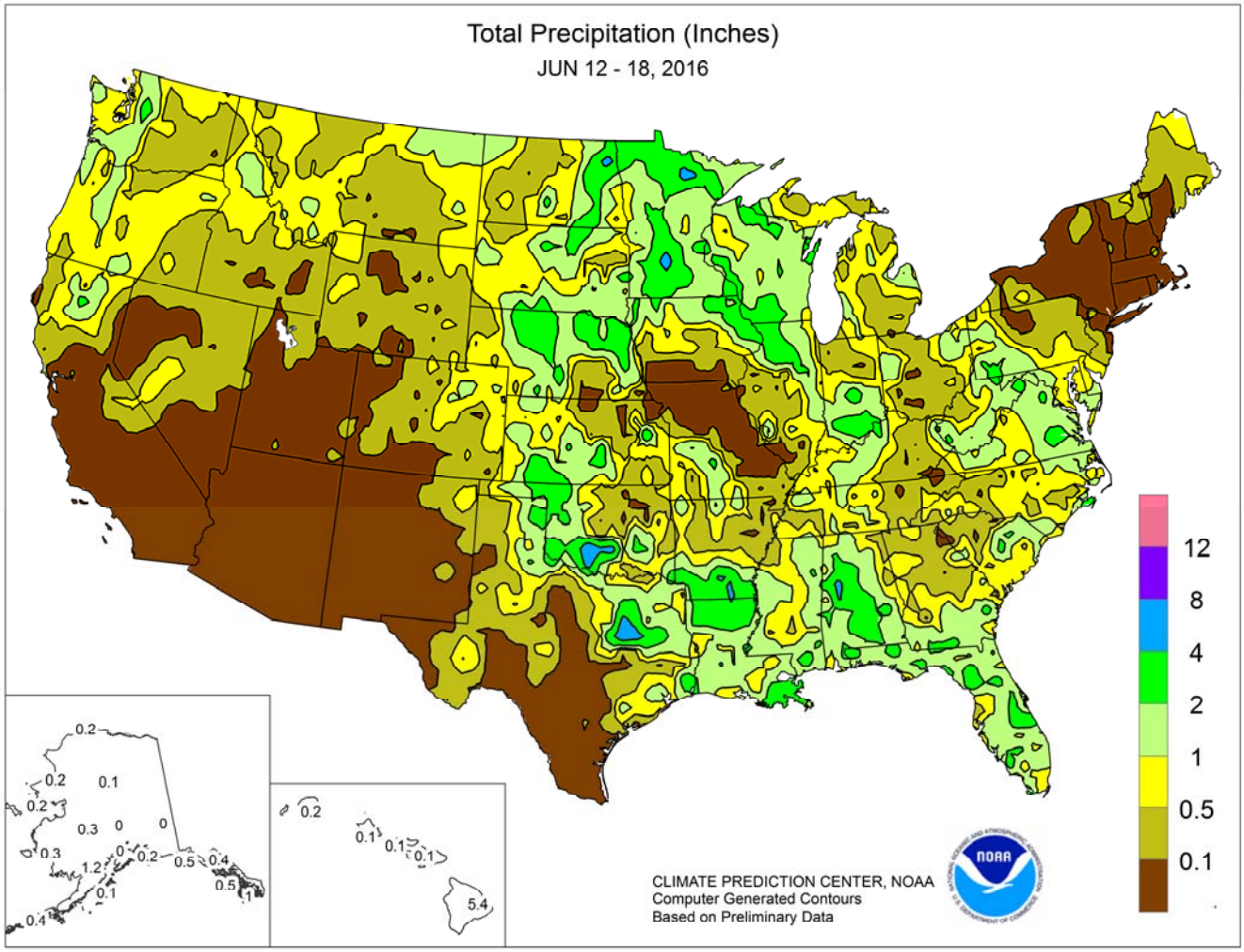
Volume 103, No. 25 http://www.usda.gov/oce/weather June 21, 2016

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

June 12 – 18, 2016

Highlights provided by USDA/WAOB

Despite an early-season heat wave across the **nation's mid-section**, widespread showers helped to offset evaporative losses. Weekly rainfall totals of 1 to 2 inches or more were common from across the **Plains**. However, a broad area centered on **northern Missouri** remained mostly dry, leading to increased stress on pastures and summer crops in the **southwestern Corn Belt**. In fact, weekly temperatures averaged at least 10°F above normal in parts of the **middle and lower Missouri Valley**. Meanwhile, seasonably dry weather prevailed in the

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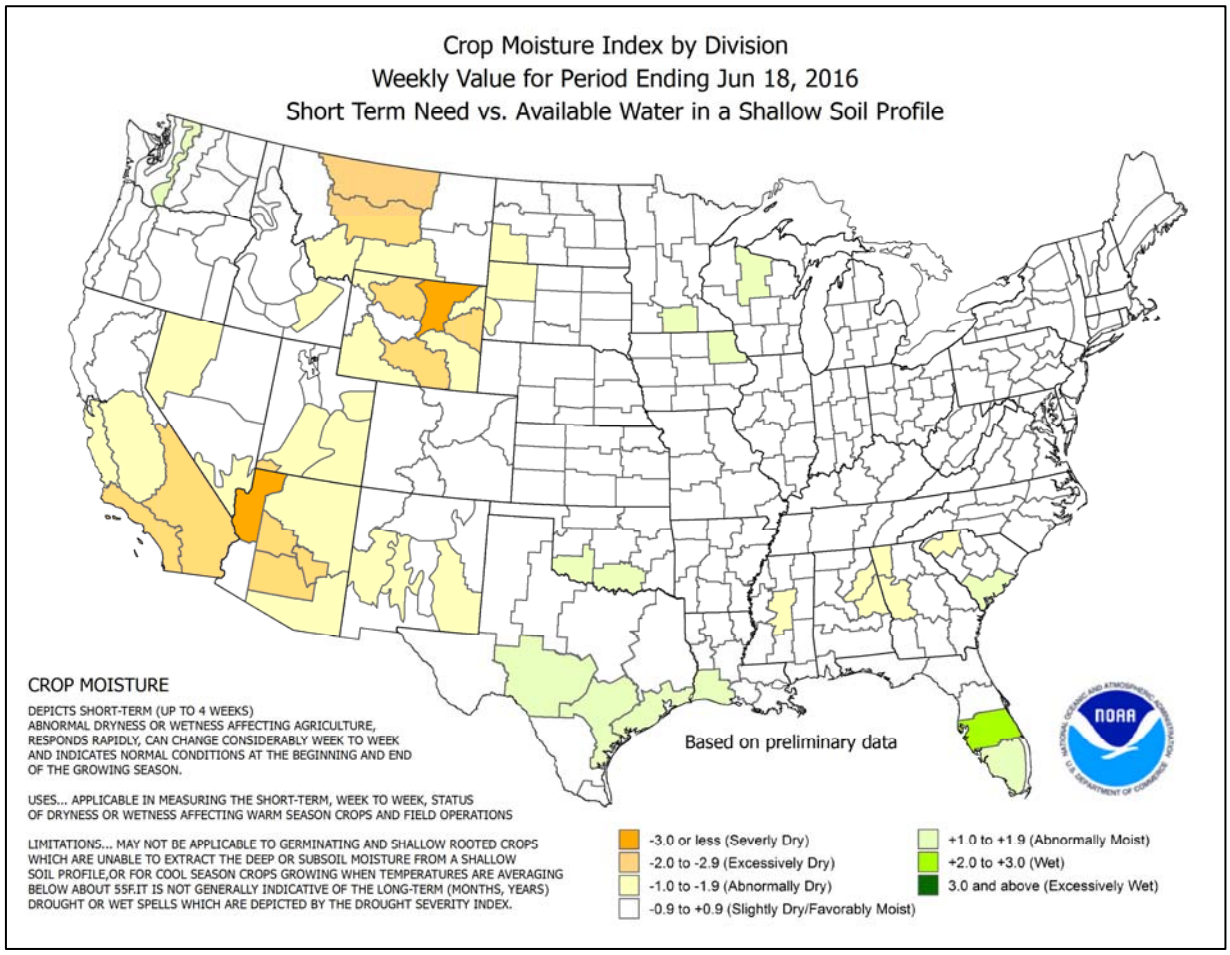
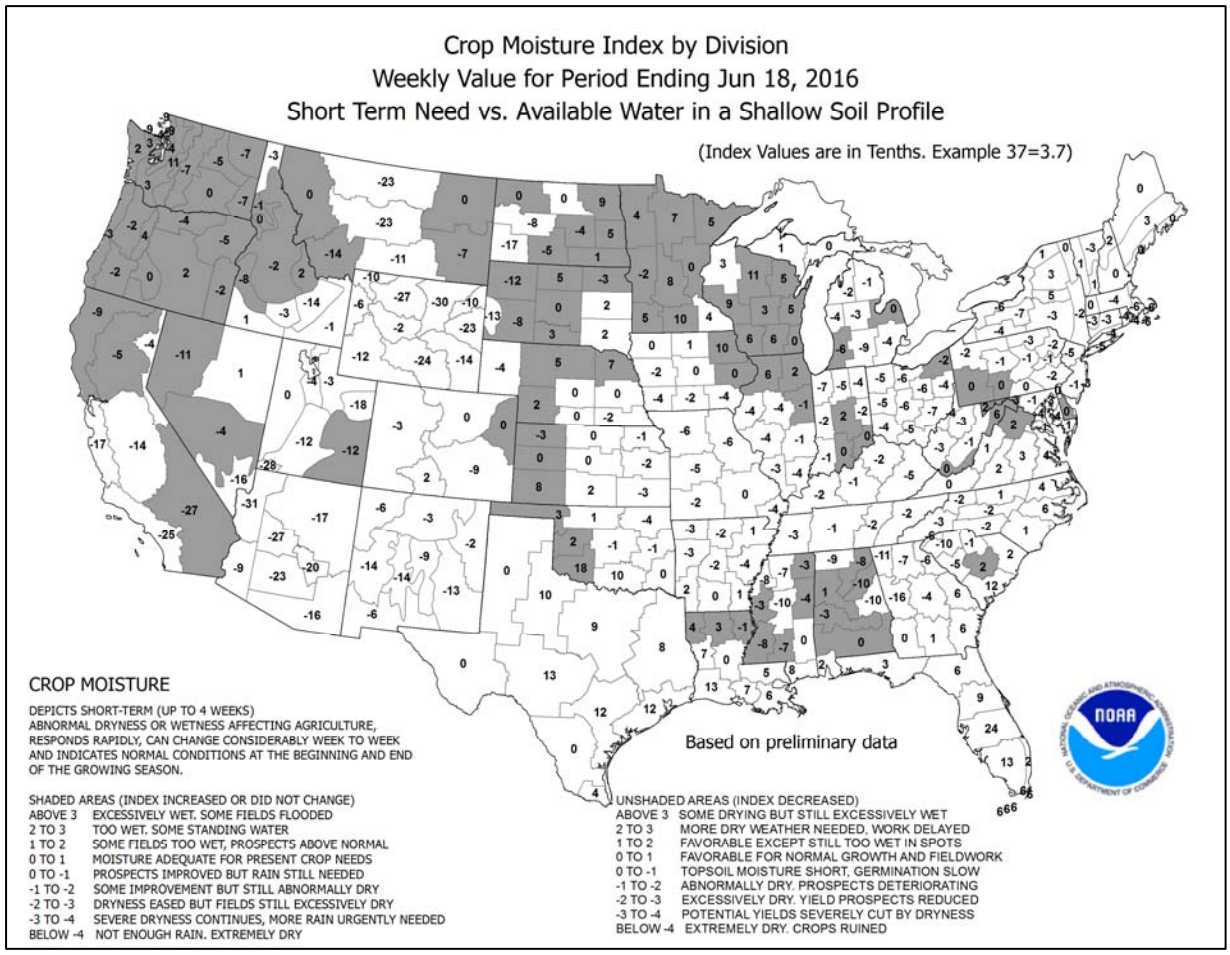
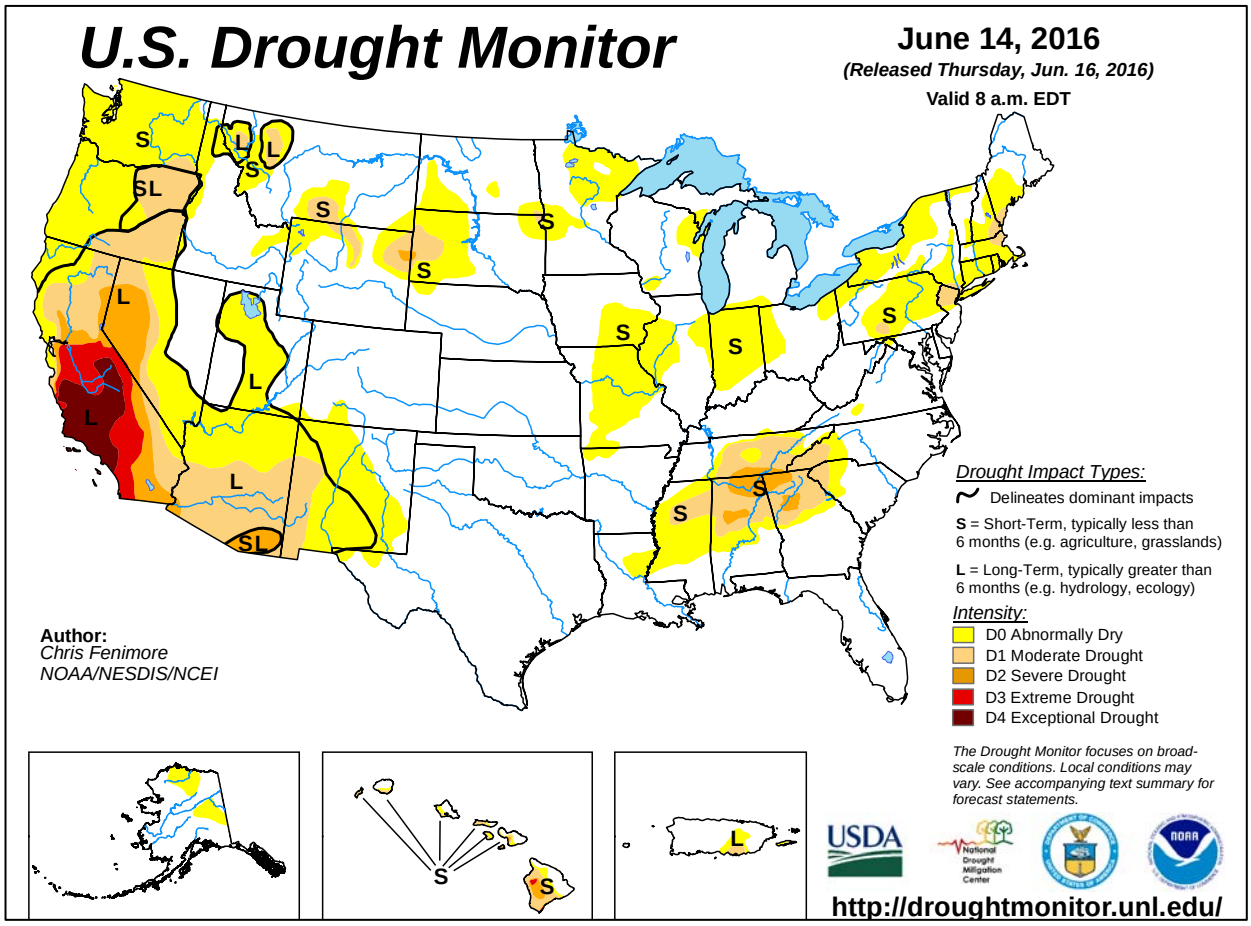
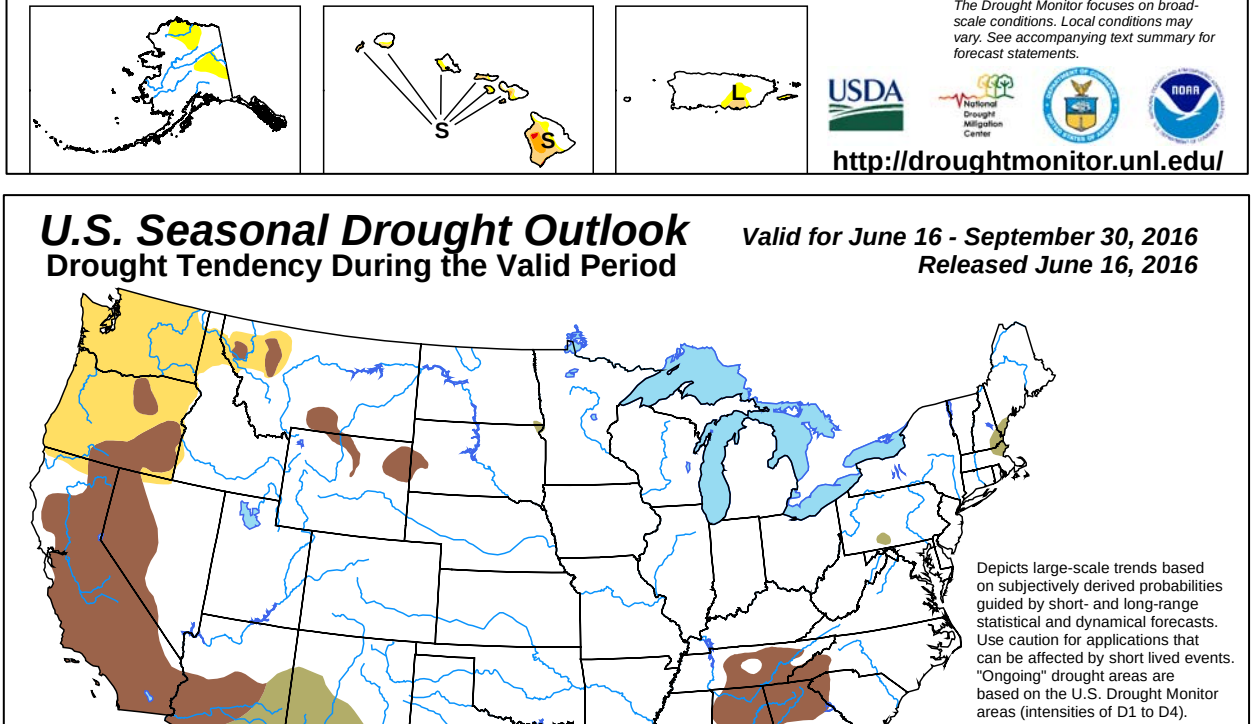
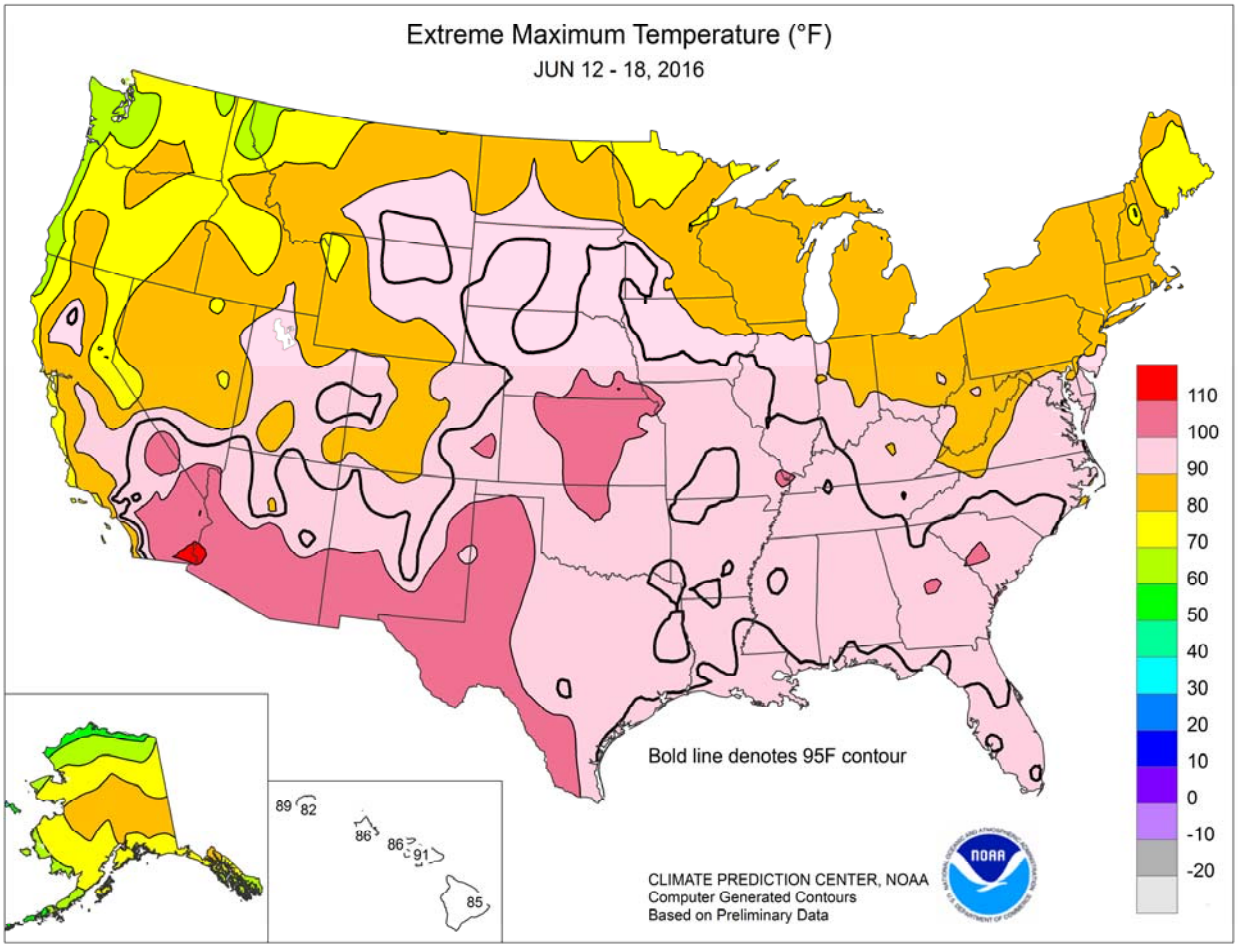
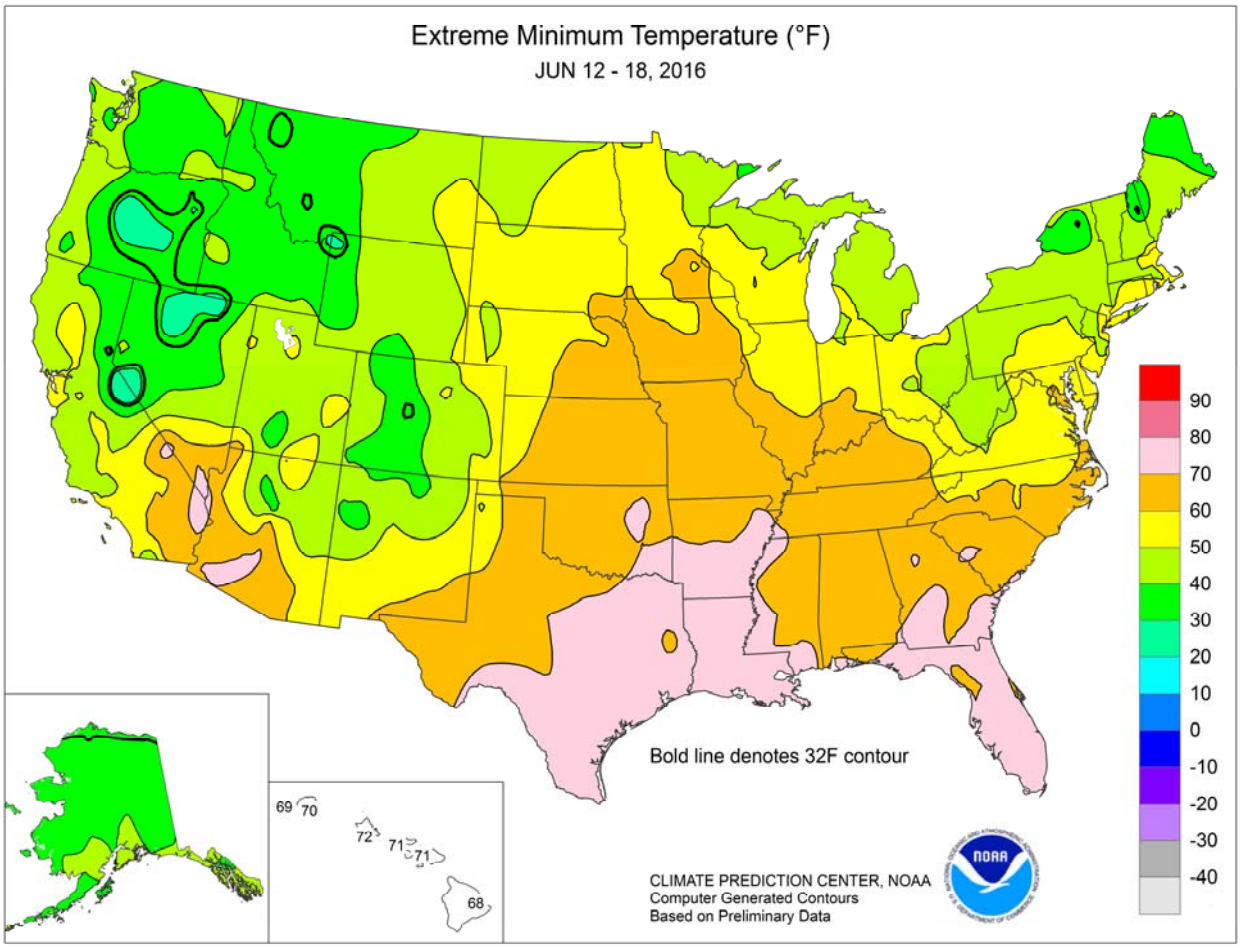

Crop Moisture Index by Division
Weekly Value for Period Ending Jun 18, 2016
Short Term Need vs. Available Water in a Shallow Soil Profile
CROP MOISTURE
DEPICTS SHORT-TERM (UP TO 4 WEEKS) ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE, RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK AND INDICATES 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.
Based on preliminary data
-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)
NOAA


Crop Moisture Index by Division
Weekly Value for Period Ending Jun 18, 2016
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
Based on preliminary data
NOAA


U.S. Drought Monitor
June 14, 2016
(Released Thursday, Jun. 16, 2016)
Valid 8 a.m. EDT
Author:
Chris Fenimore
NOAA/NESDIS/NCEI
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:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
http://droughtmonitor.unl.edu/

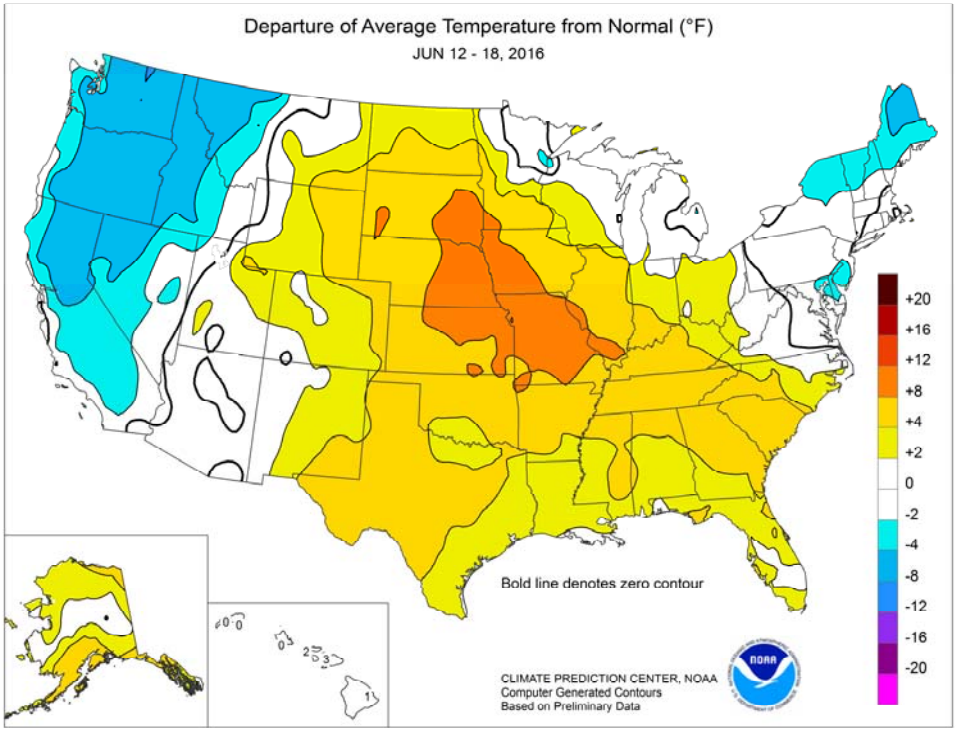

U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period
Valid for June 16 - September 30, 2016
Released June 16, 2016
Author:
David Miskus
NOAA/NWS/NCEP/Climate Prediction Center
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).
NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).
Drought persists
Drought remains but improves
Drought removal likely
Drought development likely
http://go.usa.gov/3eZ73


