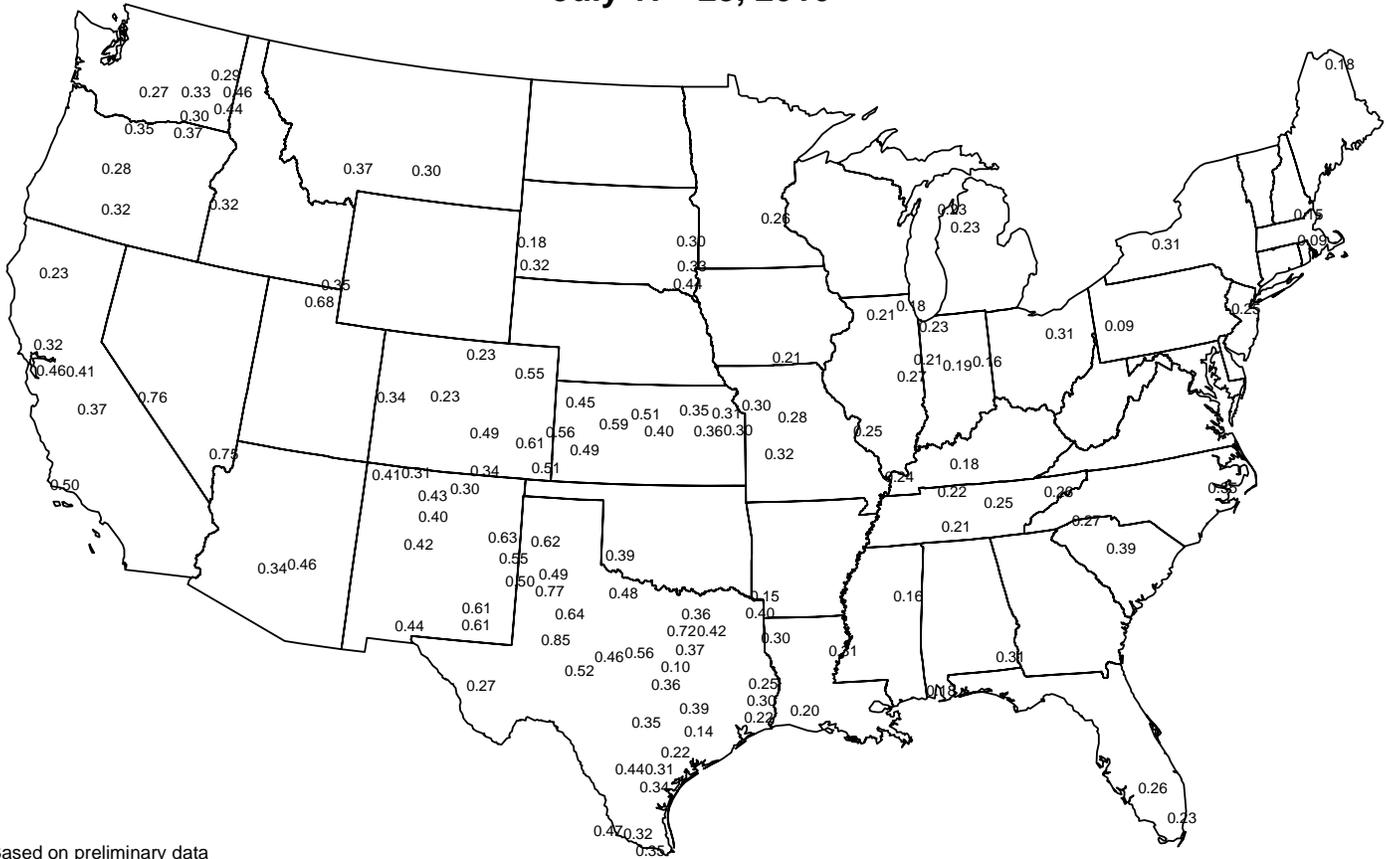
SOUTHEASTERN CANADA

Mostly dry, occasionally warm weather worsened drought conditions affecting summer crops in Ontario. Most areas reported less than 10 mm of rainfall, compounding deficits that have been accumulating since April. In addition, daytime highs reached the lower and middle 30s (degrees C) during the latter half of the week, raising moisture demands and rates of evapotranspiration of corn and soybeans. However, recent

reports out of Canada indicated that yields and condition of winter wheat are exceptional as harvesting advances. Meanwhile, seasonable showers (10-50 mm) continued in Quebec, maintaining more favorable prospects for summer crops and pastures. As in Ontario, daytime highs reaching the lower 30s maintained high crop moisture demands and evaporative losses.

Average Pan Evaporation (inches/day)

July 17 - 23, 2016



Based on preliminary data

USDA Agricultural Weather Assessments

Data obtained from the NWS Cooperative Observer Network.

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