Extreme Maximum Temperature (°F)
JUN 12 - 18, 2016
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
Bold line denotes 95F contour
89
82
86
86
91
85
CLIMATE PREDICTION CENTER, NOAA
Computer Generated Contours
Based on Preliminary Data


Extreme Minimum Temperature (°F)
JUN 12 - 18, 2016
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
Bold line denotes 32F contour
69
70
72
71
71
68
CLIMATE PREDICTION CENTER, NOAA
Computer Generated Contours
Based on Preliminary Data

(Continued from front cover)

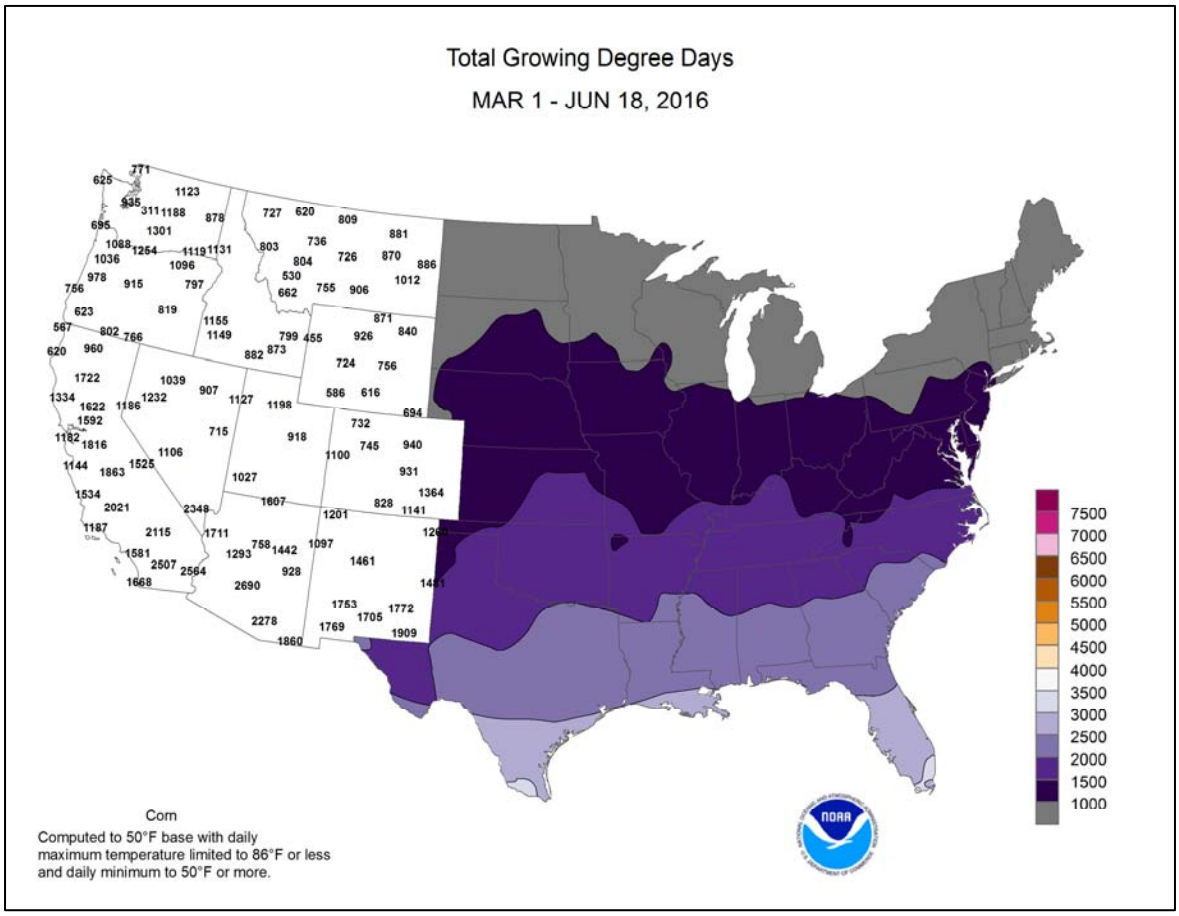
Southwest, despite several days of cool weather. At week's end, however, building heat brought a return of record-setting **Southwestern** temperatures. Farther north, beneficial showers accompanied cool conditions in the **Northwest**. Temperatures averaged more than 5°F below normal in much of **northern California** and the **Northwest**. Similarly, widespread showers—which formed near the boundary of hot air to the southwest and cooler air to the northeast—maintained favorable conditions for corn and soybeans across the **upper Midwest**. Elsewhere, generally cool, dry weather prevailed in the **Northeast**, while very warm conditions accompanied scattered showers across the **South**. In spite of the showers, developing drought remained a concern from **northern and central Mississippi to the southern Appalachians**.

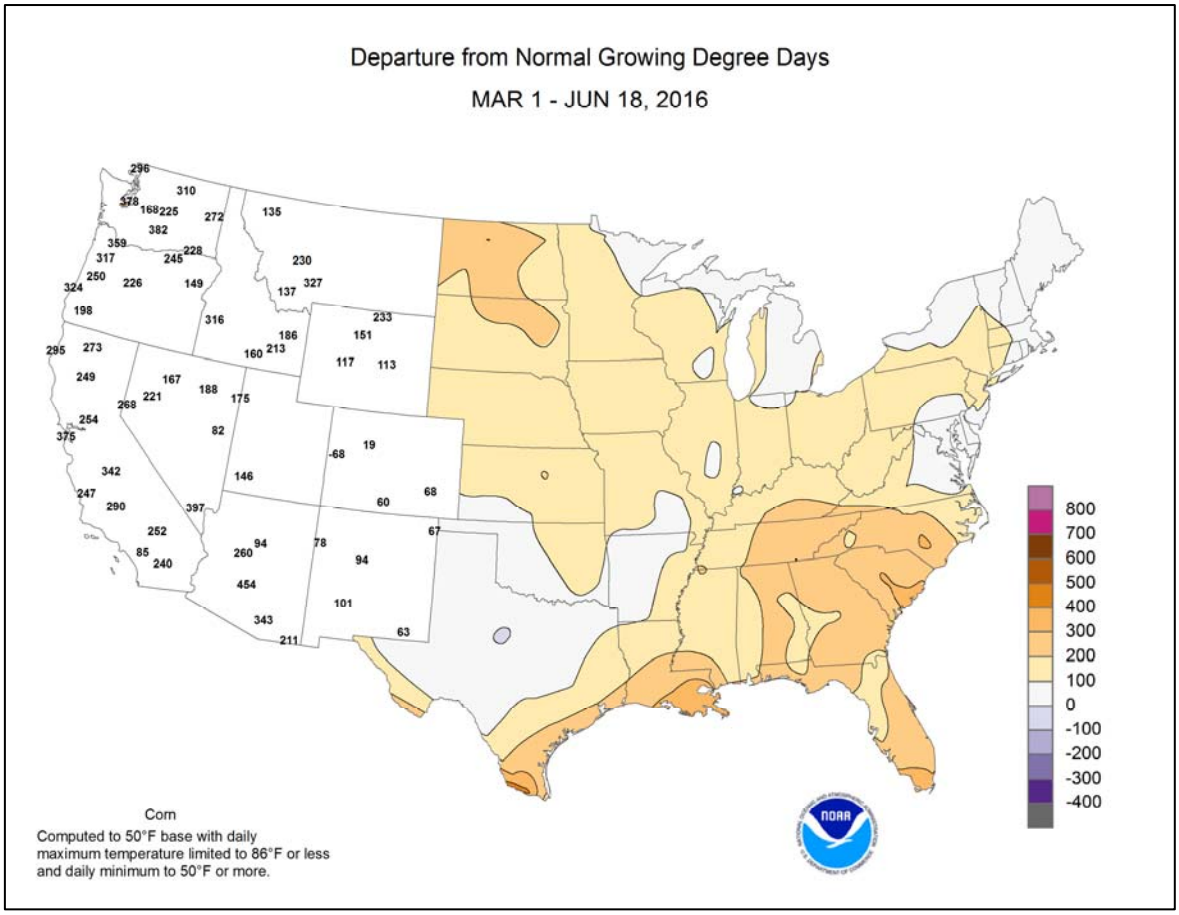


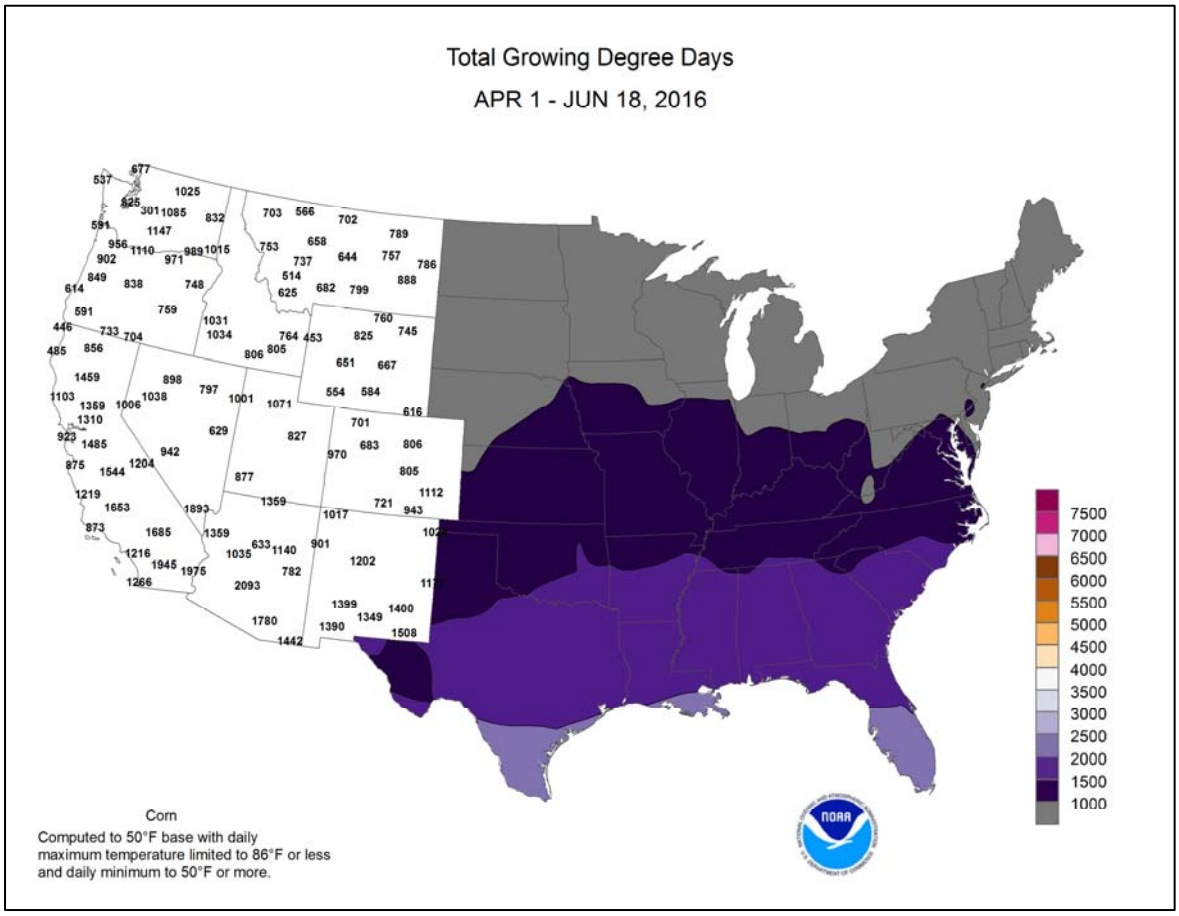
As the week began, heat was in place across the **middle and southern Atlantic States**. Daily-record highs for June 12 soared to 97°F in **Charleston, SC**, and 93°F in **Atlantic City NJ**. The following day, **St. Simons Island, GA**, posted a record-setting high (98°F) for June 13. Meanwhile, hot weather also prevailed across a broad area stretching from the **northern Plains into the middle Mississippi Valley**. **Sisseton, SD**, notched a daily-record high of 97°F on June 12, followed the next day by a record-setting high of 95°F in **Springfield, IL**. By mid-week, heat intensified across the **southwestern Corn Belt** and environs. Daily-record highs for June 15 surged to 106°F in **Salina, KS**; 101°F in **St. Joseph, MO**; 97°F in **Ottumwa, IA**; and 96°F in **Moline, IL**. On June 16, the high of 101°F in **Cape Girardeau, MO**, represented its second-earliest triple-digit reading behind 100°F on June 11, 1977. Other triple-digit, daily-record highs for June 16 included 102°F in **Medicine Lodge, KS**; 101°F in **Columbia, SC**; and 100°F in **Chadron, NE**. The parade of triple-digit records across the **Plains** and **Southeast** persisted through June 17, when highs climbed to 102°F in **Hastings, NE**; 102°F in **Russell, KS**; and 101°F in **Macon, GA**. At week's end, heat returned to the **Southwest**, where **El Paso, TX**, collected a daily-record high of 108°F. Heat reached as far north as **Wyoming**, where record-setting highs for June 18 reached 98°F in both **Sheridan** and **Worland**. In stark contrast, cool conditions dominated the **Northwest** for much of the week. June 12 featured daily-record lows in **Montana** locations such as **Kalispell** and **Missoula**—both 34°F. Cool air also settled across the **Northeast**, where **Watertown, NY**, tallied a daily-record (36°F) on June 14. Three days later, **Houlton, ME**, registered a daily-record low (34°F) for June 17. In the **Northwest**, other daily-record lows included 24°F (on June 15) in **Redmond, OR**; 25°F (on June 16) in **Winnemucca, NV**; and 31°F in Goldendale, WA (on June 15).

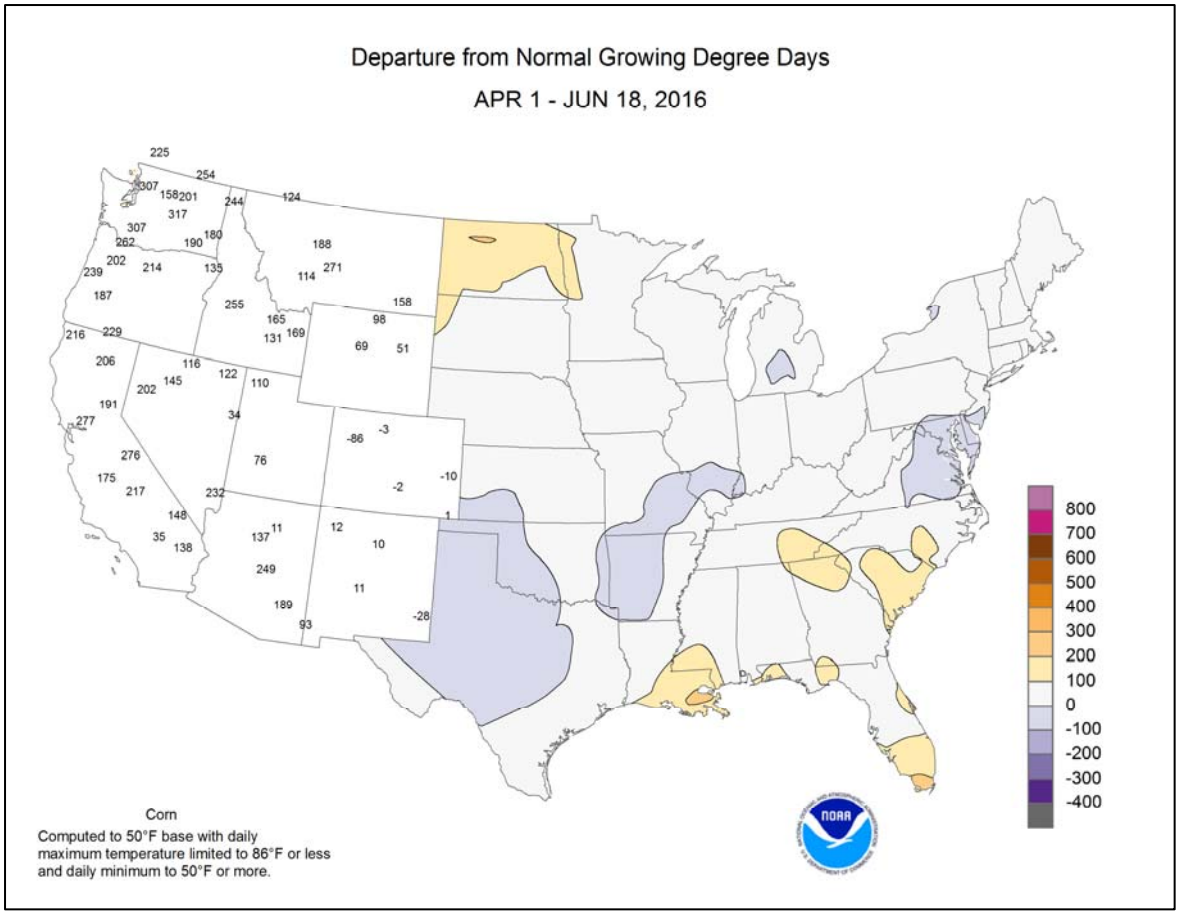
Hit-or-miss showers and thunderstorms across the **central and eastern U.S.** resulted in daily-record totals in several locations. Totals reached or exceeded 2 inches in several places, including **Waco, TX** (3.48 inches on June 12); **Virginia's Dulles Airport** (2.82 inches on June 16); **Bismarck, ND** (2.62 inches on June 14); **Midland, TX** (2.47 inches on June 12); and **Valentine, NE** (2.00 inches). **Wichita, KS**, experienced completely dry weather during the first 14 days of June, but received 2.10 inches of rain from June 15-18. However, **Wichita's** temperatures also reached 90°F or higher on each day starting June 8, peaking at 103°F on the 15th. High winds accompanied some of the thunderstorms; for example, June 17 wind gusts were clocked to 69 mph in **Sioux City, IA**, and 63 mph in **Sioux Falls, SD**. Farther west, unusually heavy showers reached as far south as **northern California**, where June 14-18 rainfall totaled 2.46 inches in **Redding** and 1.27 inches in **Red Bluff**. In the **Northwest**, daily-record totals for June 18 included 0.56 inch in **Wenatchee, WA**, and 0.49 inch in **Pendleton, OR**.

Near- to above-normal temperatures prevailed in **Alaska**, with warmth becoming more dominant during the second half of the week. Daily-record highs were established in locations such as **Bettles** (85°F on June 17); **Skagway** (84°F on June 15); and **Nome** (76°F on June 16). Meanwhile, showers were mostly light and generally confined to **southern and western Alaska**. Farther south, locally heavy showers dotted windward sections of **Hawaii**. On the **Big Island**, more than half (2.97 inches) of **Hilo's** 5.42-inch weekly rainfall occurred on June 14. According to the U.S. Drought Monitor, **Hawaii's** drought coverage fell to 44 percent by mid-June, down from 79 percent in early April.


Total Growing Degree Days
MAR 1 - JUN 18, 2016
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
MAR 1 - JUN 18, 2016
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.


Total Growing Degree Days
APR 1 - JUN 18, 2016
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 - JUN 18, 2016
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 June 18, 2016

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 JUN 1	PCT. NORMAL SINCE JUN 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	91	71	96	68	81	5	2.17	1.37	1.38	2.62	122	24.23	88	94	53	5	0	5	1
	HUNTSVILLE	94	71	97	69	83	7	0.26	-0.68	0.21	2.82	110	21.11	72	84	61	6	0	3	0
	MOBILE	91	73	96	69	82	3	0.31	-0.78	0.25	4.56	155	32.73	102	96	66	5	0	2	0
	MONTGOMERY	92	73	98	70	83	4	1.67	0.78	0.88	2.42	110	24.79	90	89	54	5	0	4	2
AK	ANCHORAGE	71	52	83	48	61	7	0.01	-0.22	0.01	1.11	198	3.27	85	67	47	0	0	1	0
	BARROW	45	32	55	30	39	4	0.23	0.17	0.11	0.52	520	1.86	282	91	71	0	4	3	0
	FAIRBANKS	71	50	85	41	60	0	0.68	0.36	0.66	2.18	299	4.06	149	85	51	0	0	3	1
	JUNEAU	68	49	80	38	58	4	0.39	-0.37	0.22	2.16	110	24.95	120	87	62	0	0	2	0
	KODIAK	64	50	74	39	57	8	0.12	-1.14	0.08	1.65	49	44.42	130	78	63	0	0	3	0
	NOME	55	40	76	37	48	1	0.21	-0.03	0.07	0.23	41	3.31	78	95	79	0	0	3	0
AZ	FLAGSTAFF	77	39	86	35	58	-2	0.02	-0.02	0.02	0.30	300	7.32	77	64	12	0	0	1	0
	PHOENIX	103	76	111	74	89	1	0.00	0.00	0.00	0.00	0	1.87	61	22	12	7	0	0	0
	PRESCOTT	86	53	95	51	70	3	0.00	-0.02	0.00	0.04	100	3.82	56	39	9	1	0	0	0
	TUCSON	101	68	109	67	85	1	0.00	-0.01	0.00	0.20	2000	2.73	85	30	13	7	0	0	0
AR	FORT SMITH	93	74	98	70	83	6	1.15	0.16	1.13	1.82	67	19.03	91	88	52	5	0	2	1
	LITTLE ROCK	93	76	98	73	84	6	0.51	-0.40	0.34	1.41	58	30.60	124	87	54	5	0	2	0
CA	BAKERSFIELD	87	61	92	53	74	-3	0.00	-0.02	0.00	0.00	0	4.10	90	54	32	1	0	0	0
	FRESNO	86	59	92	53	72	-4	0.06	0.02	0.06	0.06	40	9.08	117	61	35	1	0	1	0
	LOS ANGELES	71	60	77	57	66	0	0.00	0.00	0.00	0.00	0	6.00	64	81	61	0	0	0	0
	REDDING	79	59	96	53	69	-6	2.46	2.30	1.03	2.46	432	30.63	141	68	42	1	0	4	3
	SACRAMENTO	79	55	87	51	67	-4	0.00	-0.03	0.00	0.00	0	12.75	108	79	32	0	0	0	0
	SAN DIEGO	74	64	81	62	69	2	0.00	0.00	0.00	0.00	0	5.01	66	73	59	0	0	0	0
	SAN FRANCISCO	70	56	76	53	63	2	0.00	-0.01	0.00	0.00	0	12.44	93	76	58	0	0	0	0
	STOCKTON	83	54	91	47	68	-5	0.00	0.00	0.00	0.00	0	12.12	135	72	41	1	0	0	0
CO	ALAMOSA	83	42	88	38	62	3	0.00	-0.11	0.00	0.00	0	4.37	177	79	19	0	0	0	0
	CO SPRINGS	86	56	92	47	71	7	0.35	-0.19	0.27	0.55	38	8.48	119	70	21	1	0	2	0
	DENVER INTL	85	56	90	52	70	4	1.07	0.72	0.63	1.63	150	9.45	152	73	28	2	0	2	1
	GRAND JUNCTION	88	58	97	49	73	2	0.01	-0.06	0.01	0.02	8	4.99	119	43	21	5	0	1	0
	PUEBLO	94	59	99	49	76	6	0.29	0.01	0.28	0.37	49	7.55	149	64	26	5	0	2	0
CT	BRIDGEPORT	80	59	84	56	70	2	0.00	-0.81	0.00	1.09	51	16.63	79	74	41	0	0	0	0
	HARTFORD	81	55	87	49	68	0	0.00	-0.89	0.00	1.67	70	15.61	73	70	35	0	0	0	0
DC	WASHINGTON	85	67	93	64	76	2	0.46	-0.24	0.46	0.94	49	16.27	91	74	41	1	0	1	0
DE	WILMINGTON	79	60	90	56	70	-1	1.16	0.36	1.13	2.61	124	20.47	103	78	43	1	0	2	1
FL	DAYTONA BEACH	93	74	95	70	83	3	0.72	-0.64	0.55	2.90	89	22.90	122	99	55	7	0	4	1
	JACKSONVILLE	94	73	97	70	83	4	0.16	-1.08	0.11	2.47	84	16.93	83	96	53	5	0	3	0
	KEY WEST	89	80	91	79	85	2	0.02	-1.10	0.02	0.68	24	12.33	88	87	73	1	0	1	0
	MIAMI	92	77	95	75	85	3	1.55	-0.56	0.77	5.04	96	25.43	123	86	55	7	0	5	2
	ORLANDO	93	75	96	72	84	3	1.83	0.10	0.98	5.52	136	25.61	138	89	52	7	0	4	2
	PENSACOLA	89	76	93	71	82	1	0.75	-0.69	0.35	3.92	112	28.18	100	88	63	4	0	4	0
	TALLAHASSEE	95	74	100	71	84	4	0.21	-1.38	0.13	4.78	121	28.17	97	88	56	7	0	3	0
	TAMPA	90	79	91	76	84	3	1.87	0.59	1.28	9.52	318	25.42	165	85	61	6	0	4	2
	WEST PALM BEACH	89	75	91	74	82	1	0.25	-1.56	0.17	2.91	65	24.28	104	87	64	4	0	2	0
GA	ATHENS	94	71	98	68	82	6	0.81	-0.07	0.61	1.66	72	16.83	71	90	53	6	0	3	1
	ATLANTA	93	72	97	71	83	6	1.21	0.44	1.15	2.42	123	21.56	88	80	50	5	0	2	1
	AUGUSTA	95	71	100	68	83	6	0.26	-0.73	0.25	2.33	95	21.06	97	88	46	6	0	2	0
	COLUMBUS	93	72	97	69	82	3	1.71	0.95	0.93	2.01	105	21.45	88	90	46	5	0	3	1
	MACON	95	73	101	70	84	6	0.05	-0.74	0.03	1.22	63	19.18	85	88	42	6	0	2	0
	SAVANNAH	94	74	99	70	84	5	1.76	0.47	1.62	6.28	201	28.95	141	86	52	6	0	2	1
HI	HILO	83	70	85	68	76	1	5.40	3.80	2.14	9.61	246	34.55	60	95	84	0	0	7	3
	HONOLULU	85	74	86	72	80	1	0.06	-0.02	0.03	0.11	44	4.16	46	80	66	0	0	3	0
	KAHULUI	87	73	91	71	80	3	0.12	0.09	0.08	0.31	344	8.04	73	86	74	1	0	4	0
	LIHUE	82	72	82	70	77	-1	0.20	-0.19	0.08	0.63	56	7.06	38	90	77	0	0	6	0
ID	BOISE	75	49	87	44	62	-5	0.18	0.02	0.10	0.18	38	4.70	68	68	38	0	0	3	0
	LEWISTON	72	48	80	42	60	-5	0.59	0.33	0.24	0.70	93	7.51	110	78	50	0	0	4	0
	POCATELLO	79	46	91	37	63	1	0.01	-0.19	0.01	0.02	3	6.83	100	74	38	1	0	1	0
IL	CHICAGO/O'HARE	85	61	90	54	73	5	0.32	-0.53	0.30	1.51	70	15.14	99	75	48	1	0	2	0
	MOLINE	90	65	96	59	78	7	1.00	-0.10	0.91	1.49	53	11.49	68	77	48	3	0	2	1
	PEORIA	90	67	96	62	78	7	0.39	-0.47	0.35	0.71	32	9.82	62	83	39	3	0	2	0
	ROCKFORD	84	62	90	56	73	4	1.30	0.17	1.15	1.70	60	13.76	88	76	52	2	0	2	1
	SPRINGFIELD	92	68	95	60	80	7	0.29	-0.58	0.29	1.70	74	15.29	94	87	42	6	0	1	0
IN	EVANSVILLE	93	69	99	65	81	6	0.20	-0.74	0.19	1.39	55	23.14	104	85	52	5	0	2	0
	FORT WAYNE	83	60	89	54	71	2	1.54	0.60	1.52	3.87	161	18.06	109	86	44	0	0	2	1
	INDIANAPOLIS	87	66	92	63	76	4	2.34	1.40	1.52	3.19	131	20.69	110	81	42	3	0	2	2
	SOUTH BEND	84	56	89	49	70	1	0.28	-0.71	0.26	0.44	18	15.55	93	77	48	0	0	2	0
IA	BURLINGTON	90	68	95	64	79	7	0.20	-0.82	0.16	0.22	8	11.07	67	93	44	3	0	3	0
	CEDAR RAPIDS	87	64	91	61	76	6	0.35	-0.70	0.35	2.10	80	12.62	90	97	55	2	0	1	0
	DES MOINES	91	71	96	69	81	10	0.36	-0.71	0.36	0.72	26	11.96	80	83	49	5	0	1	0
	DUBUQUE	83	62	89	58	73	5	4.06	3.10	3.50	4.77	191	15.72	102	88	60	0	0	3	2
	SIOUX CITY	90	68	95	63	79	9	1.13	0.30	0.72	1.29	59	17.02	143	86	63	4	0	3	1
	WATERLOO	86	64	90	62	75	5	0.75	-0.38	0.75	4.05	141	14.48	101	89	64	2	0	1	1
KS	CONCORDIA	96	70	102	67	83	10	0.06	-0.83	0.06	0.06	3	12.93	101	78	43	7	0	1	0
	DODGE CITY	91	65	95	62	78	4	0.65	-0.07	0.52	0.74	39	11.86	116	95	43	4	0	2	1
	GOODLAND	92	58	97	55	75	6	0.48	-0.27	0.43	0.48	24	7.84	87	88	44	4	0	3	0
	TOPEKA	93	71	98	68	82	8	0.83	-0.33	0.60	1.58	52	20.89	133	87	55	6	0	3	1

Based on 1971-2000 normals

***** Not Available**

Weather Data for the Week Ending June 18, 2016

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 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
	WICHITA	96	71	103	68	83	8	2.10	1.10	1.51	2.10	79	17.66	127	86	49	7	0	2	2
KY	JACKSON	86	65	91	62	75	4	0.01	-1.06	0.01	1.45	51	24.25	104	84	45	1	0	1	0
	LEXINGTON	89	65	93	63	77	5	0.31	-0.74	0.25	2.75	100	21.68	98	77	48	3	0	2	0
	LOUISVILLE	91	70	95	67	80	6	1.79	0.96	1.09	2.42	106	21.48	98	81	45	4	0	3	1
	PADUCAH	93	70	100	66	82	8	0.28	-0.74	0.28	1.59	62	25.79	108	90	48	6	0	1	0
LA	BATON ROUGE	91	75	94	71	83	3	1.45	0.23	1.01	6.40	209	36.60	121	93	55	5	0	4	1
	LAKE CHARLES	91	76	96	73	83	3	1.16	-0.26	0.60	7.93	213	38.25	148	95	63	4	0	3	1
	NEW ORLEANS	92	77	96	72	85	4	2.71	1.10	1.55	7.70	202	37.02	123	87	68	6	0	3	3
	SHREVEPORT	93	76	95	73	84	4	2.45	1.26	1.51	3.77	122	38.00	148	95	61	6	0	3	2
ME	CARIBOU	66	45	82	39	56	-5	1.10	0.36	1.00	2.18	112	18.10	117	86	51	0	0	3	1
	PORTLAND	76	52	82	49	64	1	0.01	-0.73	0.01	2.68	138	18.19	85	83	38	0	0	1	0
MD	BALTIMORE	83	61	93	57	72	1	0.82	0.05	0.63	1.21	58	19.05	98	75	43	1	0	2	1
MA	BOSTON	77	58	85	54	68	0	0.12	-0.62	0.12	1.20	63	17.54	88	73	38	0	0	1	0
	WORCESTER	75	53	79	49	64	0	0.00	-0.92	0.00	1.13	47	16.84	76	76	33	0	0	0	0
MI	ALPENA	76	50	91	42	63	2	0.40	-0.18	0.40	1.26	85	16.04	138	88	37	1	0	1	0
	GRAND RAPIDS	84	59	93	53	71	4	0.33	-0.51	0.28	0.85	41	17.86	119	79	41	2	0	2	0
	HOUGHTON LAKE	75	51	87	44	63	1	1.46	0.77	1.15	2.39	136	16.46	143	92	49	0	0	3	1
	LANSING	81	56	90	50	69	3	0.34	-0.53	0.19	0.58	28	13.49	102	71	53	1	0	3	0
	MUSKEGON	80	58	87	53	69	4	1.26	0.65	0.77	1.76	109	15.70	115	81	57	0	0	3	1
	TRAVERSE CITY	76	54	90	48	65	1	0.12	-0.66	0.10	1.67	91	13.26	98	91	41	1	0	2	0
MN	DULUTH	68	51	84	47	59	-1	2.10	1.11	0.98	3.27	136	13.38	121	93	71	0	0	5	1
	INT'L FALLS	71	51	79	42	61	0	1.90	0.96	0.95	2.97	129	10.75	124	96	63	0	0	3	2
	MINNEAPOLIS	80	65	89	61	72	4	2.88	1.86	1.49	3.73	146	12.65	107	85	68	0	0	3	2
	ROCHESTER	80	62	84	60	71	5	1.16	0.25	1.08	3.69	163	15.38	124	94	76	0	0	3	1
	ST. CLOUD	77	60	86	58	69	4	1.68	0.58	1.11	2.51	93	8.88	83	97	63	0	0	4	1
MS	JACKSON	93	73	96	70	83	5	1.48	0.64	0.90	1.74	80	34.18	118	92	51	6	0	4	1
	MERIDIAN	95	73	98	70	84	6	3.09	2.24	2.96	3.51	162	28.50	92	86	58	6	0	4	1
	TUPELO	93	71	96	68	82	5	1.30	0.18	0.75	5.07	166	27.17	91	89	57	5	0	5	1
MO	COLUMBIA	93	71	99	66	82	10	0.00	-0.93	0.00	0.04	2	10.18	55	89	43	7	0	0	0
	KANSAS CITY	93	70	98	66	81	8	0.16	-0.84	0.16	0.29	11	20.82	127	83	48	5	0	1	0
	SAINT LOUIS	95	75	99	70	85	10	0.13	-0.72	0.12	0.46	21	13.50	75	72	42	6	0	2	0
	SPRINGFIELD	92	71	95	67	81	8	1.19	0.00	0.63	1.41	47	12.66	63	82	56	5	0	3	1
MT	BILLINGS	81	53	96	49	67	2	0.22	-0.21	0.11	0.23	19	5.63	71	72	27	1	0	2	0
	BUTTE	67	38	81	30	53	-3	0.42	-0.06	0.36	0.92	71	4.45	72	86	26	0	1	3	0
	CUT BANK	67	42	76	37	55	-2	0.16	-0.43	0.07	0.72	45	5.20	88	74	27	0	0	3	0
	GLASGOW	77	52	85	48	65	1	1.40	0.88	0.61	2.90	221	11.18	230	87	50	0	0	5	1
	GREAT FALLS	72	42	80	38	57	-3	0.43	-0.10	0.21	0.58	39	6.60	87	83	28	0	0	4	0
	HAVRE	76	46	85	39	61	-2	0.00	-0.44	0.00	0.00	0	7.89	146	86	41	0	0	0	0
	MISSOULA	71	38	81	34	55	-5	0.48	0.08	0.27	0.57	51	5.70	82	86	47	0	0	4	0
NE	GRAND ISLAND	94	68	101	64	81	10	0.01	-0.73	0.01	0.01	0	14.69	121	79	56	4	0	1	0
	LINCOLN	96	70	101	63	83	11	0.50	-0.30	0.50	0.57	26	12.88	100	84	47	6	0	1	1
	NORFOLK	89	65	95	59	77	7	3.10	2.11	1.61	3.10	122	19.55	158	86	63	4	0	4	2
	NORTH PLATTE	90	62	96	57	76	8	0.99	0.27	0.37	1.72	90	12.90	138	91	43	4	0	4	0
	OMAHA	95	73	99	68	84	12	0.25	-0.65	0.16	0.53	22	13.52	100	79	48	7	0	2	0
	SCOTTSBLUFF	90	58	96	53	74	7	0.81	0.20	0.77	0.81	51	9.92	119	83	42	3	0	2	1
	VALENTINE	87	62	92	58	75	8	3.54	2.88	1.98	3.56	205	17.48	199	88	53	1	0	2	2
NV	ELY	70	43	77	40	56	-3	0.29	0.16	0.28	1.47	327	8.27	160	71	43	0	0	2	0
	LAS VEGAS	96	75	101	71	86	1	0.00	0.00	0.00	0.02	200	2.87	126	23	11	7	0	0	0
	RENO	77	52	83	43	64	0	0.00	-0.10	0.00	0.00	0	5.21	123	50	22	0	0	0	0
	WINNEMUCCA	76	40	84	25	58	-6	0.01	-0.14	0.01	0.01	2	4.58	98	53	21	0	2	1	0
NH	CONCORD	81	50	87	48	66	1	0.04	-0.55	0.00	1.08	63	13.81	84	88	29	0	0	1	0
NJ	NEWARK	82	60	88	57	71	-1	0.00	-0.72	0.00	1.63	83	16.83	78	58	34	0	0	0	0
NM	ALBUQUERQUE	93	61	98	56	77	2	0.00	-0.14	0.00	0.12	34	1.31	44	27	11	7	0	0	0
NY	ALBANY	78	53	86	47	66	0	0.00	-0.88	0.00	1.95	86	12.70	75	81	37	0	0	0	0
	BINGHAMTON	73	51	82	45	62	-1	0.04	-0.84	0.04	1.80	82	14.59	85	75	50	0	0	1	0
	BUFFALO	79	55	87	46	67	1	0.12	-0.79	0.12	0.61	27	11.85	69	77	36	0	0	1	0
	ROCHESTER	78	53	88	44	66	0	0.00	-0.80	0.00	0.75	38	12.36	85	75	47	0	0	0	0
	SYRACUSE	77	51	85	44	64	-2	0.00	-0.83	0.00	1.60	78	16.36	99	83	41	0	0	0	0
NC	ASHEVILLE	87	65	92	61	76	7	1.01	-0.02	1.01	1.25	46	16.13	70	80	45	4	0	1	1
	CHARLOTTE	91	69	95	67	80	4	0.99	0.21	0.57	1.24	60	16.53	80	79	41	5	0	2	1
	GREENSBORO	89	67	94	61	78	5	0.10	-0.67	0.08	1.20	60	20.17	102	80	37	3	0	2	0
	HATTERAS	83	72	86	68	78	3	0.82	-0.05	0.68	10.03	430	44.09	182	87	59	0	0	3	1
	RALEIGH	88	66	93	59	77	3	0.55	-0.19	0.45	2.01	102	21.61	108	85	48	4	0	3	0
	WILMINGTON	90	69	96	62	80	3	2.28	1.10	1.46	4.31	149	26.99	119	91	47	5	0	3	2
ND	BISMARCK	83	56	91	51	70	5	3.16	2.56	2.64	3.30	220	10.48	150	85	53	1	0	4	1
	DICKINSON	79	54	88	48	67	4	1.38	0.58	0.97	1.79	93	6.51	87	91	41	0	0	3	1
	FARGO	81	62	86	54	72	6	0.87	0.04	0.56	1.47	70	6.94	81	86	53	0	0	3	1
	GRAND FORKS	79	58	83	51	68	3	2.12	1.42	0.94	3.27	188	10.16	139	93	49	0	0	5	2
	JAMESTOWN	80	59	86	54	70	5	1.34	0.64	1.16	2.29	135	8.20	112	94	53	0	0	3	1
	WILLISTON	82	55	88	48	69	6	0.44	-0.10	0.26	1.05	79	6.12	103	85	46	0	0	5	0
OH	AKRON-CANTON	81	59	86	48	70	3	1.88	1.08	1.84	2.62	127	17.29	100	71	43	0	0	2	1
	CINCINNATI	88	64	92	60	76	4	0.37	-0.67	0.37	1.28	47	20.89	100	82	50	1	0	1	0
	CLEVELAND	81	61	89	53	71	4	1.26	0.35	1.26	1.77	78	17.70	105	74	39	0	0	1	1
	COLUMBUS	85	61	89	51	73	2	0.91	-0.01	0.71	1.07	46	15.80	93	76	42	0	0	2	1
	DAYTON	84	61	87	52	73	3	0.08	-0.91	0.07	2.19	87	18.41	97	77	42	0	0	2	0
	MANSFIELD	82	58	88	48	70	4	0.52	-0.53	0.43	1.01	38	17.41	90	87	38	0	0	3	0

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Weather Data for the Week Ending June 18, 2016

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 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
	TOLEDO	83	58	89	50	71	3	0.43	-0.48	0.36	0.69	31	14.45	96	78	41	0	0	3	0
	YOUNGSTOWN	79	54	84	47	67	1	1.45	0.56	1.44	2.69	124	17.79	109	82	47	0	0	2	1
OK	OKLAHOMA CITY	91	71	97	67	81	4	0.04	-1.05	0.03	1.00	33	13.41	78	93	56	5	0	2	0
	TULSA	94	77	99	74	86	8	0.12	-0.99	0.12	0.66	21	14.51	71	90	63	5	0	1	0
OR	ASTORIA	63	47	66	44	55	-1	0.74	0.13	0.44	1.61	99	38.84	112	92	69	0	0	4	0
	BURNS	66	37	76	29	51	-6	0.39	0.24	0.19	0.40	91	4.25	72	77	46	0	2	4	0
	EUGENE	69	46	79	41	58	-2	0.75	0.40	0.41	0.76	72	20.69	76	89	69	0	0	5	0
	MEDFORD	72	50	88	46	61	-4	0.57	0.42	0.18	0.57	127	9.55	102	78	35	0	0	4	0
	PENDLETON	71	46	79	41	59	-6	0.53	0.35	0.49	0.91	175	6.50	96	70	47	0	0	3	0
	PORTLAND	68	51	76	48	60	-2	0.36	-0.01	0.19	0.85	80	20.59	108	83	57	0	0	5	0
	SALEM	69	49	78	46	59	-2	0.24	-0.10	0.20	0.61	65	20.90	100	80	56	0	0	4	0
PA	ALLENTOWN	81	57	88	50	69	1	0.31	-0.60	0.29	1.28	53	18.01	89	69	40	0	0	2	0
	ERIE	77	57	86	50	67	0	0.02	-1.00	0.02	1.06	42	14.84	86	69	49	0	0	1	0
	MIDDLETOWN	81	62	88	57	71	0	0.19	-0.69	0.13	1.12	48	18.31	97	77	41	0	0	2	0
	PHILADELPHIA	81	62	90	59	71	-1	0.39	-0.33	0.37	1.08	58	19.08	99	66	43	1	0	2	0
	PITTSBURGH	81	60	87	50	71	3	1.28	0.34	1.08	2.58	107	16.21	93	78	37	0	0	2	1
	WILKES-BARRE	78	54	88	50	66	-1	0.08	-0.83	0.06	1.31	58	14.13	86	82	40	0	0	2	0
	WILLIAMSPORT	81	57	88	50	69	1	0.31	-0.72	0.30	1.28	50	13.22	71	71	44	0	0	2	0
RI	PROVIDENCE	80	57	85	53	69	2	0.00	-0.79	0.00	0.74	36	18.88	85	71	31	0	0	0	0
SC	BEAUFORT	93	75	98	69	84	6	0.55	-0.83	0.54	3.41	104	21.80	108	91	51	6	0	2	1
	CHARLESTON	94	74	98	70	84	6	0.68	-0.71	0.49	2.80	83	23.55	112	86	51	6	0	3	0
	COLUMBIA	97	74	101	70	85	7	0.18	-0.98	0.12	2.37	85	16.29	74	80	45	6	0	2	0
	GREENVILLE	93	70	96	68	81	7	0.70	-0.17	0.43	1.06	45	18.60	76	83	39	6	0	2	0
SD	ABERDEEN	87	62	95	55	74	8	0.62	-0.21	0.62	1.40	68	8.34	94	83	55	3	0	1	1
	HURON	88	63	95	54	76	8	0.92	0.15	0.91	1.90	97	10.71	108	88	51	3	0	2	1
	RAPID CITY	86	60	98	54	73	9	1.18	0.51	1.18	1.18	66	5.82	69	86	40	2	0	1	1
	SIOUX FALLS	87	67	95	60	77	10	0.55	-0.27	0.24	1.02	48	12.51	114	84	60	2	0	3	0
TN	BRISTOL	88	63	94	55	76	5	0.32	-0.55	0.27	1.43	63	18.34	89	91	38	4	0	2	0
	CHATTANOOGA	94	72	98	68	83	8	0.15	-0.72	0.10	1.08	48	18.32	67	81	48	6	0	3	0
	KNOXVILLE	91	70	94	68	80	6	0.41	-0.47	0.24	3.52	151	22.79	92	85	46	4	0	3	0
	MEMPHIS	94	75	97	72	85	7	0.35	-0.62	0.19	0.60	24	35.69	129	83	54	6	0	3	0
	NASHVILLE	93	71	98	67	82	7	0.39	-0.54	0.24	1.90	75	16.34	68	85	46	6	0	3	0
TX	ABILENE	94	74	97	70	84	4	0.17	-0.58	0.17	2.49	125	20.29	203	85	60	6	0	1	0
	AMARILLO	95	65	103	61	80	6	0.49	-0.30	0.49	1.19	59	7.08	87	85	34	5	0	1	0
	AUSTIN	95	76	97	74	85	4	0.00	-0.92	0.00	2.35	88	30.64	189	87	60	7	0	0	0
	BEAUMONT	94	75	98	72	84	3	0.49	-1.06	0.42	5.91	148	35.41	134	96	58	6	0	3	0
	BROWNSVILLE	94	79	96	77	86	3	0.00	-0.70	0.00	2.75	156	12.74	132	95	61	7	0	0	0
	CORPUS CHRISTI	92	78	96	75	85	3	0.00	-0.86	0.00	2.79	122	21.01	161	95	65	7	0	0	0
	DEL RIO	100	78	101	76	89	6	0.00	-0.54	0.00	2.39	176	11.00	140	87	55	7	0	0	0
	EL PASO	101	71	108	66	86	4	0.00	-0.18	0.00	0.14	36	0.78	37	23	10	7	0	0	0
	FORT WORTH	95	75	98	73	85	4	0.98	0.22	0.84	3.60	157	20.36	113	86	50	7	0	2	1
	GALVESTON	89	79	89	70	84	2	0.44	-0.50	0.38	6.85	284	27.39	151	92	76	0	0	2	0
	HOUSTON	94	77	97	74	86	5	2.11	0.81	2.11	12.83	373	41.78	188	93	59	6	0	1	1
	LUBBOCK	98	69	104	64	83	6	0.33	-0.39	0.33	0.96	53	6.23	85	82	45	7	0	1	0
	MIDLAND	99	72	103	66	86	7	2.60	2.21	2.48	2.72	272	6.46	128	76	43	7	0	2	1
	SAN ANGELO	96	73	98	67	85	6	1.14	0.53	1.14	3.05	176	18.68	199	90	59	7	0	1	1
	SAN ANTONIO	94	77	95	76	86	5	0.00	-1.06	0.00	2.38	82	24.20	156	86	50	7	0	0	0
	VICTORIA	94	76	98	75	85	3	0.02	-1.17	0.02	2.06	65	22.28	124	96	57	7	0	1	0
	WACO	95	75	96	71	85	4	0.01	-0.70	0.01	1.12	55	23.77	146	88	54	7	0	1	0
	WICHITA FALLS	93	72	96	67	82	3	0.78	-0.13	0.43	3.31	134	19.80	142	90	71	5	0	2	0
UT	SALT LAKE CITY	85	58	95	55	72	3	0.19	0.03	0.19	0.51	91	8.16	88	65	25	3	0	1	0
VT	BURLINGTON	78	52	88	50	65	0	0.15	-0.62	0.11	1.92	98	12.77	89	81	34	0	0	3	0
VA	LYNCHBURG	84	61	92	57	73	2	0.67	-0.17	0.59	1.70	78	21.35	106	85	47	2	0	3	1
	NORFOLK	81	68	93	64	74	0	1.42	0.59	0.73	3.97	186	26.20	127	83	55	1	0	3	2
	RICHMOND	84	62	94	57	73	0	1.72	0.95	1.66	5.91	287	26.54	134	82	53	2	0	2	1
	ROANOKE	87	62	93	55	75	3	2.72	1.89	1.91	3.32	151	21.05	104	78	44	2	0	3	2
	WASH/DULLES	83	63	91	59	73	2	2.97	2.02	2.58	4.01	159	21.67	112	75	47	1	0	2	1
WA	OLYMPIA	64	42	70	38	53	-5	0.55	0.13	0.42	0.97	87	26.35	102	93	71	0	0	4	0
	QUILLAYUTE	62	44	68	38	53	-2	0.94	0.12	0.34	2.31	100	54.14	104	97	70	0	0	4	0
	SEATTLE-TACOMA	67	50	70	44	58	-2	0.16	-0.19	0.08	0.53	58	21.60	118	91	62	0	0	3	0
	SPOKANE	67	46	72	40	56	-5	0.03	-0.24	0.03	0.32	42	8.18	96	75	32	0	0	1	0
	YAKIMA	74	43	82	34	59	-4	0.15	0.01	0.13	0.23	66	5.68	140	70	33	0	0	2	0
WV	BECKLEY	80	58	84	47	69	2	1.28	0.42	0.61	3.16	140	22.19	112	79	55	0	0	4	1
	CHARLESTON	87	61	91	50	74	4	0.26	-0.65	0.20	1.83	77	21.73	107	88	43	2	0	2	0
	ELKINS	82	52	88	41	67	2	1.92	0.87	1.59	2.69	98	21.11	98	90	37	0	0	2	1
	HUNTINGTON	86	62	92	53	74	3	2.56	1.69	2.17	3.96	169	23.67	117	87	51	2	0	2	1
WI	EAU CLAIRE	80	59	87	54	70	4	1.85	0.84	1.00	3.20	125	15.61	121	94	54	0	0	3	2
	GREEN BAY	76	57	85	53	66	1	0.00	-0.80	0.00	0.04	2	11.22	97	88	57	0	0	0	0
	LA CROSSE	83	62	88	57	73	4	3.46	2.54	1.92	5.30	236	17.90	136	90	49	0	0	3	3
	MADISON	81	59	88	53	70	3	1.51	0.56	1.43	3.27	140	17.20	125	82	58	0	0	3	1
	MILWAUKEE	74	59	82	54	67	1	1.10	0.27	1.04	1.55	77	13.36	89	80	60	0	0	2	1
WY	CASPER	83	50	92	45	66	4	0.95	0.64	0.70	0.95	103	10.41	150	86	39	1	0	2	1
	CHEYENNE	80	53	86	50	67	6	1.44	0.97	1.44	1.69	133	11.55	160	71	38	0	0	1	1
	LANDER	80	51	90	45	66	3	0.23	-0.02	0.23	0.47	60	16.62	221	65	21	1	0	1	0
	SHERIDAN	84	50	98	46	67	6	0.36	-0.12	0.28	0.38	29	9.73	125	85	41	1	0	2	0

Based on 1971-2000 normals

***** Not Available**

Spring Weather Review

Weather summary provided by USDA/WAOB

Highlights: As a strong "warm episode" (El Niño) began to wane, warm, wet conditions covered much of the country. Not surprisingly, El Niño-driven warmth was most prominent across the nation's northern tier, from the Pacific Northwest to the upper Great Lakes region. However, spring warmth was also very persistent across the eastern U.S. And, all of the Lower 48 states reported spring temperatures within the warmest one-quarter of the historical distribution. Still, there were a few impressive spring cold snaps embedded within the warm regime. In particular, early-April freezes in the Northeastern and Mid-Atlantic States, following a warm March, led to variable losses for a variety of fruit and ornamental crops.

Meanwhile, pockets of dryness developed amid the overall wet pattern. Some of the most persistently dry conditions occurred in the Northeast, where a lack of moisture and the aforementioned April freezes delayed the spring green-up. By the end of May, pockets of short-term dryness had also developed in several other areas, including the Pacific Northwest and the interior Southeast. The Midwest was free of drought by the end of May, but also saw a late-spring drying trend in many areas. Farther west, northern California received extremely heavy precipitation during the first half of March, further easing long-term drought. However, southern California remained mostly dry and limped to the end of a fifth consecutive year of drought (2011-12 to 2015-16). Parts of the Southwest also remained entrenched in long-term drought. Contiguous U.S. drought coverage reached a 5½-year minimum in mid-March, with just under one-eighth (12.41%) of the country affected by drought. Coverage subsequently rose to 17.75% on April 12 before spring storms again reduced the drought footprint to about one-eighth (12.73%) of the U.S. by May 31.

Figure 1 Statewide Average Temperature Ranks
March–May 2016
Period: 1895–2016

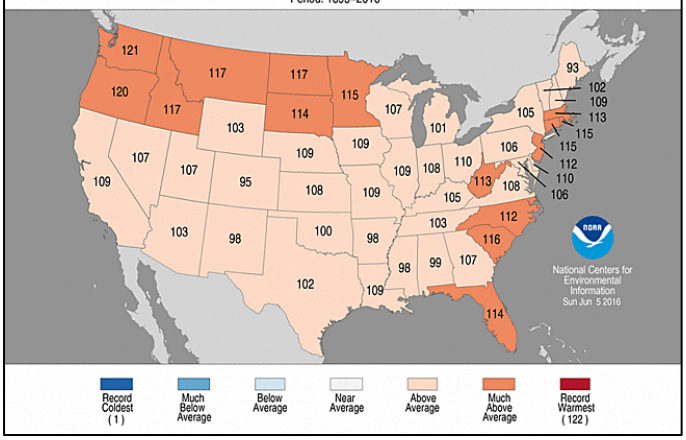
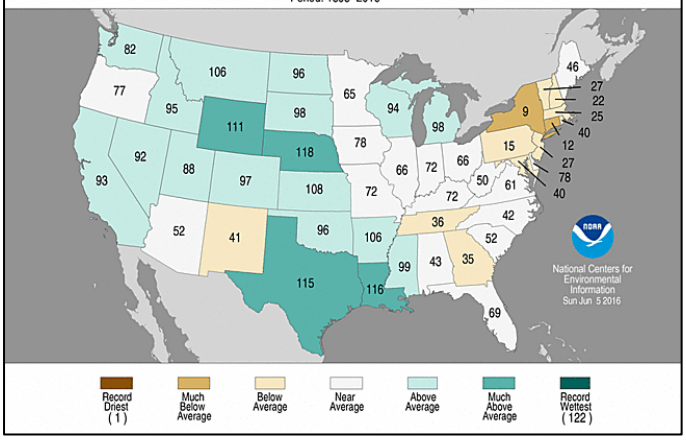


Figure 2 Statewide Precipitation Ranks
March–May 2016
Period: 1895–2016



Historical Perspective: Despite near-normal U.S. temperatures and precipitation during May, the nation experienced an overall warm, wet spring. According to preliminary information provided by the National Centers for Environmental Information (NCEI), it was the nation's sixth-warmest, 18th-wettest spring during the 1895-2016 period of record. The March-May average temperature of 53.7°F was 2.8°F above the 20th century mean, while precipitation averaged 9.03 inches, 114% of normal. It was the warmest U.S. spring since 2012. Six of the eight warmest U.S. springs on record have occurred in the last two decades. More than a dozen states across the northern and eastern U.S. experienced a top-ten spring for warmth (figure 1). Washington tied with 1992 for its second-warmest spring behind only 1934. Meanwhile, state precipitation rankings (figure 2) ranged from the ninth-driest spring in New York to top-ten values for March-May wetness in Nebraska (fifth wettest); Louisiana (seventh wettest); and Texas (eighth wettest).

March: Dry conditions intensified during March across the central and southern Plains and the Southwest, contributing to a rash of wildfires and combining with large temperature oscillations to increase stress on winter wheat. Still, the overall U.S. wheat condition improved during the overwintering period for the first time since 2011-12, and for only the seventh time in the last 21 years, mainly on the strength of favorable weather in the Northwest and lower Midwest.

Northwestern wetness not only aided winter wheat, but also led to further reductions in drought coverage and intensity as far south as northern California. However, a sharp southern boundary of recovery was evident, with southern California facing an almost certain fifth year of drought. In northern California, however, much-improved surface water supplies included a near-normal snowpack, abundant streamflow, and substantial reservoir recharge.

Meanwhile, much of the eastern U.S. experienced drier-than-normal March weather, favoring early-season fieldwork but reducing topsoil moisture. Elsewhere, generally wet weather affected several other areas, including the eastern Corn Belt, the upper Great Lakes region, and a broad section of the South stretching from southern and eastern Texas to the Mississippi Delta. Heavy Southern rain, much of which fell from March 8-13, resulted in severe flooding and spring fieldwork delays from easternmost Texas into the lower Mississippi Valley.

According to NCEI, the contiguous U.S. experienced its fourth-warmest, 26th-wettest March during the 122-year period of record. The nation's average temperature of 47.5°F was 6.0°F above the 1901-2000 mean—ranking behind only 2012 (50.4°F), 1910 (49.4°F), and 2007 (47.7°F)—while U.S. precipitation averaged 2.89 inches (115% of normal). Coast-to-coast warmth pushed 29 states—mainly across the North, East, and Southwest—into top-ten territory in terms of March temperature rankings. In fact, only three states—Maine (26th warmest), Oregon (24th warmest), and Arkansas (21st warmest)—failed to achieve a top-twenty ranking for March warmth. Meanwhile, state precipitation rankings ranged from the driest March on record in New Mexico to the second-wettest March in Louisiana and Wisconsin. Five other states (AZ, MD, NJ, NC, and PA) experienced a top-ten ranking for March dryness. In contrast, March totals were among the ten highest values on record in Arkansas, Mississippi, Washington, and Michigan.

April: A mid-month pattern change brought much-needed precipitation to the Hard Red Winter Wheat Belt and gradually pushed warm, showery weather into the Midwestern and Mid-Atlantic States. The central and southern Plains' precipitation reversed a short-term drying trend and put an end to a spate of wildfires and episodes of blowing dust. And, as heavier precipitation began to overspread the Midwest, an initially torrid corn planting pace gradually slowed.

On the strength of mid- to late-month storminess, above-average precipitation dominated the nation's mid-section. Excessive rain fell, however, in parts of the western Gulf Coast region, where some early plantings were washed away by flooding. Wetness extended as far east as the lower Mississippi Valley, resulting in some fieldwork delays.

In contrast, short-term dryness intensified for much of April in the Mid-Atlantic States and environs, although late-month rainfall began to boost topsoil moisture. In addition, hard freezes on April 6 and 10—following a warm March—caused damage to a variety of crops, including fruits and ornamentals, as far south as North Carolina. Farther north, persistently cool weather from the Great Lakes region into New England held monthly temperatures as much as 5°F below normal.

Elsewhere, periodic April showers engulfed much of the western U.S., although warm, dry conditions dominated the Pacific Northwest. The Northwestern drying trend followed a very wet winter, helping to minimize impacts. Monthly temperatures averaged at least 5°F above normal in much of the Northwest, despite a late-month cool spell. Farther south, late-season storms provided additional drought relief and delivered high-elevation snow, with some of the heaviest precipitation occurring across the Great Basin, central Rockies, and northern Intermountain West.

According to NCEI, the U.S. experienced its 18th-warmest, 21st-wettest April. The nation's average temperature of 53.2°F was 2.2°F above the 1901-2000 mean, while precipitation averaged 2.95 inches (117% of normal). It was the nation's wettest April since 2011. In fact, April precipitation ranked among the ten highest values on record on the Plains from the Dakotas to Texas. In contrast, it was the 22nd-driest April on record in Washington, and among the twenty driest in Maryland, New Jersey, and Virginia. Meanwhile, near- to above-normal temperatures dominated much of the nation, with state rankings ranging from the 35th-coolest April in New York to the second-warmest April—behind 1934—in Idaho, Oregon, and Washington.

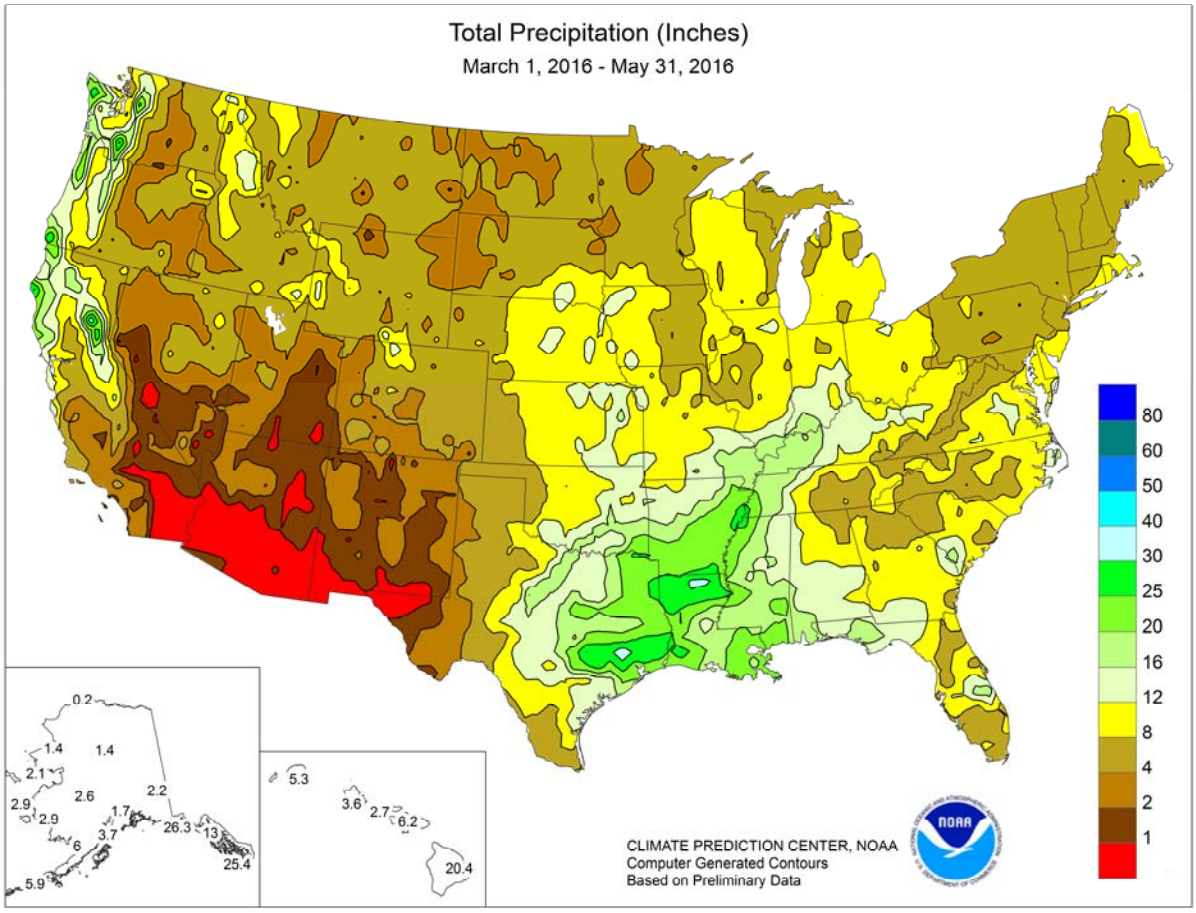
May: A high-latitude atmospheric blocking pattern led to cool, showery weather in many parts of the country—with consistent warmth mainly confined to the nation's northern tier. Some of the most persistent rain fell across the Plains, slowing fieldwork but maintaining mostly adequate to locally excessive soil moisture for winter wheat and spring-sown crops. By May 29, nearly two-thirds of the nation's pastures (66%) and winter wheat (63%) were rated in good to excellent condition—the highest for both at this time of year since 2010.

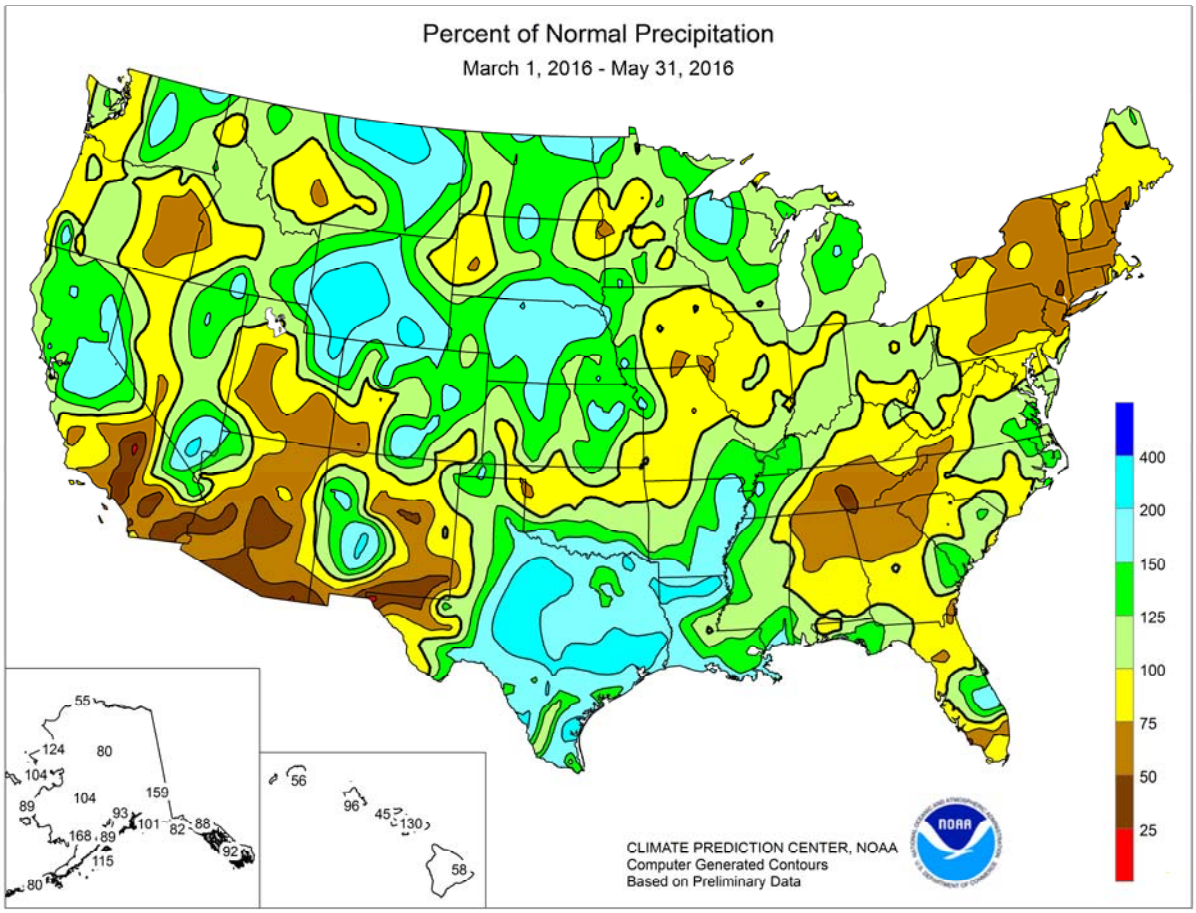
In contrast, drier conditions developed across the Great Lakes region, leading to more fieldwork opportunities. Following earlier corn and soybean planting delays in the eastern Corn Belt due to cool, damp field conditions, fieldwork accelerated in late May. During the week ending May 29, producers in Ohio planted 41% of their intended soybean acreage, jumping from 22 to 63%, and 33% of their corn. Delays persisted, however, in the southwestern Corn Belt.

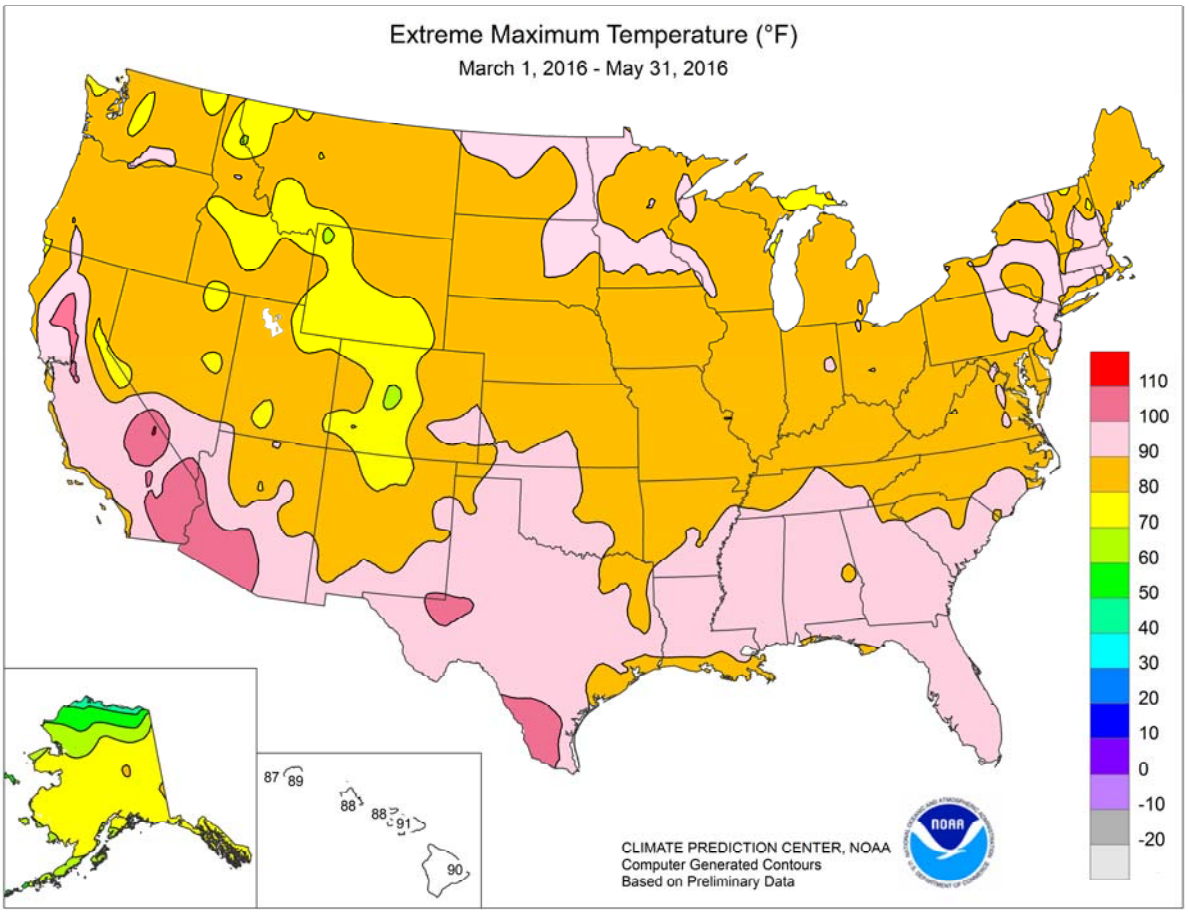
Meanwhile, warmth in the Northwest contrasted with cool conditions in the Southwest. Northwestern warmth promoted a rapid crop development pace, while occasional showers maintained favorable growing conditions for winter wheat and spring-sown crops. Higher elevations, mainly from the Great Basin to the central Rockies, received some late-season snow.

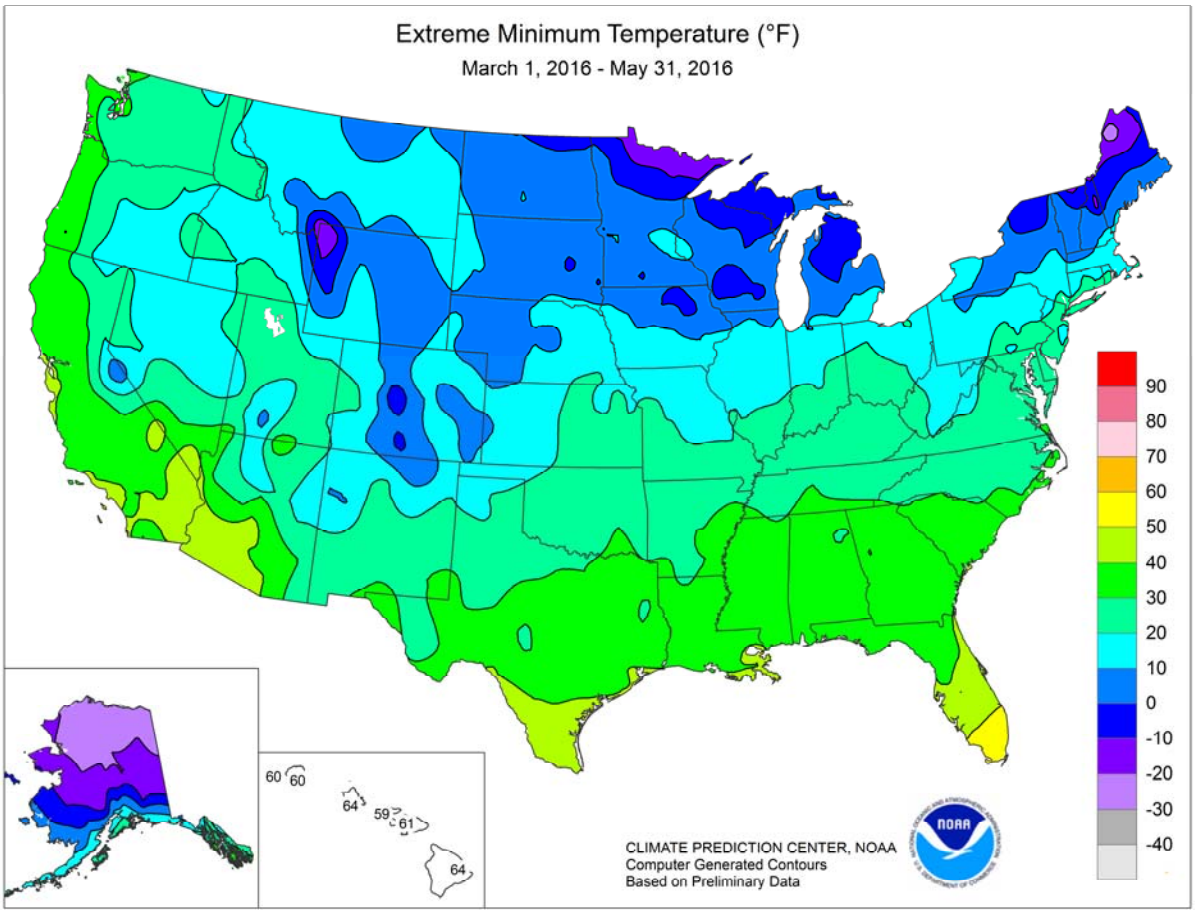
Elsewhere, developing drought across the interior Southeast contrasted with wet weather and fieldwork delays in the western Gulf Coast region and the middle and southern Atlantic States. Torrential rainfall induced some mid- to late-month flooding along and near the Texas coast.

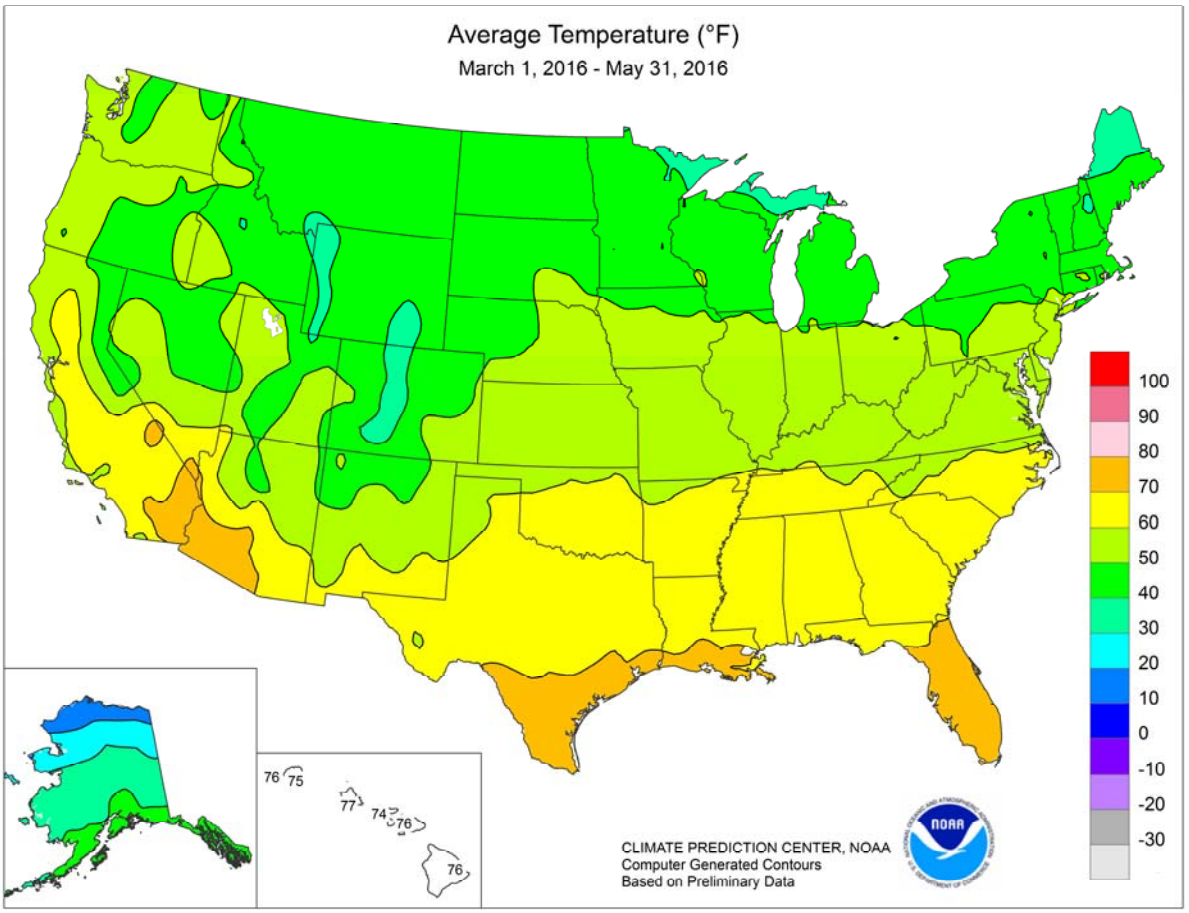
According to NCEI, the U.S. experienced May precipitation and temperatures that were very close to historical averages. The U.S. average temperature of 60.3°F was 0.1°F above the 1901-2000 mean. State temperature rankings ranged from the 25th-coolest May in Oklahoma to the 11th-warmest May in Washington. Meanwhile, precipitation averaged 3.04 inches, 104% of normal. State precipitation rankings ranged from the 15th-driest May in Alabama to the fifth-wettest May in Delaware and Virginia. In addition to Alabama, May rainfall totals were among the thirty lowest values on record in Mississippi, New Hampshire, New York, and Washington.

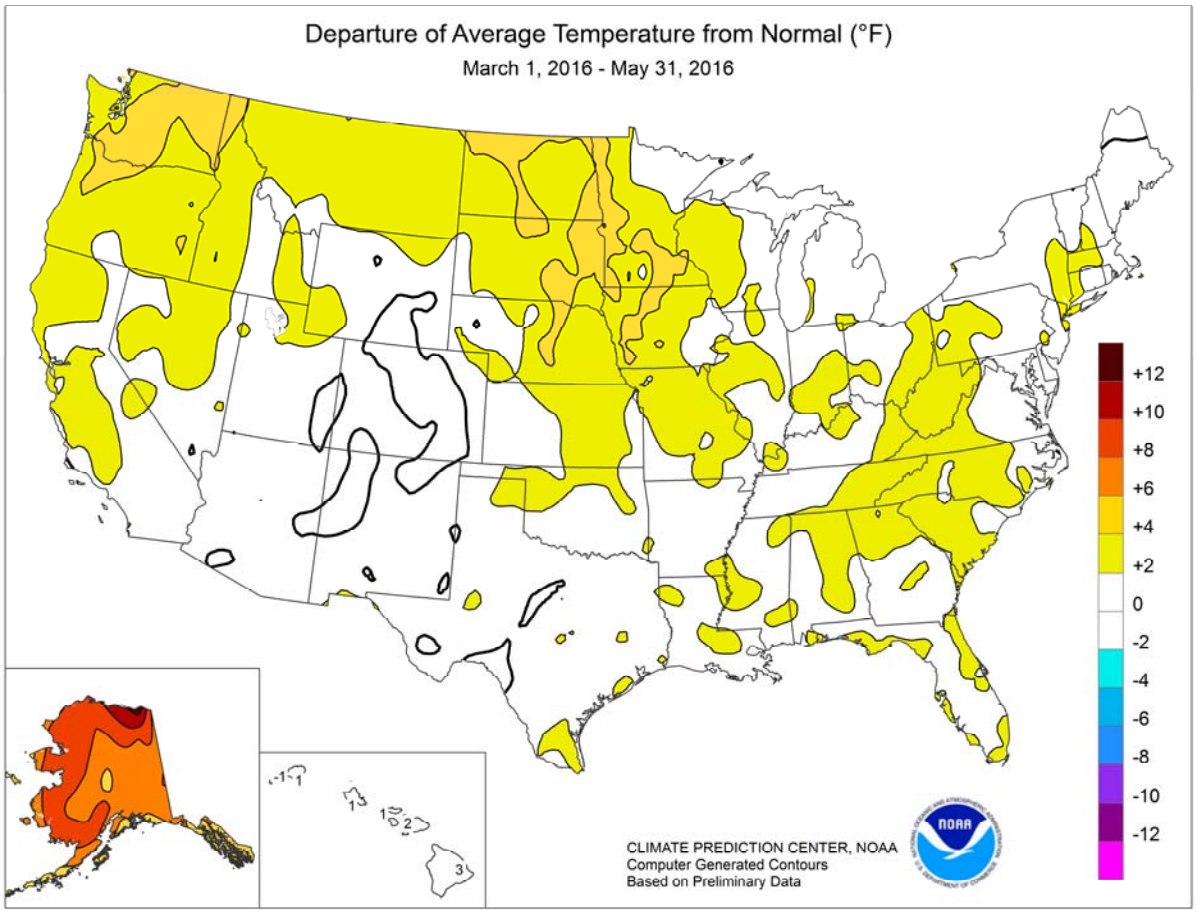

Total Precipitation (Inches)
March 1, 2016 - May 31, 2016
80
60
50
40
30
25
20
16
12
8
4
2
1
0.2
1.4
1.4
2.1
2.9
2.6
2.2
2.9
1.7
3.7
26.3
13
6
25.4
5.9
5.3
3.6
2.7
6.2
20.4
CLIMATE PREDICTION CENTER, NOAA
Computer Generated Contours
Based on Preliminary Data
NOAA


Percent of Normal Precipitation
March 1, 2016 - May 31, 2016
400
200
150
125
100
75
50
25
55
124
80
104
104
159
89
93
101
82
88
168
89
92
115
80
56
96
45
130
58
CLIMATE PREDICTION CENTER, NOAA
Computer Generated Contours
Based on Preliminary Data
NOAA


Extreme Maximum Temperature (°F)
March 1, 2016 - May 31, 2016
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
87
89
88
88
91
90
CLIMATE PREDICTION CENTER, NOAA
Computer Generated Contours
Based on Preliminary Data


Extreme Minimum Temperature (°F)
March 1, 2016 - May 31, 2016
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
60
60
64
59
61
64
CLIMATE PREDICTION CENTER, NOAA
Computer Generated Contours
Based on Preliminary Data


Average Temperature (°F)
March 1, 2016 - May 31, 2016
100
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
76
75
77
74
76
76
CLIMATE PREDICTION CENTER, NOAA
Computer Generated Contours
Based on Preliminary Data


Departure of Average Temperature from Normal (°F)
March 1, 2016 - May 31, 2016
+12
+10
+8
+6
+4
+2
0
-2
-4
-6
-8
-10
-12
-1
1
1
2
3
CLIMATE PREDICTION CENTER, NOAA
Computer Generated Contours
Based on Preliminary Data

National Weather Data for Selected Cities

Spring 2016

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	65	3	10.87	-4.73	LEXINGTON	57	2	12.59	-0.27	COLUMBUS	53	1	10.32	0.30
HUNTSVILLE	64	4	8.34	-8.12	LONDON-CORBIN	57	1	10.20	-3.11	DAYTON	53	2	11.40	-0.09
MOBILE	68	1	18.71	0.35	LOUISVILLE	60	4	13.24	0.04	MANSFIELD	50	3	11.50	-0.45
MONTGOMERY	68	3	11.71	-3.20	PADUCAH	59	2	18.74	4.77	TOLEDO	50	2	10.54	1.54
AK ANCHORAGE	43	7	1.58	-0.28	LA BATON ROUGE	70	3	20.89	4.92	YOUNGSTOWN	50	3	9.91	0.08
BARROW	11	9	0.18	-0.15	LAKE CHARLES	70	2	24.15	10.91	OK OKLAHOMA CITY	62	2	10.95	-0.39
COLD BAY	39	5	5.93	-1.50	NEW ORLEANS	72	3	21.19	6.31	TULSA	62	1	12.66	-0.97
FAIRBANKS	38	8	1.82	0.73	SHREVEPORT	68	2	29.21	15.36	OR ASTORIA	53	4	14.94	-0.64
JUNEAU	46	5	13.00	3.05	ME BANGOR	44	1	7.86	-2.30	BURNS	47	3	2.13	-1.01
KING SALMON	42	9	5.97	2.89	CARIBOU	38	0	10.45	1.97	EUGENE	54	4	10.09	-2.03
KODIAK	44	6	19.48	2.47	PORTLAND	45	1	7.97	-4.25	MEDFORD	57	5	3.74	-0.63
NOME	30	8	2.06	0.07	MD BALTIMORE	55	2	8.64	-2.18	PENDLETON	55	4	3.22	-0.39
AZ FLAGSTAFF	44	1	3.24	-1.47	MA BOSTON	49	0	8.90	-1.79	PORTLAND	57	5	8.41	-0.32
PHOENIX	74	3	0.56	-0.92	WORCESTER	47	2	8.33	-4.17	SALEM	55	4	9.56	0.50
TUCSON	70	3	0.82	-0.51	MI ALPENA	41	1	10.25	3.20	PA ALLENTOWN	53	4	7.70	-3.82
AR FORT SMITH	63	2	15.06	1.92	DETROIT	50	2	9.37	0.75	ERIE	48	1	7.56	-2.29
LITTLE ROCK	64	2	23.50	8.10	FLINT	49	4	8.38	0.29	MIDDLETOWN	54	2	7.27	-3.51
CA BAKERSFIELD	67	3	1.97	-0.13	GRAND RAPIDS	49	3	12.08	2.66	PHILADELPHIA	56	3	11.01	-0.17
EUREKA	53	2	11.70	1.62	HOUGHTON LAKE	43	1	10.95	4.04	PITTSBURGH	53	3	8.69	-1.29
FRESNO	65	3	4.27	0.92	LANSING	48	2	9.75	1.62	WILKES-BARRE	51	2	7.02	-2.64
LOS ANGELES	62	1	2.33	-0.94	MUSKEGON	48	3	9.72	1.50	WILLIAMSPORT	52	3	5.52	-4.97
REDDING	64	5	14.58	5.37	TRAVERSE CITY	45	2	7.81	0.81	PR SAN JUAN	80	1	19.39	8.25
SACRAMENTO	63	3	6.49	2.14	MN DULUTH	41	2	8.23	1.50	RI PROVIDENCE	50	1	9.77	-2.48
SAN DIEGO	64	2	1.75	-1.46	INT'L FALLS	40	1	6.42	1.53	SC CHARLESTON	68	3	12.46	2.02
SAN FRANCISCO	60	4	6.01	1.20	MINNEAPOLIS	50	4	7.52	0.11	COLUMBIA	67	4	7.29	-3.45
STOCKTON	63	2	6.73	2.99	ROCHESTER	48	4	10.29	1.86	FLORENCE	65	2	13.63	3.53
CO ALAMOSA	43	2	3.39	1.69	ST. CLOUD	47	4	5.41	-1.19	GREENVILLE	63	4	9.29	-4.14
CO SPRINGS	48	2	6.39	1.32	MS JACKSON	67	3	20.85	4.27	MYRTLE BEACH	66	4	9.63	0.73
DENVER	48	2	6.84	2.18	MERIDIAN	65	1	17.50	0.08	SD ABERDEEN	49	4	6.25	0.39
GRAND JUNCTION	52	0	3.60	0.76	TUPELO	64	3	14.93	-2.11	HURON	49	3	7.94	0.98
PUEBLO	53	3	6.31	2.60	MO COLUMBIA	58	4	8.48	-3.76	RAPID CITY	47	2	3.78	-2.07
CT BRIDGEPORT	51	2	8.38	-3.79	JOPLIN	59	2	13.43	0.42	SIOUX FALLS	49	4	9.81	1.96
HARTFORD	51	2	7.11	-5.02	KANSAS CITY	57	3	19.37	8.16	TN BRISTOL	58	3	9.51	-1.95
DC WASHINGTON	58	2	8.86	-1.33	SPRINGFIELD	58	2	9.97	-2.73	CHATTANOOGA	63	3	6.50	-8.20
DE WILMINGTON	54	2	11.14	-0.37	ST JOSEPH	56	2	13.72	3.18	JACKSON	61	1	19.76	3.88
FL DAYTONA BEACH	72	2	9.29	-0.35	ST LOUIS	60	4	11.44	0.04	KNOXVILLE	61	3	9.38	-4.46
FT LAUDERDALE	77	3	9.44	-3.60	MT BILLINGS	49	3	4.87	-0.47	MEMPHIS	64	2	27.24	10.72
FT MYERS	75	1	5.75	-2.08	BUTTE	41	2	3.06	-0.81	NASHVILLE	62	3	7.81	-6.06
JACKSONVILLE	69	2	6.81	-3.74	GLASGOW	47	3	7.61	4.67	TX ABILENE	65	0	17.08	11.17
KEY WEST	77	0	4.57	-2.83	GREAT FALLS	46	3	5.37	0.43	AMARILLO	58	2	5.20	0.24
MELBOURNE	73	2	12.11	3.17	HELENA	48	4	2.65	-0.67	AUSTIN	68	0	26.11	16.42
MIAMI	78	2	9.97	-1.47	KALISPELL	47	4	5.99	1.62	BEAUMONT	71	2	23.54	10.12
ORLANDO	74	2	12.75	3.05	MILES CITY	50	4	7.05	2.88	BROWNSVILLE	76	2	8.11	2.74
PENSACOLA	70	2	15.61	0.92	MISSOULA	48	3	4.02	0.02	COLLEGE STATION	69	1	22.77	11.68
ST PETERSBURG	74	1	6.62	-1.39	NE GRAND ISLAND	53	3	12.50	3.78	CORPUS CHRISTI	75	3	15.93	8.67
TALLAHASSEE	70	3	14.70	-0.31	HASTINGS	53	3	11.17	1.63	DALLAS/FT WORTH	67	2	13.52	2.11
TAMPA	75	3	7.19	-0.30	LINCOLN	55	4	10.72	1.38	DEL RIO	71	0	7.86	2.88
WEST PALM BEACH	76	2	8.82	-3.82	MCCOOK	52	2	9.49	2.60	EL PASO	67	2	0.11	-0.76
GA ATHENS	64	3	7.01	-5.19	NORFOLK	51	2	14.30	5.82	GALVESTON	71	1	16.57	7.55
ATLANTA	65	3	6.61	-6.34	NORTH PLATTE	49	1	9.92	3.37	HOUSTON	69	0	24.84	12.73
AUGUSTA	65	2	13.31	2.69	OMAHA/EPPLEY	55	4	11.27	1.76	LUBBOCK	62	2	4.88	0.52
COLUMBUS	66	1	12.01	-1.20	SCOTTSBLUFF	49	2	8.35	2.70	MIDLAND	67	3	3.26	0.32
MACON	65	2	12.23	1.22	VALENTINE	49	3	13.24	6.96	SAN ANGELO	67	2	14.83	9.15
SAVANNAH	69	3	16.26	5.69	NV ELKO	49	4	4.49	1.62	SAN ANTONIO	70	1	18.89	9.68
HI HILO	75	2	20.36	-14.60	ELY	44	1	3.77	0.53	VICTORIA	71	1	15.28	4.95
HONOLULU	77	1	3.61	-0.17	LAS VEGAS	69	2	2.30	1.32	WACO	67	1	20.19	10.26
KAHULUI	76	2	6.18	1.42	RENO	55	6	3.09	1.26	WICHITA FALLS	64	1	14.79	5.98
LIHUE	75	1	5.27	-4.18	WINNEMUCCA	49	1	2.46	-0.31	UT SALT LAKE CITY	55	4	5.19	-0.83
ID BOISE	55	4	3.02	-0.93	NH CONCORD	47	2	6.95	-2.49	VT BURLINGTON	46	2	6.52	-2.00
LEWISTON	56	5	5.23	1.25	NJ ATLANTIC CITY	53	2	12.71	1.82	VA LYNCHBURG	57	2	12.36	0.96
POCATELLO	48	2	5.53	1.46	NEWARK	55	3	7.15	-5.44	NORFOLK	60	2	11.36	0.16
IL CHICAGO/O'HARE	50	2	11.57	1.86	NM ALBUQUERQUE	57	1	0.77	-0.94	RICHMOND	58	1	12.98	1.76
MOLINE	53	3	8.67	-2.32	NY ALBANY	49	2	5.44	-4.62	ROANOKE	59	3	9.50	-2.19
PEORIA	54	3	7.73	-2.83	BINGHAMTON	46	2	7.08	-2.93	WASH/DULLES	55	2	9.41	-1.58
ROCKFORD	51	3	10.53	0.50	BUFFALO	47	1	5.96	-3.42	WA OLYMPIA	52	4	10.24	-0.90
SPRINGFIELD	56	3	11.26	0.69	ROCHESTER	47	2	6.31	-1.84	QUILLAYUTE	51	4	20.37	-3.56
IN EVANSVILLE	58	2	15.41	1.63	SYRACUSE	47	2	8.04	-1.76	SEATTLE-TACOMA	55	4	7.65	-0.46
FORT WAYNE	51	2	11.14	0.99	NC ASHEVILLE	58	4	5.90	-6.60	SPOKANE	52	5	4.40	-0.01
INDIANAPOLIS	55	3	13.79	2.39	CHARLOTTE	63	2	8.51	-2.49	YAKIMA	56	7	2.73	0.99
SOUTH BEND	49	0	11.33	1.32	GREENSBORO	61	3	12.83	1.60	WV BECKLEY	53	2	12.74	1.30
IA BURLINGTON	54	2	9.47	-1.50	HATTERAS	63	3	20.95	8.79	CHARLESTON	57	3	12.73	1.28
CEDAR RAPIDS	51	2	8.99	-0.31	RALEIGH	62	3	13.20	2.58	ELKINS	52	3	12.75	0.53
DES MOINES	55	5	9.47	-0.57	WILMINGTON	65	2	10.62	-0.94	HUNTINGTON	58	3	12.26	0.69
DUBUQUE	49	2	9.87	-0.31	ND BISMARCK	47	4	6.54	2.01	WI EAU CLAIRE	47	2	11.03	2.57
SIOUX CITY	52	3	13.89	5.39	DICKINSON	44	1	4.30	-0.43	GREEN BAY	46	2	8.70	1.33
WATERLOO	50	2	8.71	-0.80	FARGO	47	4	4.48	-0.67	LA CROSSE	51	3	10.43	1.67
KS CONCORDIA	56	3	11.32	2.32	GRAND FORKS	45	3	6.31	1.98	MADISON	48	2	11.69	2.81
DODGE CITY	55	1	10.53	3.44	JAMESTOWN	45	2	5.72	1.26	MILWAUKEE	47	2	9.50	0.07
GOODLAND	51	2	6.50	0.33	MINOT	49	7	6.00	1.09	WAUSAU	47	3	10.22	1.92
HILL CITY	54	3	12.05	4.88	WILLISTON	46	4	3.94	0.27	WY CASPER	43	0	8.00	3.20
TOPEKA	58	4	18.04	7.48	OH AKRON-CANTON	51	3	10.08	-0.42	CHEYENNE	44	2	8.66	3.58
WICHITA	59	4	14.82	5.38	CINCINNATI	55	1	12.98	0.53	LANDER	45	1	15.23	9.54
KY JACKSON	58	2	13.24	-0.09	CLEVELAND	51	3	11.34	1.53	SHERIDAN	46	2	7.90	2.72

Based on 1971-2000 normals

***** Not Available**

National Agricultural Summary

June 13 – 19, 2016

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Above-average temperatures blanketed much of the country during the week. Temperatures ranged from as much as 12°F below normal west of the Rocky Mountains to 12°F above normal in portions of the central Great Plains. Precipitation was scattered throughout much of the nation during the week, with the largest accumulations evident in the upper Midwest and the south-central U.S. Conversely, drier-than-normal weather continued in the Northeast and Southwest, including southern California, which is experiencing mostly extreme drought conditions.

Corn: Seventy-five percent of the corn was reported in good to excellent condition, unchanged from last week but 4 percentage points above the same time last year. The corn acreage rated in good to excellent condition dropped 6 percentage points in Missouri last week, to 66 percent, due to continued dry conditions.

Soybeans: Ninety-six percent of the nation's soybean crop was planted by June 19, seven percentage points ahead of last year and 3 points ahead of the 5-year average. By week's end, 89 percent of the soybeans were emerged, 8 percentage points ahead of last year and 5 points ahead of the 5-year average. Favorable conditions allowed for double-digit emergence in 11 of the 18 estimating states. Overall, 73 percent of the soybeans were reported in good to excellent condition, down slightly from last week but 8 percentage points above the same time last year.

Winter Wheat: By June 19, producers had harvested 25 percent of the 2016 winter wheat crop, 8 percentage points ahead of last year but 3 points behind the 5-year average. Producers in Arkansas, California, Illinois, Missouri, and North Carolina harvested at least 25 percent of their winter wheat during the week. However, nine of the 18 estimating states had not yet started harvesting winter wheat by week's end. Overall, 61 percent of the winter wheat was reported in good to excellent condition, unchanged from last week but 20 percentage points better than at the same time last year.

Cotton: Ninety-five percent of the cotton was planted by June 19, two percentage points ahead of last year but 3 points behind the 5-year average. Planting delays continued on the central Great Plains, with progress 22 percentage points behind the 5-year average in Kansas. By week's end, 22 percent of the cotton was at or beyond the squaring stage, 3 percentage points ahead of last year and slightly ahead of the 5-year average. Cotton farmers in California continued to irrigate and spray for pests. Overall, 54 percent of the cotton was reported in good to excellent condition, up slightly from last week but slightly below the same time last year.

Sorghum: Producers had planted 88 percent of this year's sorghum by week's end, 7 percentage points ahead of last year and 2 points ahead of the 5-year average. Favorable weather in Colorado and Kansas spurred fieldwork during the week, advancing planting progress 22 percentage points in both states. Heading advanced to 17 percent complete by June 19, slightly ahead of last year but 3 percentage points behind the 5-year average. Overall, 70 percent of the sorghum was reported in good to excellent condition, down slightly from last week but 2 percentage points better than at the same time last year.

Rice: Eight percent of the rice was at or beyond the heading stage by June 19, three percentage points ahead of both last year and the 5-year average. Heading progress was most advanced in Louisiana at 34 percent complete, 15 percentage points ahead of the 5-year average. Overall, 70 percent of the rice was reported in good to excellent condition, up 2 percentage points from last week and 2 points better than at the same time last year.

Small Grains: By June 19, sixty-eight percent of the oat crop was at or beyond the heading stage, 6 percentage points ahead of last year and 11 points ahead of the 5-year average. Heading progress was ahead of the 5-year average in all nine estimating states. Overall, 70 percent of the oat crop was reported in good to excellent condition, unchanged from last week but 3 percentage points better than at the same time last year.

Nationally, 23 percent of this year's barley was headed by week's end, 8 percentage points behind last year but 6 points ahead of the 5-year average. Heading advanced 12 percentage points or more in all estimating states during the week. Overall, 77 percent of the barley was reported in good to excellent condition, down slightly from last week but slightly better than at the same time last year.

By week's end, 28 percent of the spring wheat was at or beyond the heading stage, 9 percentage points ahead of last year and 14 points ahead of the 5-year average. Warm weather on the northern Great Plains accelerated heading, which was 28 and 17 percentage points, respectively, ahead of the 5-year average in Minnesota and South Dakota. Overall, 76 percent of the spring wheat was reported in good to excellent condition, down 3 percentage points from last week but 5 points better than at the same time last year.

Other Crops: Twenty-one percent of this year's peanut crop was pegging by June 19, nine percentage points ahead of last year and 10 points ahead of the 5-year average. Pegging was 28 percent complete in Georgia, 19 percentage points ahead of the 5-year average. Overall, 70 percent of the peanut crop was reported in good to excellent condition, unchanged from last week but 2 percentage points lower than at the same time last year.

Sunflower producers had planted 87 percent of this year's crop by week's end, 10 percentage points ahead of both last year and the 5-year average. Seeding was nearly complete in North Dakota, with 98 percent of the crop planted by June 19.

Crop Progress and Condition

Week Ending June 19, 2016

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

Soybeans Percent Planted

	Prev Year	Prev Week	Jun 19 2016	5-Yr Avg
AR	90	93	96	89
IL	91	90	96	95
IN	94	91	96	94
IA	94	98	100	95
KS	68	75	89	86
KY	79	67	80	79
LA	97	97	99	97
MI	99	95	100	98
MN	99	100	100	96
MS	94	95	98	97
MO	48	84	92	80
NE	94	97	99	99
NC	78	67	79	75
ND	98	99	100	96
OH	95	94	97	96
SD	98	93	98	97
TN	79	74	85	81
WI	98	98	99	93
18 Sts	89	92	96	93

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

Soybeans Percent Emerged

	Prev Year	Prev Week	Jun 19 2016	5-Yr Avg
AR	81	87	91	80
IL	87	78	88	88
IN	88	76	87	87
IA	88	91	97	88
KS	44	40	70	72
KY	65	41	58	67
LA	93	94	97	93
MI	95	76	93	90
MN	97	96	99	89
MS	90	90	95	93
MO	37	64	80	68
NE	84	84	96	94
NC	64	56	68	63
ND	89	89	96	80
OH	90	79	90	86
SD	90	80	90	84
TN	61	60	70	62
WI	95	88	97	83
18 Sts	81	79	89	84

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

Soybean Condition by Percent

	VP	P	F	G	EX
AR	6	5	32	44	13
IL	1	4	20	61	14
IN	1	4	23	58	14
IA	0	3	17	66	14
KS	1	3	31	61	4
KY	1	3	19	66	11
LA	0	4	20	69	7
MI	2	5	25	58	10
MN	0	3	21	61	15
MS	2	7	24	46	21
MO	2	6	35	52	5
NE	0	2	21	65	12
NC	1	5	26	58	10
ND	1	3	18	69	9
OH	1	4	31	52	12
SD	1	2	19	69	9
TN	1	3	20	60	16
WI	0	1	14	60	25
18 Sts	1	4	22	61	12
Prev Wk	1	3	22	62	12
Prev Yr	2	6	27	54	11

Cotton Percent Planted

	Prev Year	Prev Week	Jun 19 2016	5-Yr Avg
AL	97	93	97	97
AZ	100	100	100	100
AR	100	100	100	100
CA	100	99	100	100
GA	99	93	97	98
KS	79	56	68	90
LA	100	99	100	100
MS	99	96	98	100
MO	100	100	100	100
NC	96	95	97	99
OK	81	78	91	85
SC	98	93	96	97
TN	100	99	99	99
TX	90	86	94	96
VA	100	84	94	100
15 Sts	93	89	95	98

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

Cotton Percent Squaring

	Prev Year	Prev Week	Jun 19 2016	5-Yr Avg
AL	40	18	38	34
AZ	42	40	50	48
AR	38	35	55	43
CA	79	15	20	41
GA	23	19	32	26
KS	0	1	8	3
LA	50	13	42	51
MS	29	17	35	32
MO	4	16	51	17
NC	25	2	12	22
OK	1	2	9	8
SC	16	5	11	15
TN	17	15	24	22
TX	15	10	15	15
VA	27	16	25	24
15 Sts	19	13	22	21

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

Cotton Condition by Percent

	VP	P	F	G	EX
AL	0	4	48	44	4
AZ	4	0	3	55	38
AR	5	5	22	45	23
CA	0	0	40	30	30
GA	0	5	28	55	12
KS	0	1	31	65	3
LA	0	5	24	67	4
MS	1	7	32	47	13
MO	6	13	49	30	2
NC	4	6	29	55	6
OK	0	0	45	49	6
SC	0	0	53	42	5
TN	1	3	17	63	16
TX	1	8	43	41	7
VA	0	0	20	80	0
15 Sts	1	7	38	45	9
Prev Wk	1	8	38	45	8
Prev Yr	1	8	36	45	10

Crop Progress and Condition

Week Ending June 19, 2016

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

Sorghum Percent Planted

	Prev Year	Prev Week	Jun 19 2016	5-Yr Avg
AR	100	98	99	100
CO	83	66	88	77
IL	74	50	62	84
KS	72	63	85	81
LA	100	100	100	100
MO	56	87	94	82
NE	91	98	98	97
NM	91	65	71	68
OK	71	68	79	76
SD	71	92	96	87
TX	89	87	90	92
11 Sts	81	76	88	86

These 11 States planted 98% of last year's sorghum acreage.

Sorghum Percent Headed

	Prev Year	Prev Week	Jun 19 2016	5-Yr Avg
AR	12	5	16	11
CO	0	0	0	0
IL	1	0	0	1
KS	0	1	4	0
LA	45	30	49	46
MO	1	3	4	1
NE	0	0	0	0
NM	0	0	0	0
OK	0	0	2	0
SD	0	1	4	0
TX	42	37	40	54
11 Sts	16	14	17	20

These 11 States planted 98% of last year's sorghum acreage.

Sorghum Condition by Percent

	VP	P	F	G	EX
AR	3	8	28	46	15
CO	0	0	22	74	4
IL	7	6	32	54	1
KS	0	2	25	71	2
LA	0	2	19	62	17
MO	0	4	36	57	3
NE	0	0	17	79	4
NM	0	0	70	30	0
OK	0	2	25	71	2
SD	0	0	32	68	0
TX	1	5	28	49	17
11 Sts	0	3	27	62	8
Prev Wk	1	3	25	64	7
Prev Yr	3	3	26	56	12

Peanuts Percent Pegging

	Prev Year	Prev Week	Jun 19 2016	5-Yr Avg
AL	20	NA	22	19
FL	15	4	22	14
GA	11	6	28	9
NC	6	NA	1	12
OK	0	NA	0	5
SC	15	3	15	13
TX	9	NA	7	2
VA	1	NA	0	10
8 Sts	12	NA	21	11

These 8 States planted 97% of last year's peanut acreage.

Peanut Condition by Percent

	VP	P	F	G	EX
AL	0	0	54	41	5
FL	0	1	34	55	10
GA	0	3	22	59	16
NC	0	1	17	69	13
OK	0	0	9	91	0
SC	0	0	13	71	16
TX	0	0	33	64	3
VA	0	0	8	92	0
8 Sts	0	2	28	59	11
Prev Wk	0	1	29	59	11
Prev Yr	0	3	25	58	14

Corn Condition by Percent

	VP	P	F	G	EX
CO	0	1	19	63	17
IL	1	4	20	59	16
IN	1	5	22	59	13
IA	1	3	17	61	18
KS	1	4	26	61	8
KY	1	4	22	59	14
MI	2	5	30	50	13
MN	0	2	19	61	18
MO	1	5	28	57	9
NE	1	2	18	65	14
NC	2	4	21	56	17
ND	0	2	12	74	12
OH	0	4	32	51	13
PA	0	2	22	63	13
SD	1	3	22	63	11
TN	1	4	19	52	24
TX	1	4	21	58	16
WI	0	2	12	57	29
18 Sts	1	3	21	60	15
Prev Wk	1	3	21	60	15
Prev Yr	1	5	23	57	14

Rice Percent Headed

	Prev Year	Prev Week	Jun 19 2016	5-Yr Avg
AR	0	NA	0	2
CA	7	NA	1	1
LA	19	18	34	19
MS	8	1	14	3
MO	0	NA	0	0
TX	2	9	19	10
6 Sts	5	NA	8	5

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

Rice Condition by Percent

	VP	P	F	G	EX
AR	3	8	27	45	17
CA	0	0	5	77	18
LA	0	5	27	60	8
MS	0	2	21	53	24
MO	1	5	24	51	19
TX	5	5	34	47	9
6 Sts	2	5	23	54	16
Prev Wk	2	6	24	53	15
Prev Yr	2	4	26	47	21

Crop Progress and Condition

Week Ending June 19, 2016

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

Winter Wheat Percent Harvested

	Prev Year	Prev Week	Jun 19 2016	5-Yr Avg
AR	63	45	81	69
CA	64	50	75	53
CO	0	0	0	4
ID	0	0	0	0
IL	2	1	38	19
IN	4	1	14	14
KS	6	5	25	27
MI	0	0	0	0
MO	10	22	49	31
MT	0	0	0	0
NE	0	0	0	3
NC	52	22	63	61
OH	1	0	0	2
OK	52	34	55	69
OR	0	0	0	0
SD	0	0	0	0
TX	59	35	55	63
WA	0	0	0	0
18 Sts	17	11	25	28

These 18 States harvested 90% of last year's winter wheat acreage.

Winter Wheat Condition by Percent

	VP	P	F	G	EX
AR	3	8	35	43	11
CA	0	5	15	35	45
CO	1	9	23	53	14
ID	3	3	14	63	17
IL	3	6	27	51	13
IN	1	4	23	55	17
KS	1	7	30	50	12
MI	1	4	21	55	19
MO	2	4	30	49	15
MT	2	6	28	39	25
NE	3	9	26	50	12
NC	14	19	32	29	6
OH	0	1	16	59	24
OK	1	4	29	54	12
OR	5	5	29	48	13
SD	1	4	28	61	6
TX	2	10	45	36	7
WA	1	4	17	67	11
18 Sts	2	7	30	49	12
Prev Wk	2	7	30	49	12
Prev Yr	7	15	37	34	7

Sunflowers Percent Planted

	Prev Year	Prev Week	Jun 19 2016	5-Yr Avg
CO	50	48	67	63
KS	57	51	70	65
ND	96	93	98	86
SD	62	68	80	70
4 Sts	77	78	87	77

These 4 States planted 84% of last year's sunflower acreage.

Oats Percent Headed

	Prev Year	Prev Week	Jun 19 2016	5-Yr Avg
IA	68	60	81	65
MN	48	23	52	29
NE	70	61	76	70
ND	16	8	27	10
OH	52	52	74	52
PA	50	68	81	50
SD	63	47	66	44
TX	100	100	100	99
WI	47	27	51	37
9 Sts	62	52	68	57

These 9 States planted 68% of last year's oat acreage.

Spring Wheat Percent Headed

	Prev Year	Prev Week	Jun 19 2016	5-Yr Avg
ID	32	8	45	22
MN	19	12	48	20
MT	7	NA	6	3
ND	14	5	25	11
SD	37	28	51	34
WA	55	54	68	36
6 Sts	19	NA	28	14

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

Spring Wheat Condition by Percent

	VP	P	F	G	EX
ID	0	0	24	57	19
MN	2	8	26	49	15
MT	1	2	25	52	20
ND	1	3	14	74	8
SD	0	3	29	62	6
WA	0	1	14	78	7
6 Sts	1	3	20	64	12
Prev Wk	0	2	19	67	12
Prev Yr	1	3	25	59	12

Oat Condition by Percent

	VP	P	F	G	EX
IA	0	1	19	64	16
MN	0	2	15	65	18
NE	1	1	25	65	8
ND	1	2	16	76	5
OH	1	2	21	66	10
PA	2	5	22	62	9
SD	0	1	31	63	5
TX	3	13	42	36	6
WI	0	1	13	67	19
9 Sts	1	4	25	60	10
Prev Wk	1	4	25	60	10
Prev Yr	4	7	22	56	11

Barley Percent Headed

	Prev Year	Prev Week	Jun 19 2016	5-Yr Avg
ID	43	NA	25	27
MN	25	10	41	21
MT	29	NA	12	9
ND	15	5	26	10
WA	60	NA	61	33
5 Sts	31	NA	23	17

These 5 States planted 82% of last year's barley acreage.

Barley Condition by Percent

	VP	P	F	G	EX
ID	0	1	25	62	12
MN	1	10	24	55	10
MT	0	1	29	42	28
ND	0	1	13	77	9
WA	0	0	10	84	6
5 Sts	0	1	22	60	17
Prev Wk	0	1	21	60	18
Prev Yr	0	3	21	59	17

Crop Progress and Condition

Week Ending June 19, 2016

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

Pasture and Range Condition by Percent
Week Ending Jun 19, 2016

	VP	P	F	G	EX		VP	P	F	G	EX
AL	5	8	31	47	9	NH	0	9	37	53	1
AZ	18	14	40	26	2	NJ	0	1	35	49	15
AR	1	6	30	51	12	NM	2	18	48	30	2
CA	10	15	25	30	20	NY	0	4	39	50	7
CO	3	5	18	62	12	NC	2	10	38	44	6
CT	6	7	19	57	11	ND	1	5	28	60	6
DE	3	6	27	58	6	OH	1	5	24	58	12
FL	3	8	33	45	11	OK	1	7	35	49	8
GA	4	13	39	39	5	OR	10	11	31	43	5
ID	1	2	20	58	19	PA	6	5	20	52	17
IL	1	5	23	55	16	RI	0	0	25	75	0
IN	1	4	20	62	13	SC	0	2	21	69	8
IA	1	4	23	57	15	SD	1	7	24	61	7
KS	0	3	22	64	11	TN	4	13	34	44	5
KY	1	5	21	62	11	TX	2	5	23	49	21
LA	1	7	27	57	8	UT	0	3	25	55	17
ME	2	0	26	61	11	VT	0	4	20	71	5
MD	1	4	15	67	13	VA	2	7	47	37	7
MA	4	8	21	66	1	WA	0	5	20	63	12
MI	2	7	29	52	10	WV	1	7	26	58	8
MN	0	3	15	65	17	WI	0	2	17	58	23
MS	2	8	27	54	9	WY	4	5	20	62	9
MO	1	7	42	47	3	48 Sts	2	7	27	52	12
MT	4	14	36	39	7						
NE	1	1	15	68	15	Prev Wk	2	6	26	53	13
NV	0	5	20	45	30	Prev Yr	2	7	26	50	15

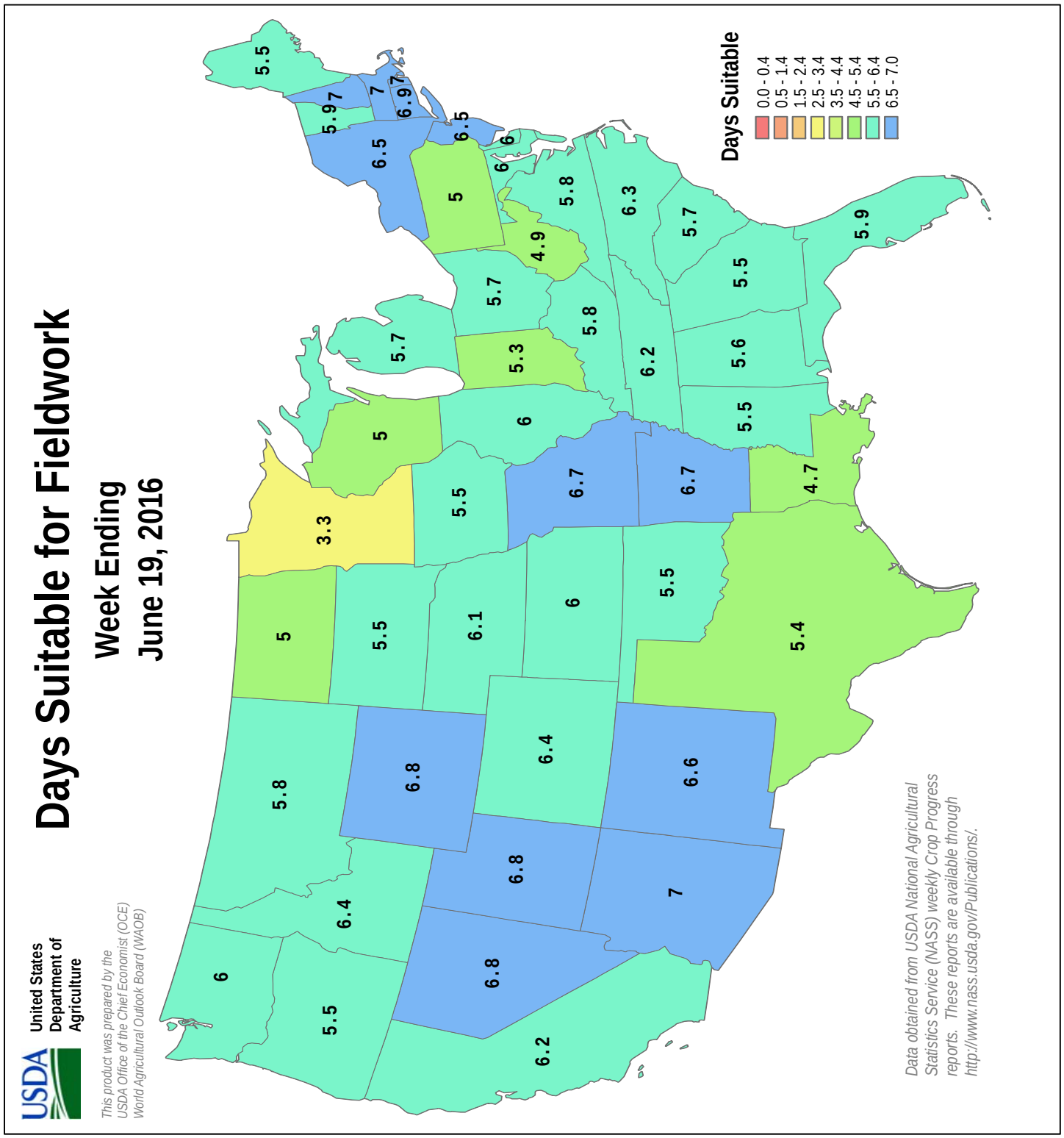
VP - Very Poor; P - Poor;
F - Fair;
G - Good; EX - Excellent

NA - Not Available
*** Revised**

Crop Progress and Condition

Week Ending June 19, 2016

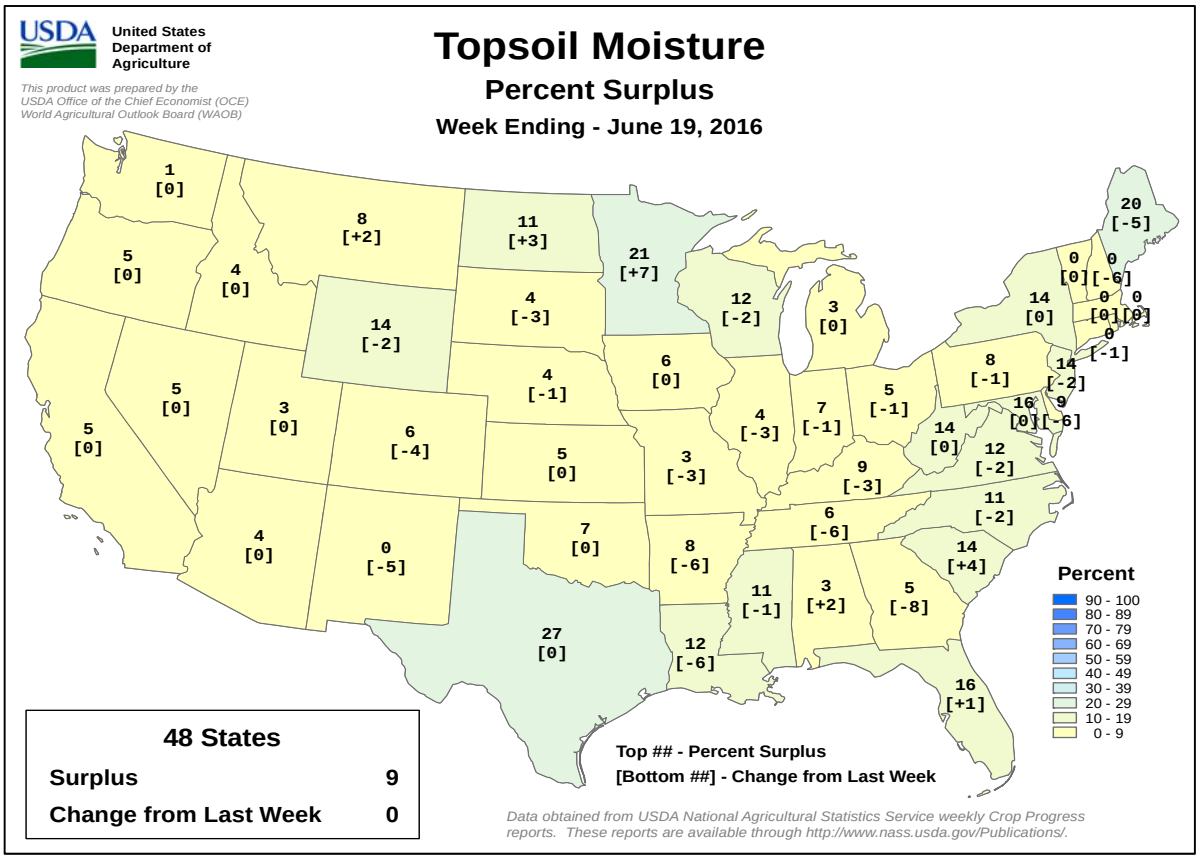
Weekly U.S. Progress and Condition Data provided by USDA/NASS

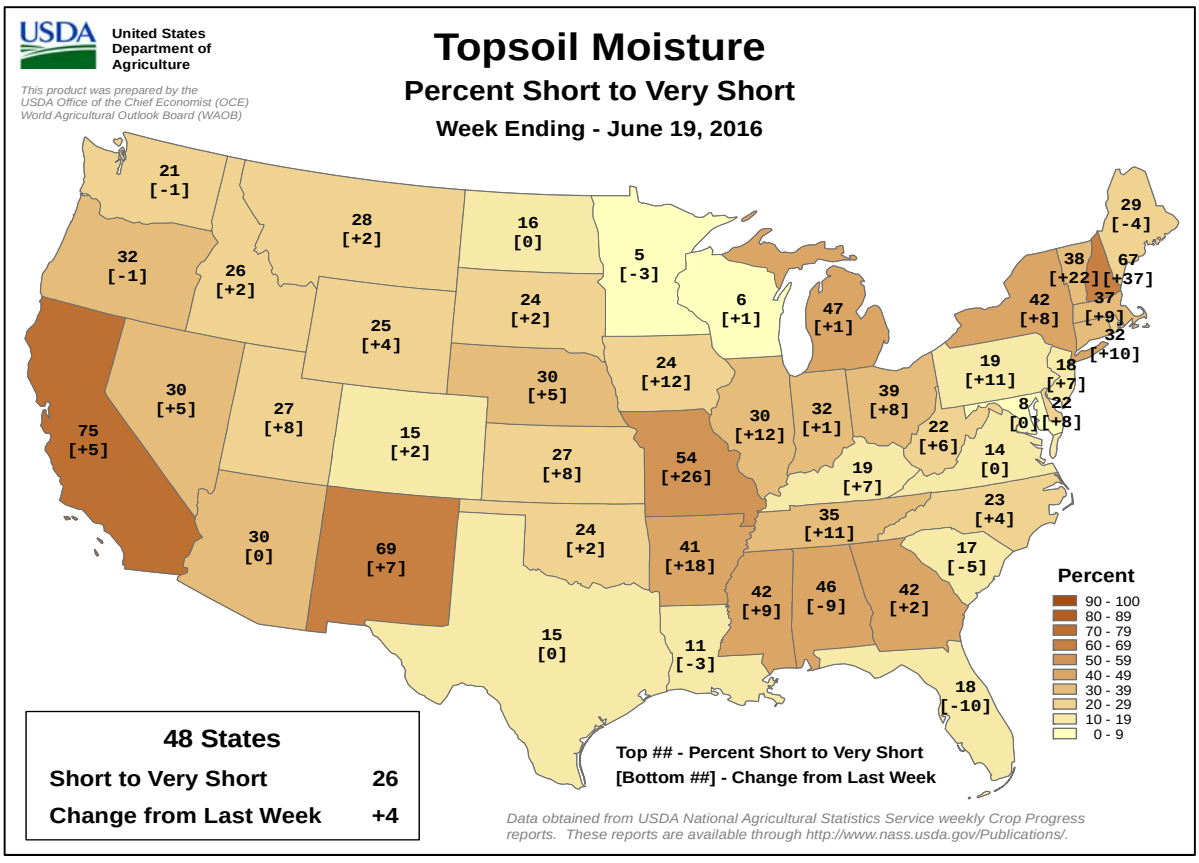


Crop Progress and Condition

Week Ending June 19, 2016

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

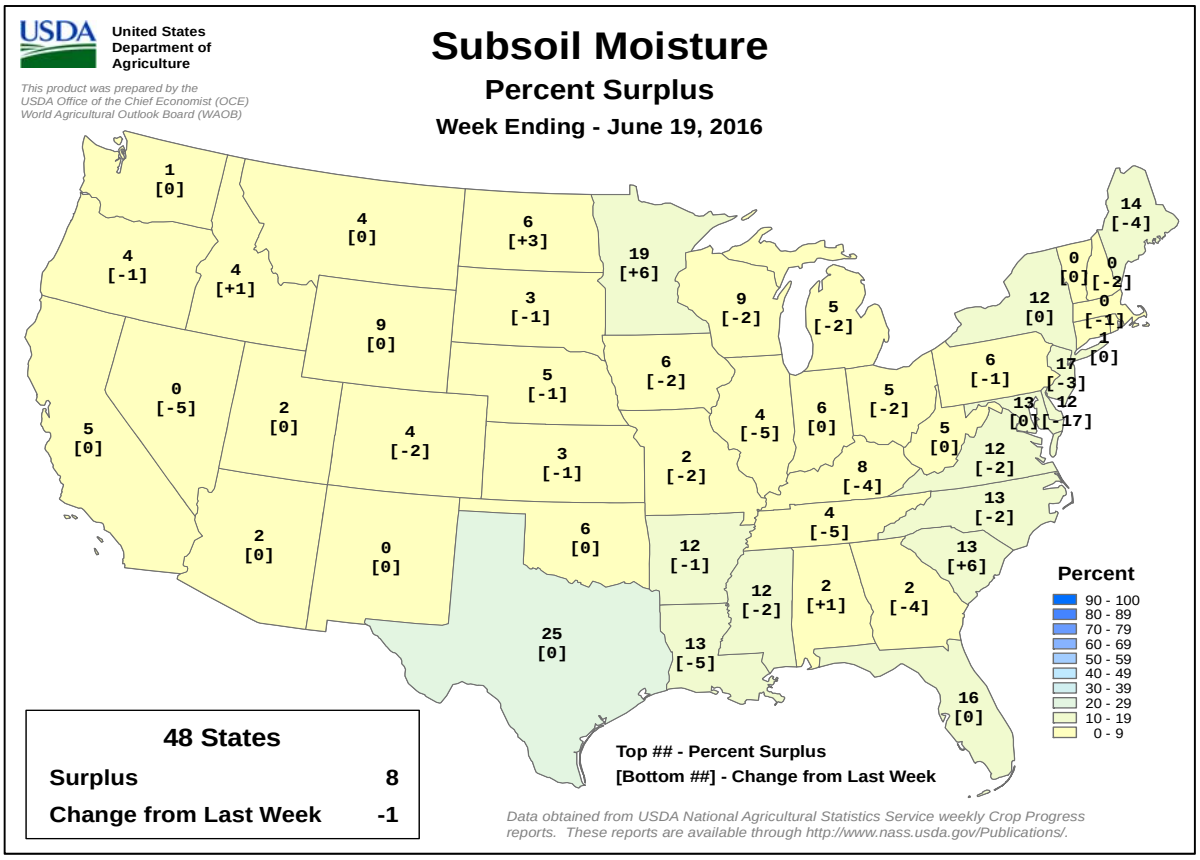


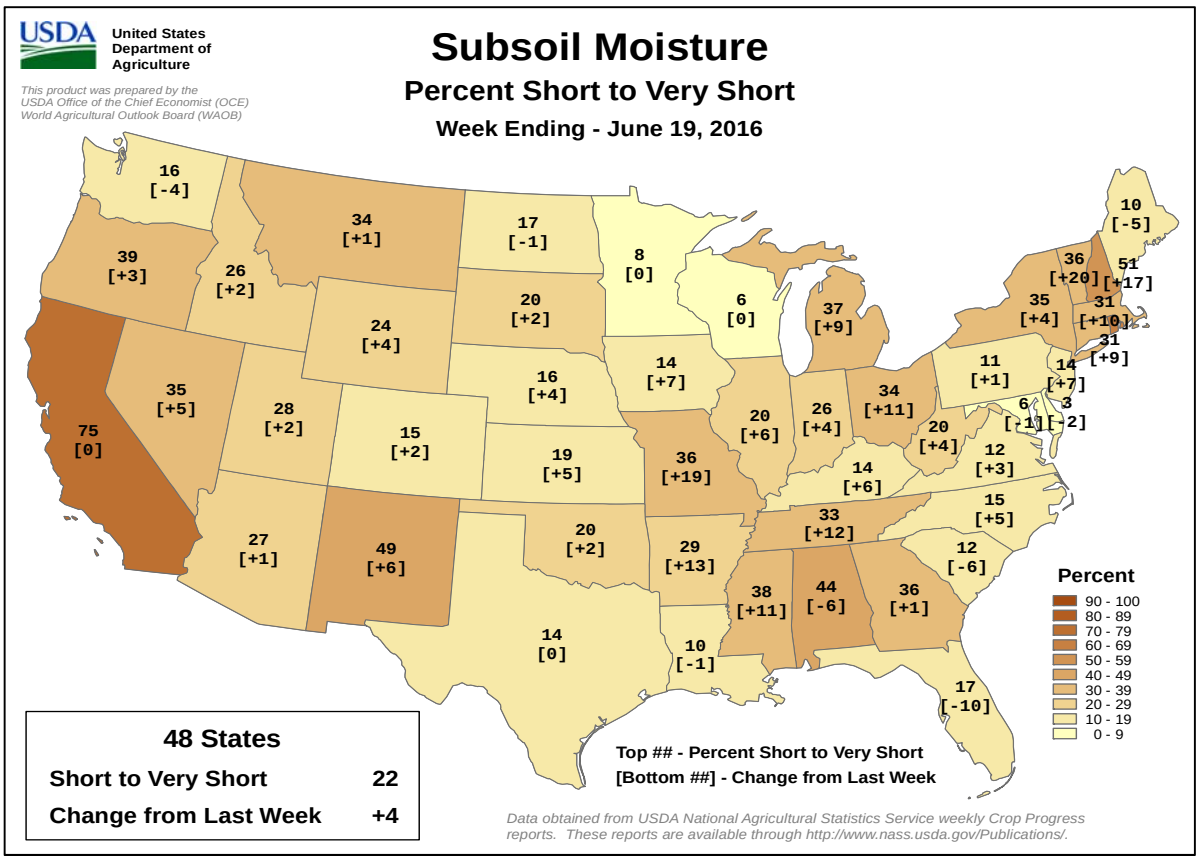


Crop Progress and Condition

Week Ending June 19, 2016

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





International Weather and Crop Summary

June 12-18, 2016

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

HIGHLIGHTS

EUROPE: The resumption of moderate to heavy showers renewed concerns for filling to maturing winter crops in portions of France, Germany, and the Low Countries.

WESTERN FSU: Widespread showers maintained abundant soil moisture in Ukraine, while dry weather for much of the week sped winter wheat maturation in southern Russia.

EASTERN FSU: Rain boosted soil moisture for spring wheat development, while scattered showers in the south provided supplemental soil moisture for irrigated cotton.

MIDDLE EAST: Sunny skies over Turkey and northern Iran allowed winter grain maturation and harvesting to resume.

SOUTH ASIA: Monsoon rainfall arrived in central and northeastern India, up to 10 days late in some areas, encouraging widespread planting of summer crops.

EAST ASIA: Showers maintained favorable soil moisture for crops in northeastern China, but persistent wetness raised quality concerns for unharvested wheat on the North China Plain.

SOUTHEAST ASIA: Monsoon showers kept rice adequately watered in most northern growing areas of the region, but pockets of dryness persisted in parts of Thailand.

AUSTRALIA: Showers maintained adequate to locally abundant moisture supplies for recently sown winter grains and oilseeds.

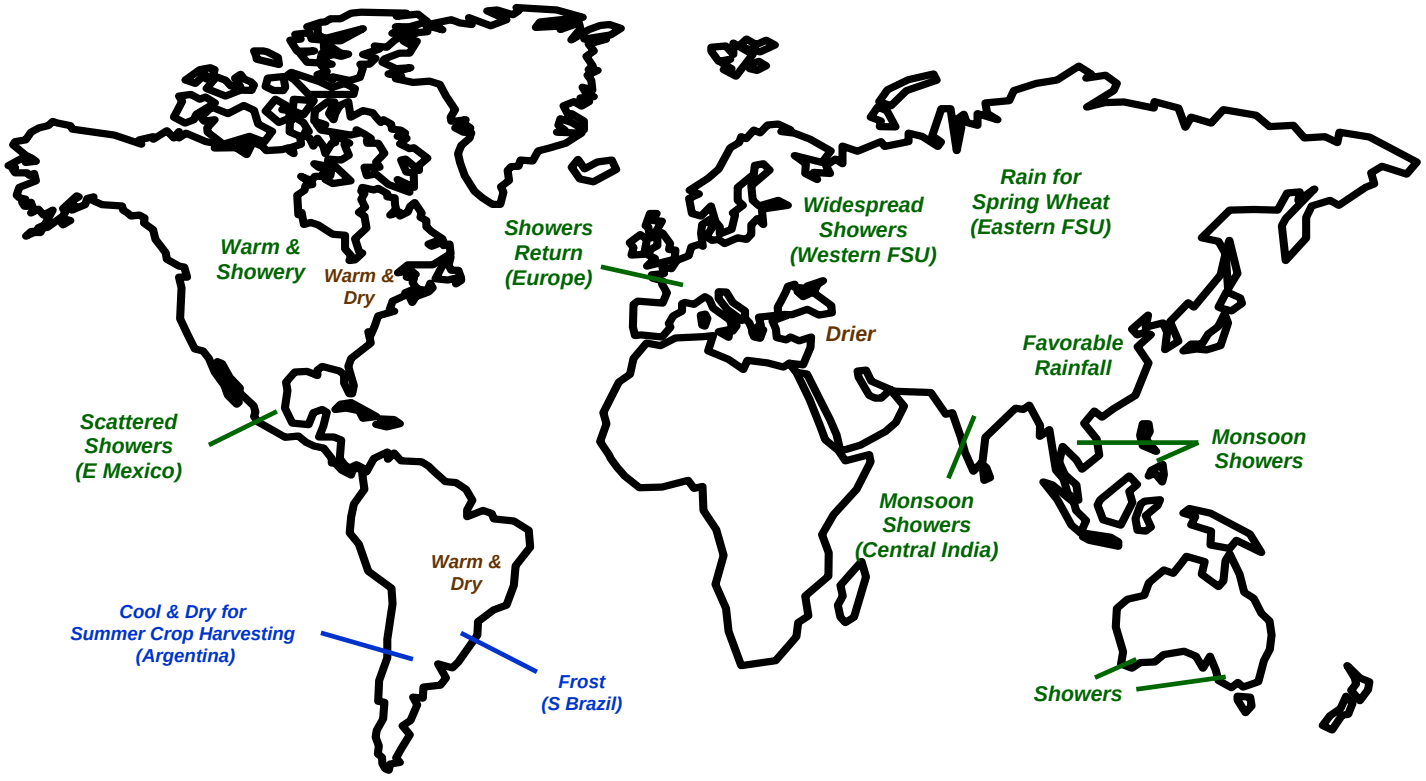
ARGENTINA: Dry weather favored harvesting of corn, soybeans, and cotton.

BRAZIL: Frost lingered in southern corn areas as warmth and dryness persisted for corn and cotton farther north.

MEXICO: Timely showers covered western sections of the southern plateau corn belt.

CANADIAN PRAIRIES: Beneficial rain fell in previously dry farming areas of northern Saskathchewan.

SOUTHEASTERN CANADA: Mostly dry, generally mild weather dominated the region, stimulating growth of summer crops, winter grains, and pastures.



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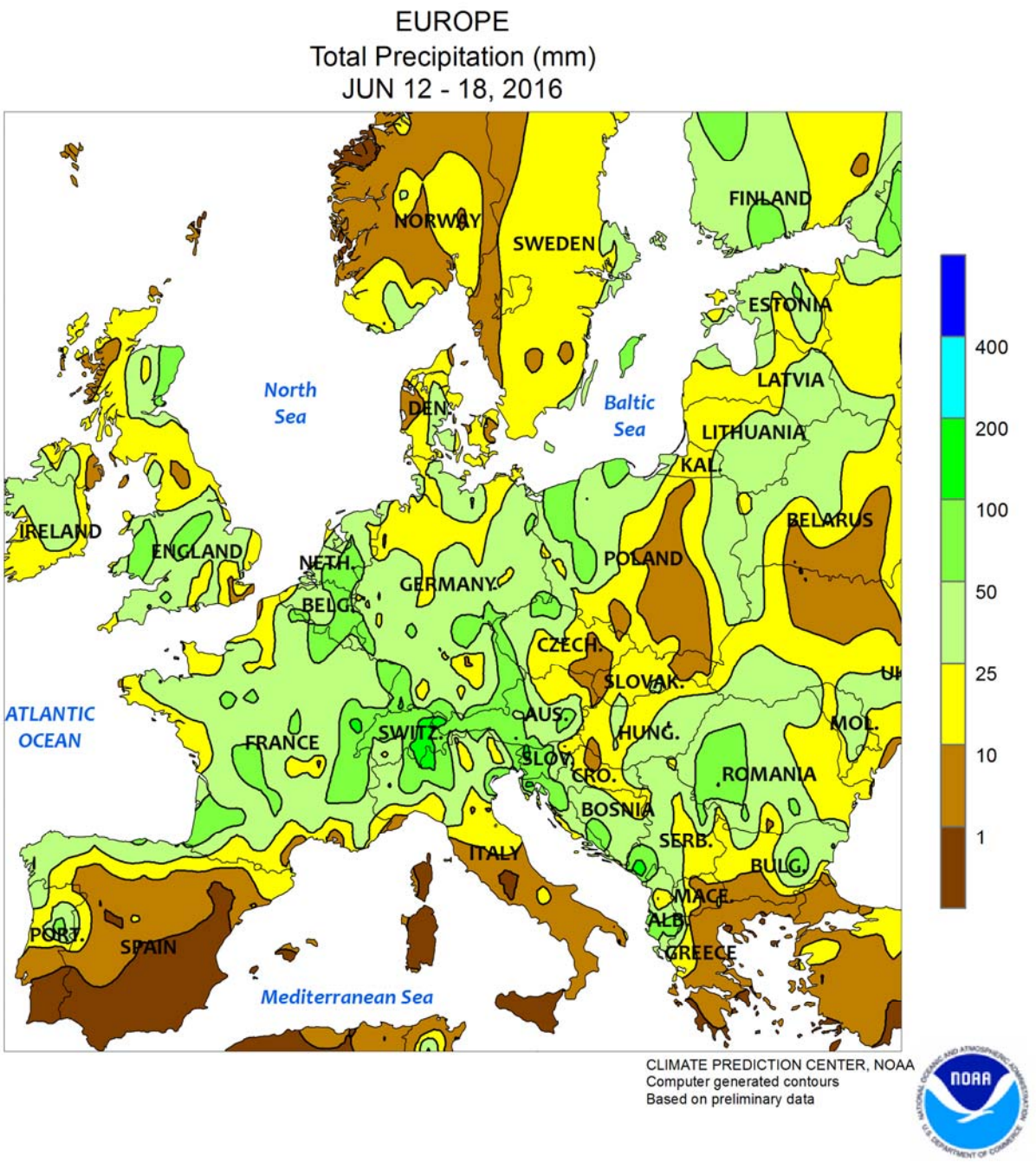

EUROPE

After a brief respite, the resumption of moderate to heavy showers renewed quality concerns for winter crops across northern and central Europe. A persistent blocking high over Scandinavia and northern Eurasia — which has prevailed for the better part of a month — continued to cause storms to slowly traverse the continent, resulting in widespread moderate to heavy rainfall (25-80 mm, locally more) from France and the United Kingdom eastward into western Poland and the Balkans. The rain maintained good to excellent early-season prospects for vegetative corn, soybeans, and sunflowers over most growing areas and further increased irrigation reserves across southern France, northern Italy, and the Balkans. However, the return of wet weather was unfavorable for filling to maturing winter wheat and rapeseed, particularly in France, southern Germany, and the central Danube River Valley. The primary impact of the wet conditions would be to reduce crop quality and hamper drydown and early harvest efforts. In contrast, warm, dry conditions in Spain were ideal for winter grain maturation and harvesting. On the opposite end of the continent, variable showers (5-50 mm) in the Baltic States were favorable for vegetative spring grains. Early-season heat (35-38°C) continued to build over southern Spain and the lower Danube River Valley, though summer crops were not yet in the temperature-sensitive reproductive stages of development.

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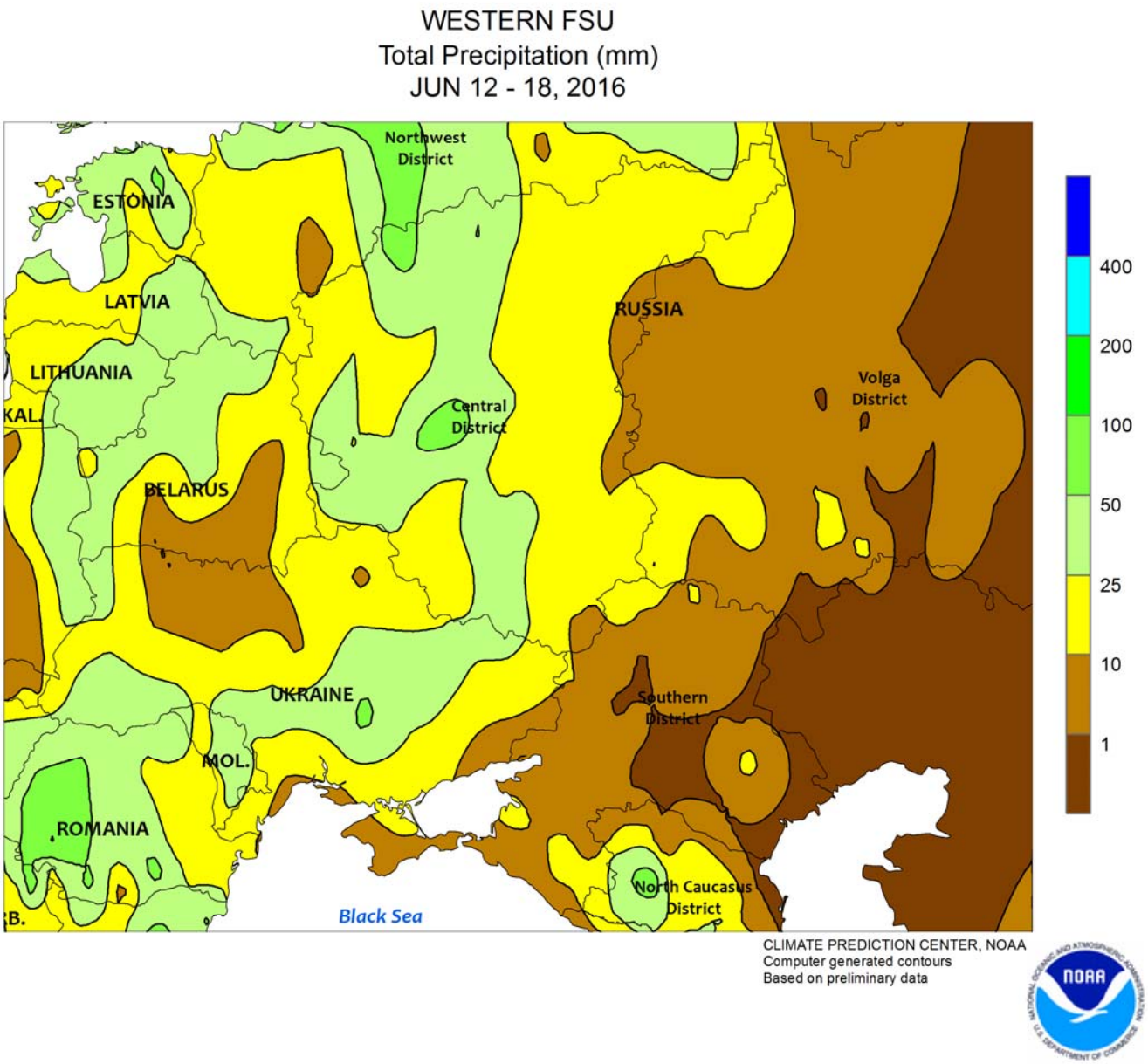

WESTERN FSU

Mostly favorable weather prevailed, with rain in western and northern growing areas contrasting with dry conditions for much of the week in southern Russia. A persistent blocking high over northern Eurasia continued to cause storms to drift and stall over Ukraine and northern Russia. As a result, an additional 10 to 55 mm of rain from central Ukraine into western and northern Russia sustained adequate to abundant soil moisture for filling winter wheat as well as vegetative corn, soybeans, and sunflowers in Moldova, Ukraine, and western Russia. However, key southern Russian winter wheat areas of Rostov and Krasnodar Krai (located in the southwestern Southern District) were dry for much of the week, which enabled winter wheat maturation and drydown. After a cool start to the week, increasingly warm weather (30-34°C) developed over much of Russia as well as western-most crop areas.

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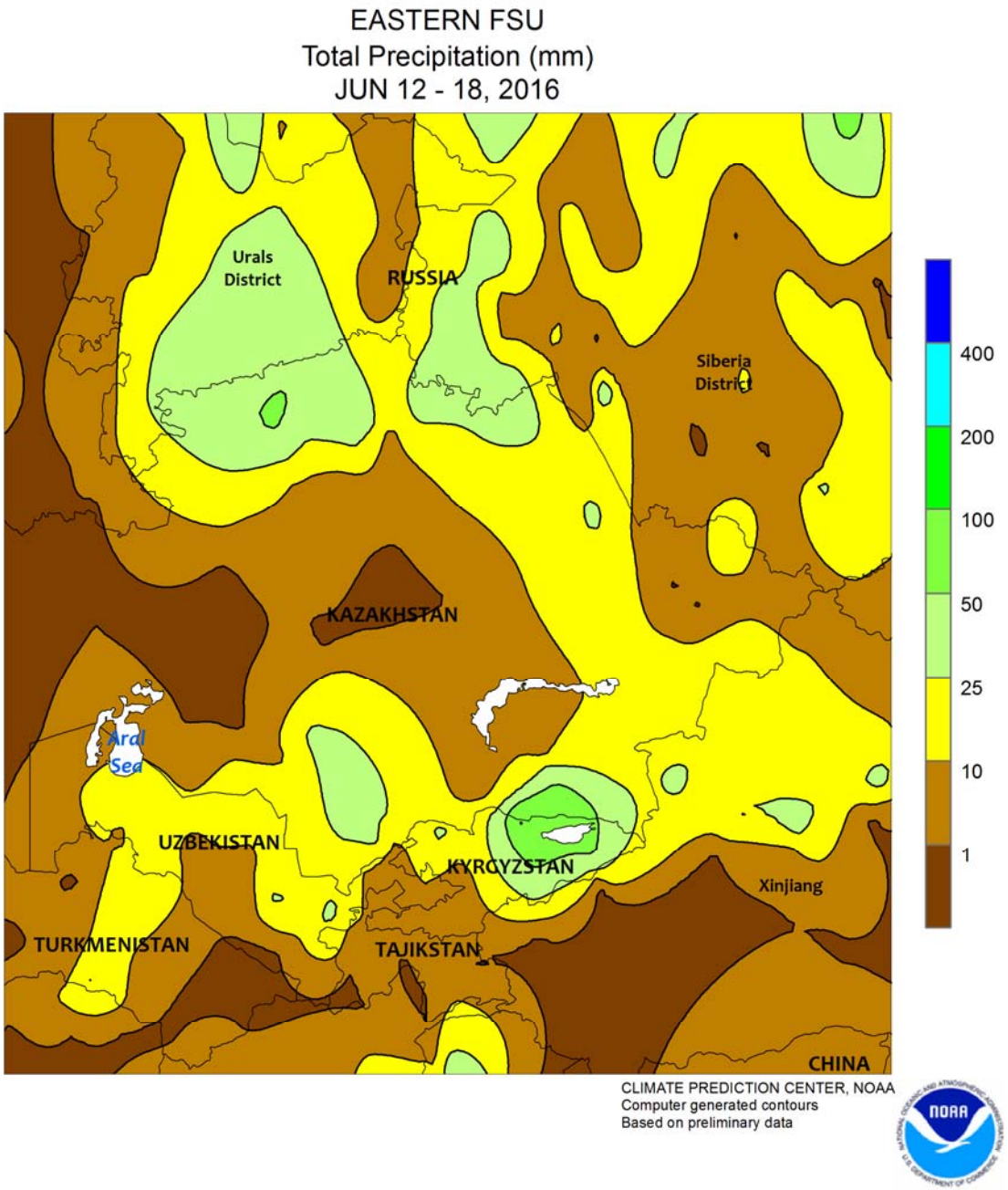

EASTERN FSU

Beneficial showers continued over the region's primary spring wheat areas, while early-season heat lingered over eastern portions of the region. For the second consecutive week, showers and thunderstorms (10-55 mm) across northern Kazakhstan and central Russia boosted soil moisture for crop establishment. Localized pockets of dry weather continued in Russia's Siberia District, but most areas have sufficient soil moisture for proper spring wheat development. Eastern-most spring wheat areas experienced daytime highs at or above 30°C, which accelerated crop development but also increased evapotranspiration rates. Farther south, seasonable heat continued — albeit not as hot as last week — with daytime readings topping 35°C (locally as high as 40°C in Uzbekistan and 44°C in Turkmenistan) across much of the region's southern tier. The heat was accompanied by showers and thunderstorms (10-50 mm, locally more than 100 mm), which provided supplemental moisture for vegetative cotton and also boosted irrigation reserves.

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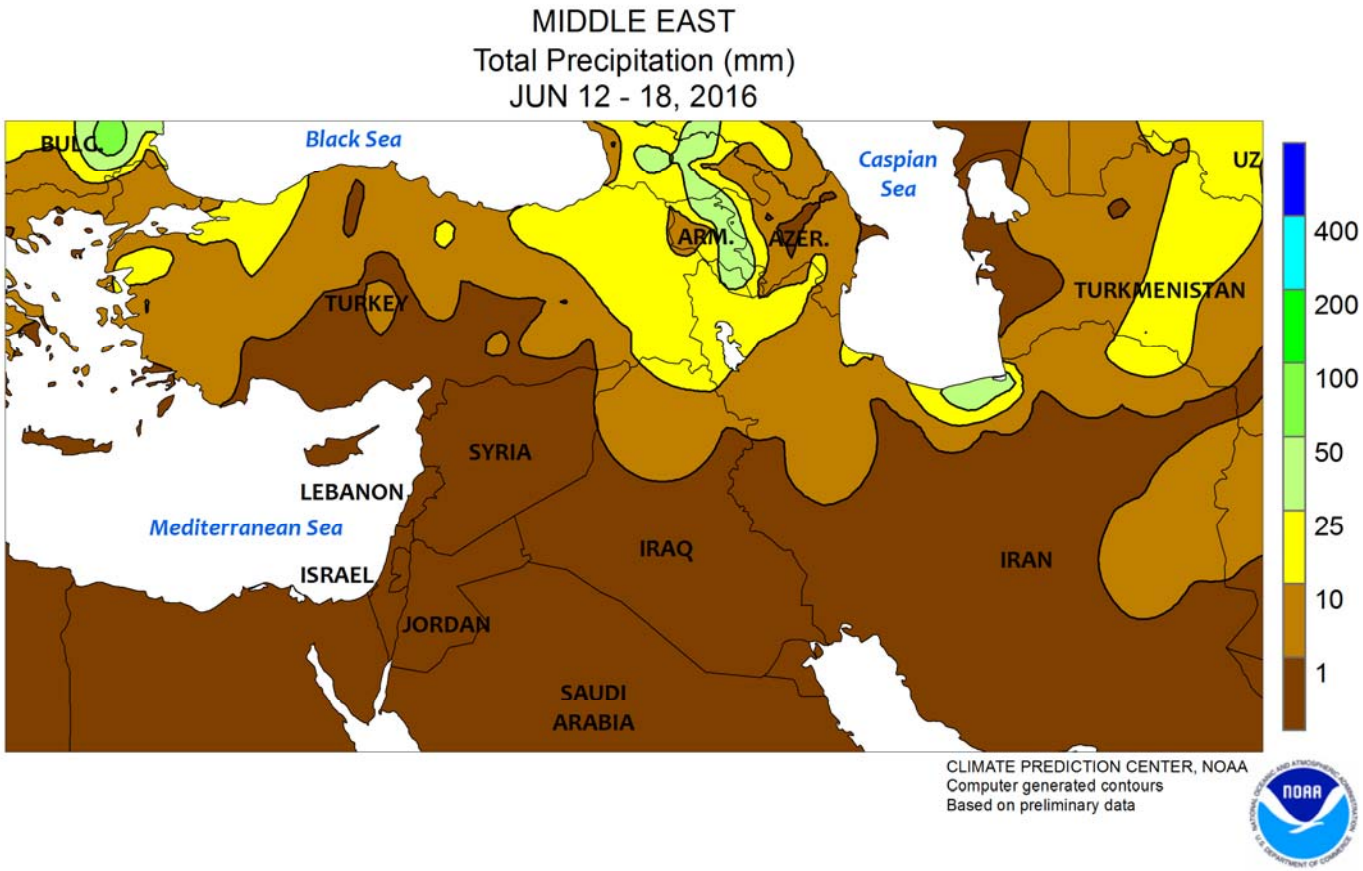

MIDDLE EAST

Mostly dry weather settled over previously-wet northern growing areas and continued over central and southern portions of the region. Following last week's late-season showers, mostly sunny skies and near- to above-normal temperatures facilitated winter grain drydown and harvesting in Turkey and northern Iran. The recent rain in these areas has been mostly beneficial, boosting soil moisture and irrigation reserves for corn, cotton, and sunflowers; however, producers likely welcomed the break in the rain to attend to mature winter wheat and barley. Over the southern half of the region, sunny skies promoted seasonal fieldwork and the development of specialty crops.

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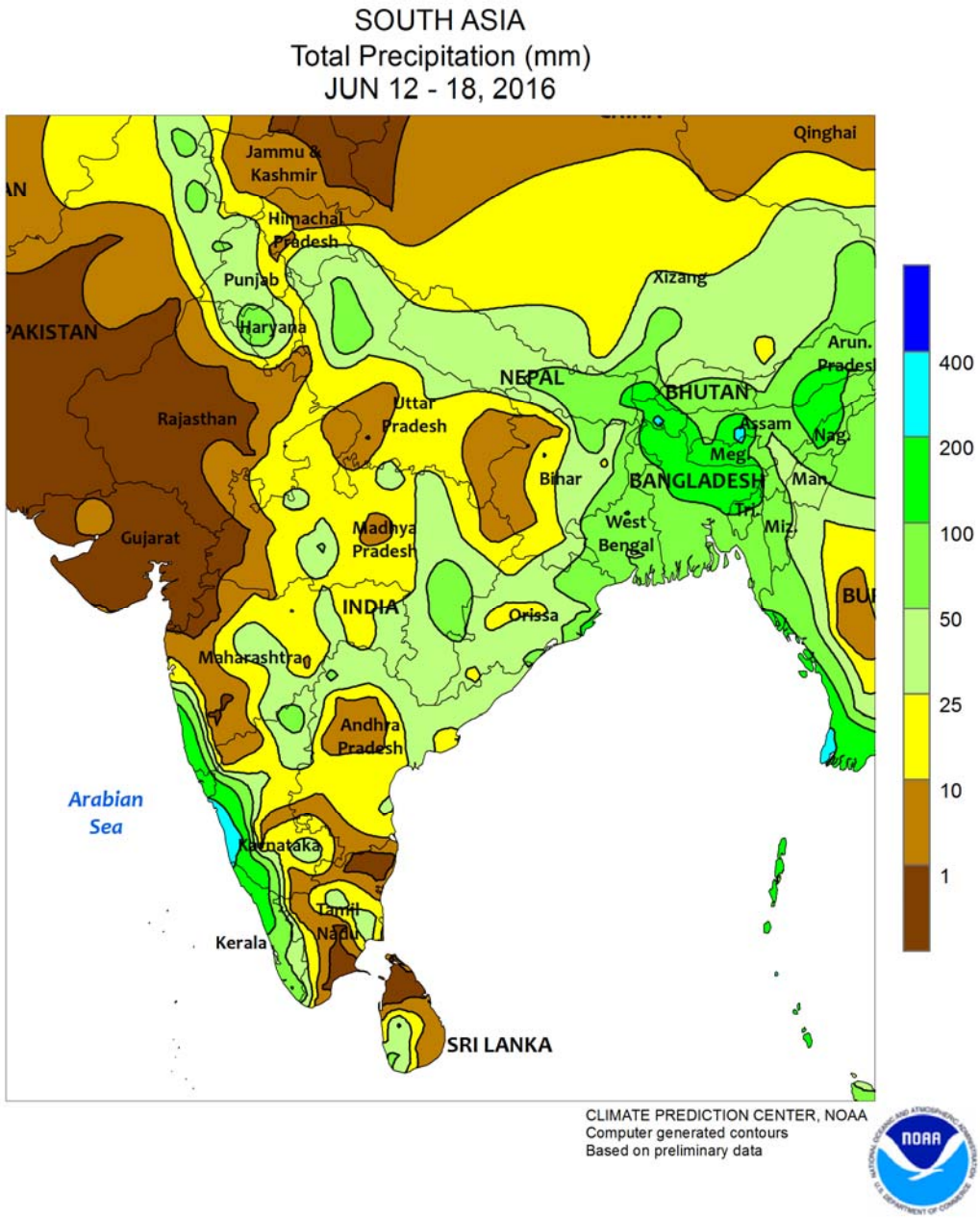

SOUTH ASIA

Monsoon showers moved into central and northeastern India, encouraging widespread planting of oilseeds, cotton, and rice. The monsoon was delayed in some areas by as much as 10 days but the delay was not a concern as most rainfall occurs in July and August. The rainfall in central cotton and oilseed areas was unseasonably light (totaling less than 25 mm for the week), with similarly light showers in the lower Ganges River Basin (southeastern Uttar Pradesh and bordering states). Showers were heavier (25-100 mm) in eastern rice areas (Orissa, West Bengal, and neighboring states). The monsoon had yet to make headway into western cotton areas, with hot, dry weather still prevalent and planting limited to irrigated fields. In other parts of the region, planting of irrigated rice and cotton continued in Pakistan under seasonably hot, dry conditions, while continued showers (over 50 mm) in Bangladesh and Sri Lanka kept summer-grown rice adequately watered.

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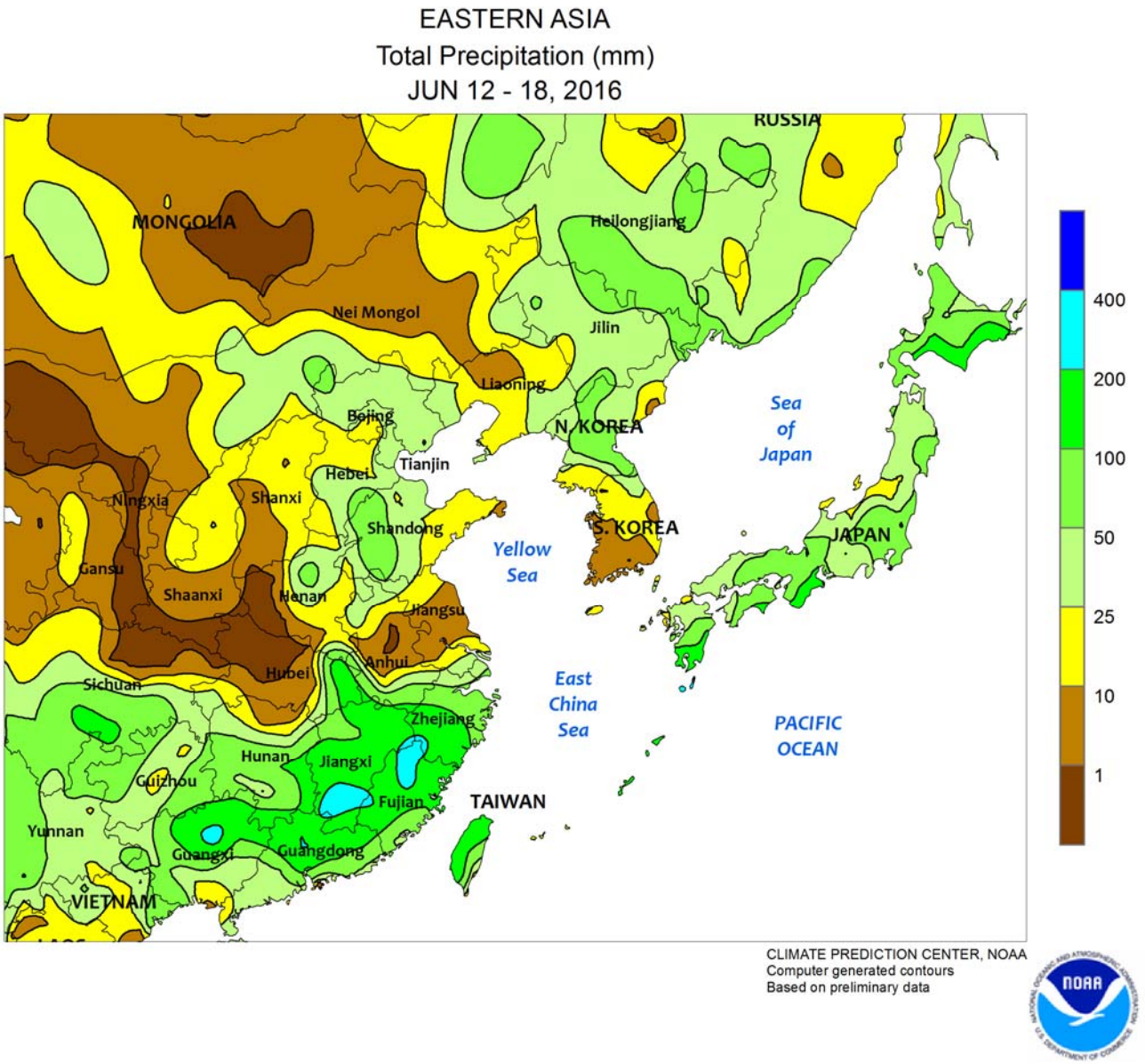

EASTERN ASIA

Widespread showers (25-50 mm, locally more) in northeastern China further improved soil moisture for corn, soybeans, and single-season rice. The majority of rain in western sections came in one day at the end of the week. In addition, the rainfall spread into neighboring areas of North Korea, maintaining favorable soil moisture and irrigation supplies for rice. Farther south, heavy early-week showers (25-50 mm, locally over 100 mm) caused harvest delays for wheat and isolated ponding in fields. Harvest weather has been less than ideal with persistent wet weather since late May raising concerns over wheat quality. Meanwhile in southern China, torrential rainfall (100-300 mm) in southeastern provinces caused more ponding and flooding in fields but likely was not enough to submerge rice. In contrast, dryness continued in the central Yangtze Valley (particularly Hubei), where little rain has occurred during June. In other parts of the region dryness persisted in South Korea, where June rainfall has been scant following a fairly wet May, while much of Japan received over 25 mm of rain, boosting moisture supplies for rice.

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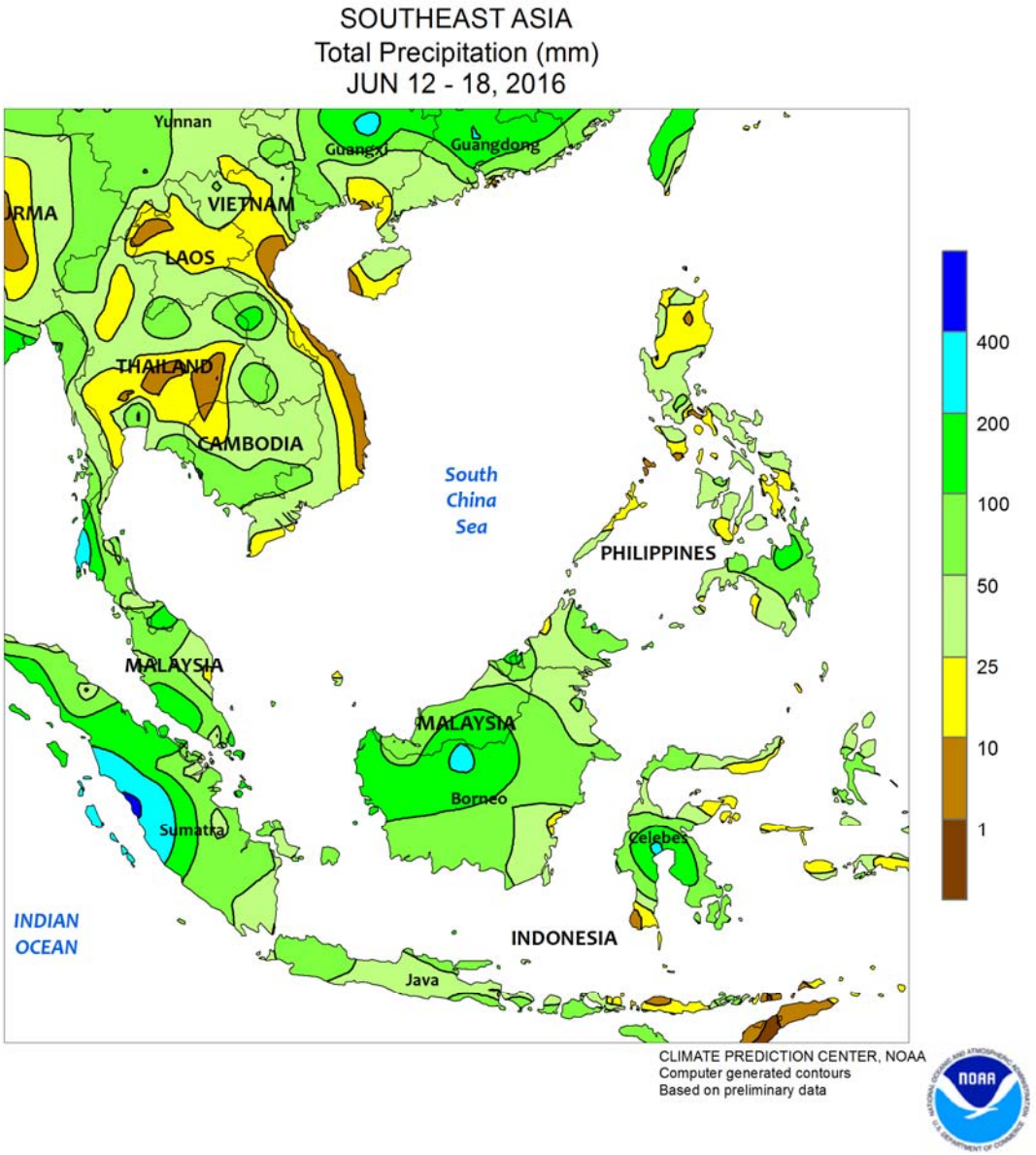

SOUTHEAST ASIA

Monsoon showers (25-100 mm) continued in the northern rice areas of Thailand, but pockets of dryness persisted in some of the southern areas. Since the inception of the monsoon, rainfall has been near to above normal in all but the lower Chao Phraya Basin, where the majority of rice is irrigated. In other parts of Indochina, satellite-derived rainfall estimates over 25 mm were reported across rice areas of Cambodia, Laos, and Vietnam. Meanwhile, showers were widespread, albeit seasonably lighter than normal, throughout the Philippines. Rainfall amounts typically ranged between 25 and 50 mm (somewhat less in northern Luzon and up to 100 mm in northern Mindanao), with moisture conditions for summer-grown rice and corn generally favorable thus far. In southern sections of the region, oil palm continued to receive beneficial rainfall (over 50 mm in most places), with flooding reported in western Sumatra (Indonesia), where nearly 500 mm of rain occurred. Rainfall remained firmly entrenched in southern areas of the region, particularly Java, Indonesia, which was likely preventing seasonably heavier rain from reaching parts of the north.

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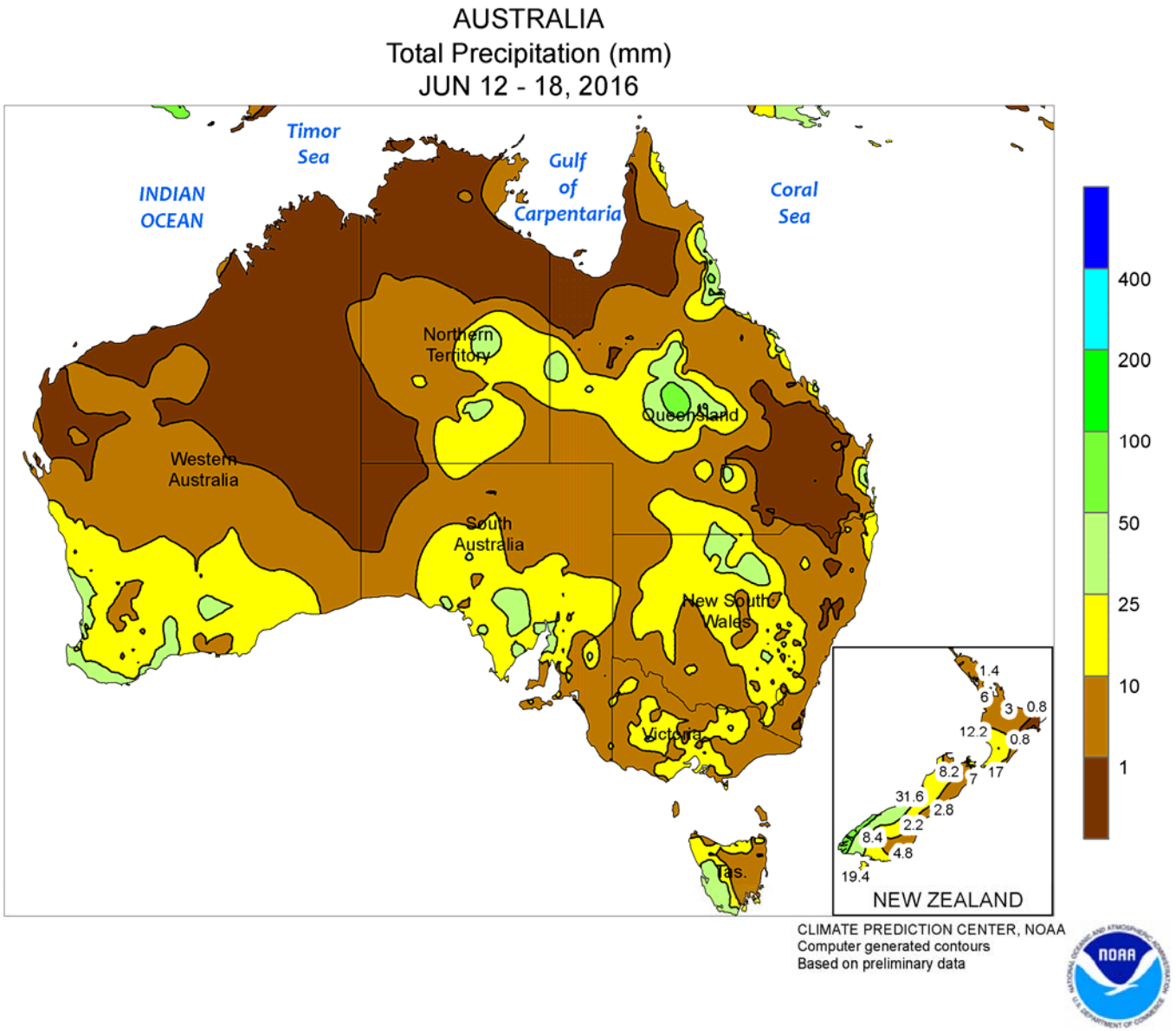

AUSTRALIA

Scattered showers fell across most of the wheat belt, maintaining adequate to locally abundant moisture supplies for recently sown winter grains and oilseeds. The rain further aided winter crop emergence and establishment, sustaining good to excellent early season yield prospects for wheat, barley, canola, and other winter crops. Many areas received between 5 and 25 mm of rainfall, with amounts locally approaching 50 mm in South Australia and New South Wales. The exception was extreme parts of southeastern Queensland and northeastern New South Wales, where mostly dry weather favored fieldwork. Temperatures in eastern Australia averaged about 1 to 3°C above normal, accelerating crop development. Elsewhere in the wheat belt, temperatures were generally seasonable.

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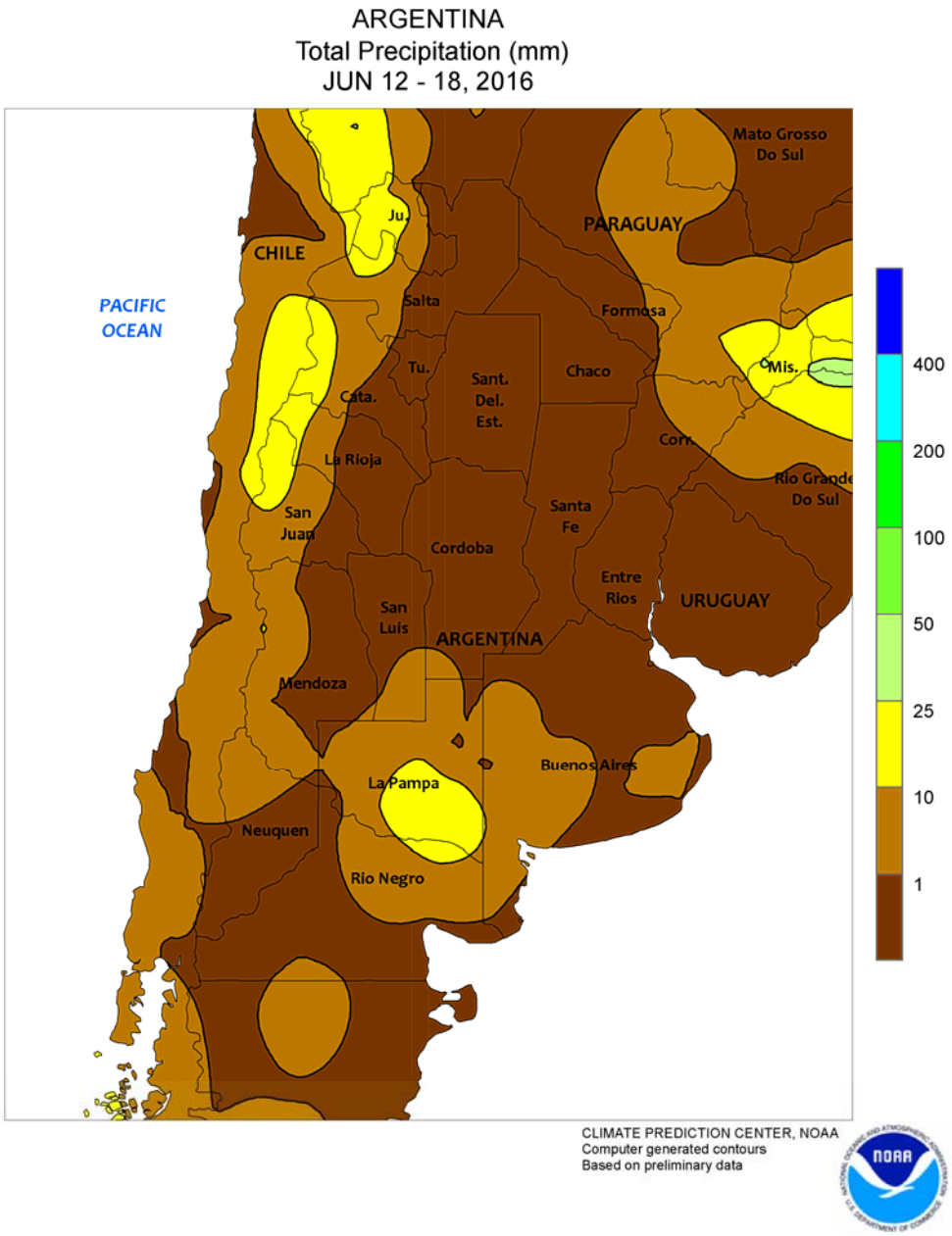

ARGENTINA

Conditions favored drydown and harvesting of corn, soybeans, and cotton, as virtually no rain fell in the main agricultural areas of northern and central Argentina. Near- to above-normal temperatures accompanied the dryness in western and southern agricultural areas (including La Pampa, southern Cordoba, and southwestern Buenos Aires), with weekly temperatures averaging as much as 3°C below normal in the northeast. Freezes reached as far north as eastern sections of Chaco and Formosa, helping to drydown open cotton bolls. According to Argentina's Ministry of Agriculture, corn and soybeans were 43 harvested as of June 16, compared with 59 percent last year. Soybean harvesting was nearing completion at 93 percent.

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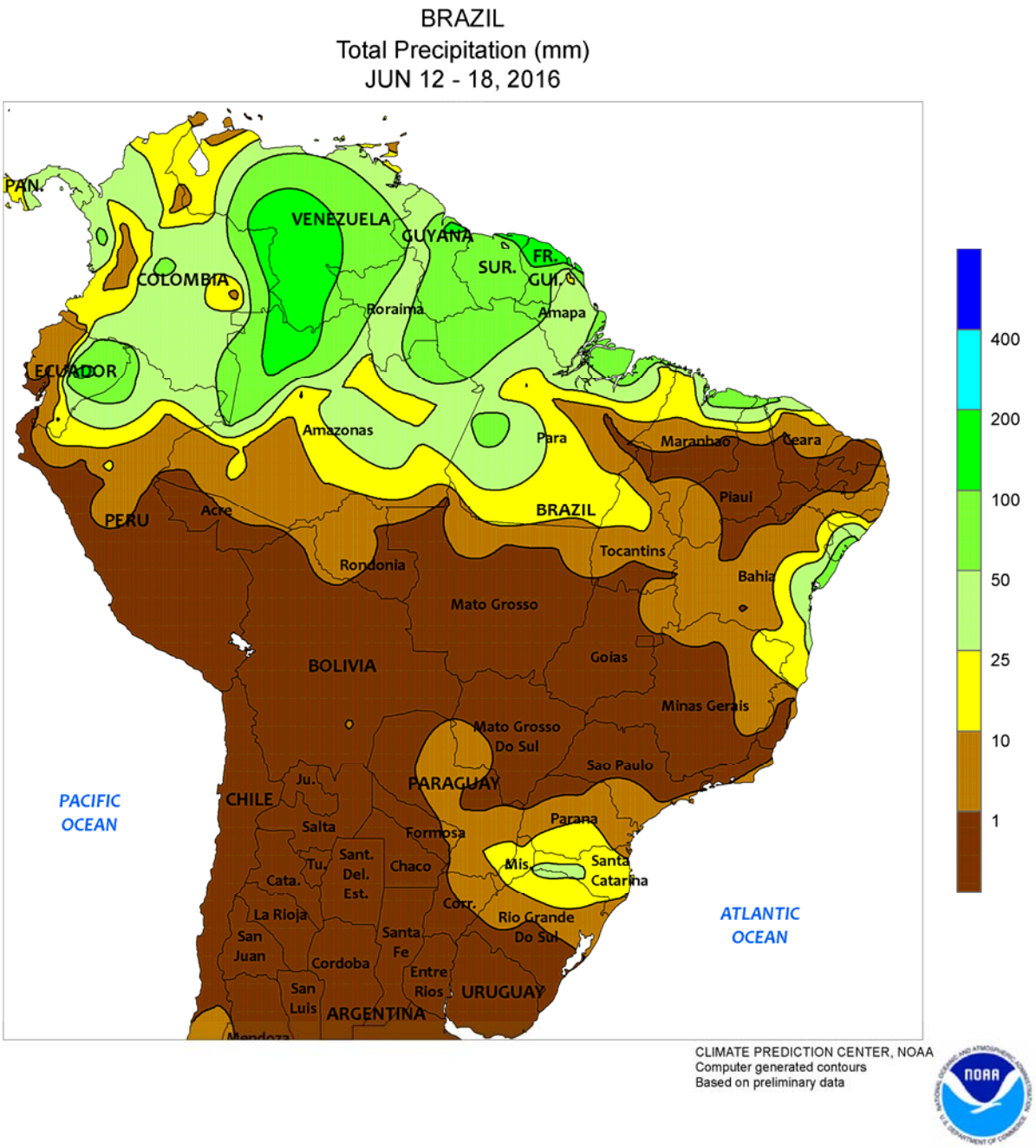

BRAZIL

Lingering cold raised additional concern for corn, sugarcane, and other vulnerable crops in southern Brazil. As the week began, nighttime lows fell below freezing on several days as far north as Parana. According to the government of Parana, second-crop corn was 3 percent reproductive and 38 percent filling as of June 13, while the remainder of the crop was mature or already harvested. The lateness of the season and the location of the freezes — which were recorded well south of the coffee belt — limited the potential impact on agriculture. Warmer conditions gradually returned to the region as the week progressed, with daytime highs reaching the middle and upper 20s (degrees C) by week's end. Conditions were markedly drier in the southern corn belt compared to recent weeks; most major corn and sugarcane areas recorded little to no rain as significant moisture (rainfall totaling more than 10 mm) was generally confined to southern Parana, Santa Catarina, and northern Rio Grande do Sul. Elsewhere, warm (daytime highs reaching the middle 30s), seasonably dry weather hastened maturation of corn and cotton in key production areas of central and northeastern Brazil (Mato Grosso to Bahia and points north), while seasonable rainfall (10-50 mm) continued in cocoa and coffee areas of coastal Bahia.

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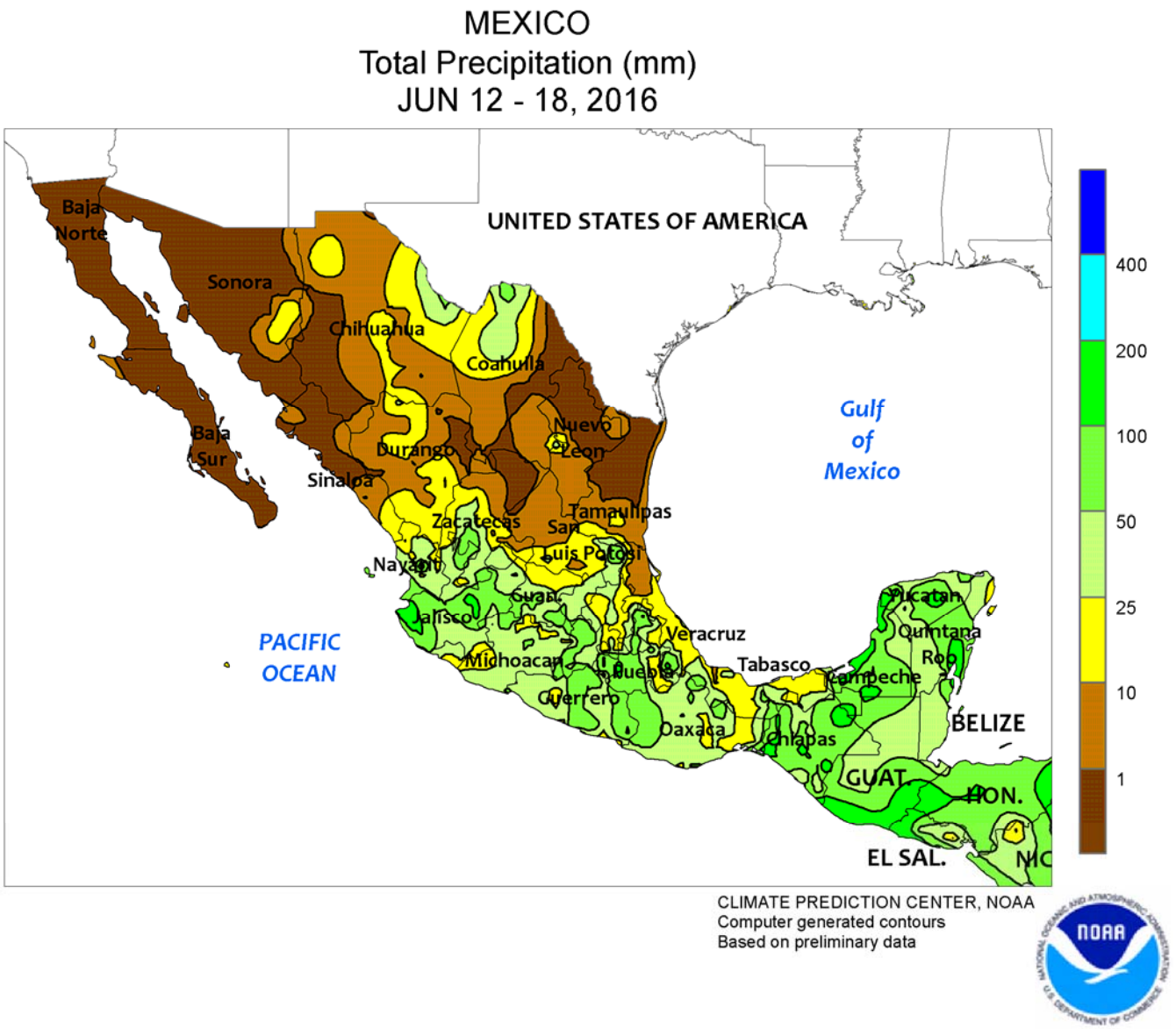
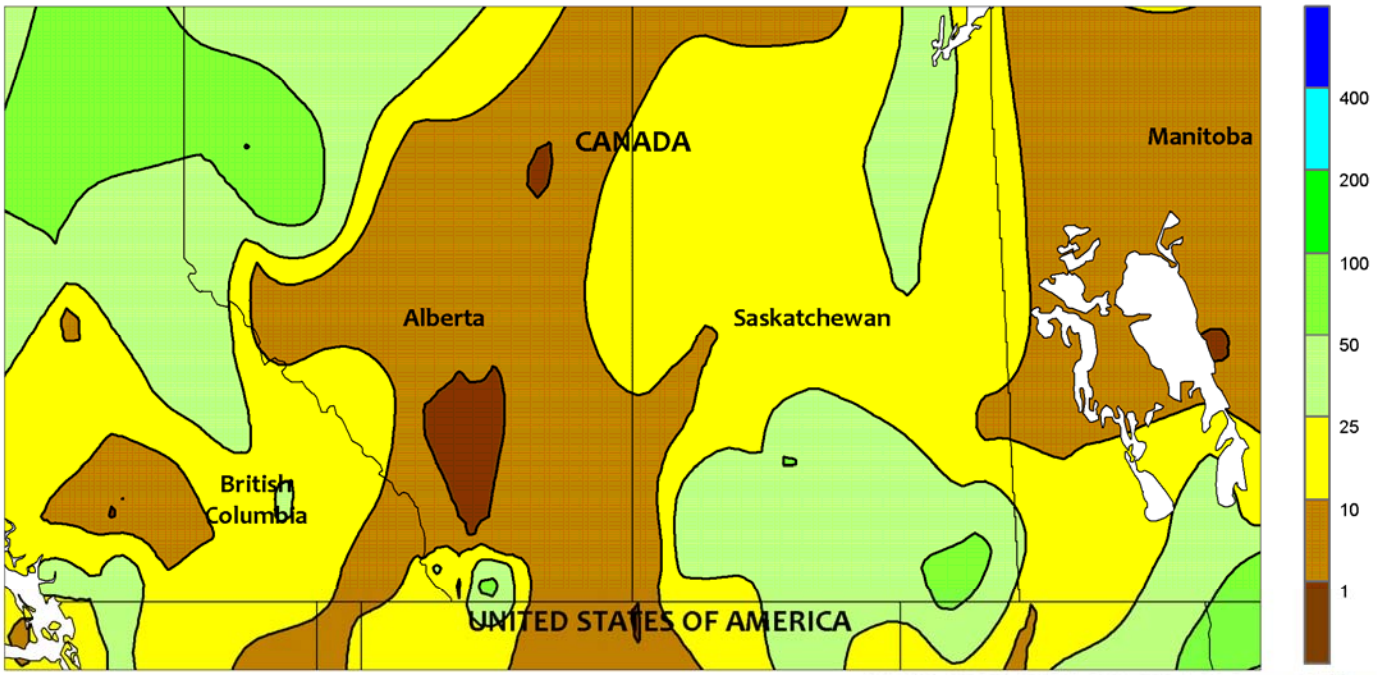


MEXICO

Showers intensified over western sections of the southern plateau, providing much needed moisture for germination and establishment of corn and other rain-fed summer crops. Rainfall totaled more than 25 mm across much of the southern plateau this week, reaching previously dry production areas in Jalisco and Michoacan. Beneficial rain also spread along the southern Pacific Coast (Guerrero to Chiapas) and continued over the Yucatan Peninsula. Rain also continued in sugarcane areas in the vicinity of southern Veracruz, though drier conditions prevailed in the northern production zone. Meanwhile, moderate to heavy rain (10-50 mm) fell in southern sections of the western Sierras (Zacatecas); lighter rain was concentrated farther north into Durango and Chihuahua. Warmth and dryness — with daytime highs approaching 40°C — favored the final stages of winter grain harvesting in the northwest (wheat and corn) and northeast (sorghum).

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

CANADIAN PRAIRIES
Total Precipitation (mm)
JUN 12 - 18, 2016



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

CANADIAN PRAIRIES

Moisture conditions continued to improve in previously dry northern agricultural districts. Rainfall totaling more than 10 mm overspread northern farming areas of Saskatchewan and Manitoba; while below normal, amounts were sufficient to aid in germination of later-sown spring grain and oilseeds. Heavier rain (locally in excess of 50 mm) covered much of southern Saskatchewan and southeastern Manitoba. Heavy rain (10 to more than 50 mm) also fell in Alberta's Peace River Valley but most other districts in the province recorded less than 10 mm. Weekly average temperatures were near to below normal in the western Prairies, with patchy frost at the western edge of central Alberta's farmlands and most areas in Alberta and western-most Saskatchewan recording nighttime lows below 5°C. Temperatures averaged at least 1°C above normal in eastern Saskatchewan and Manitoba (daytime highs reaching the middle and upper 20s degrees C).

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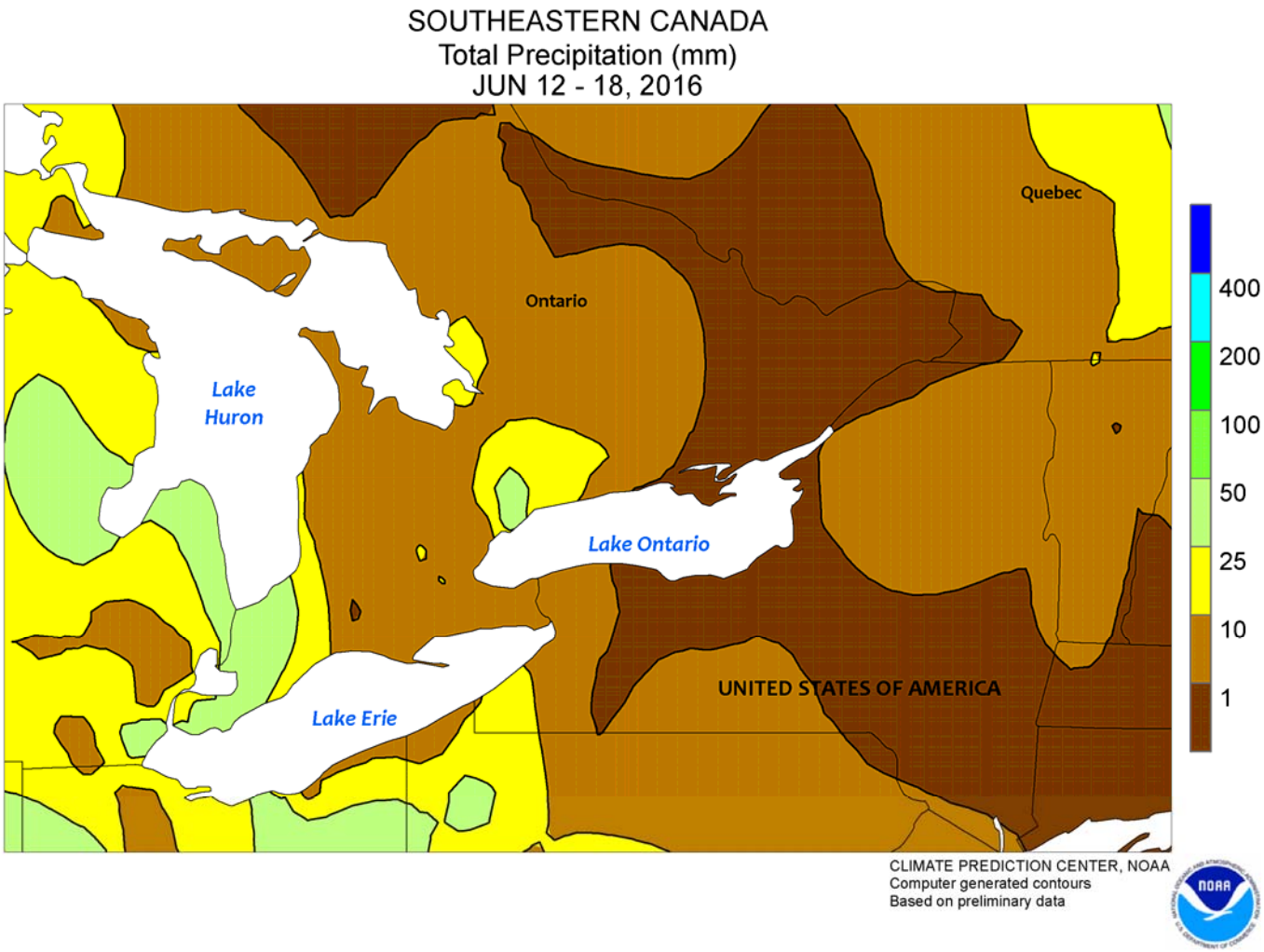
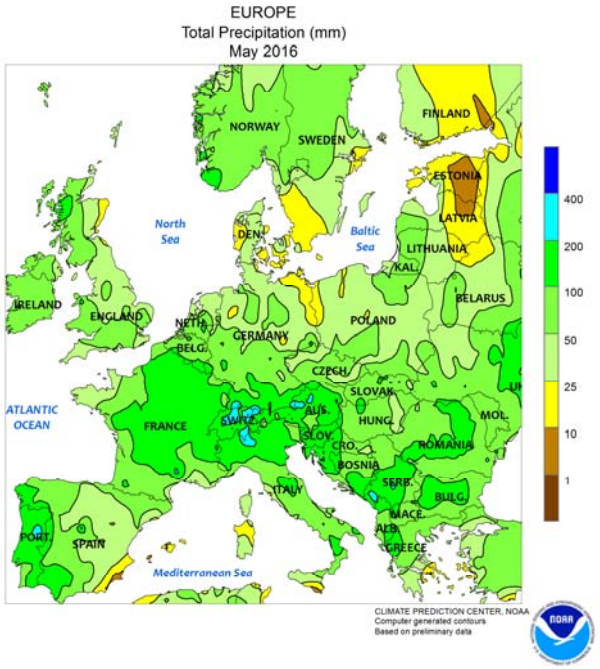


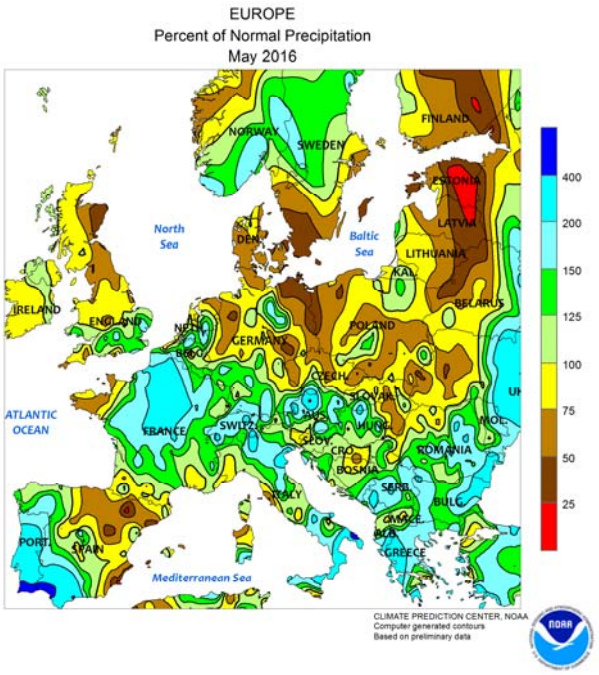
SOUTHEASTERN CANADA

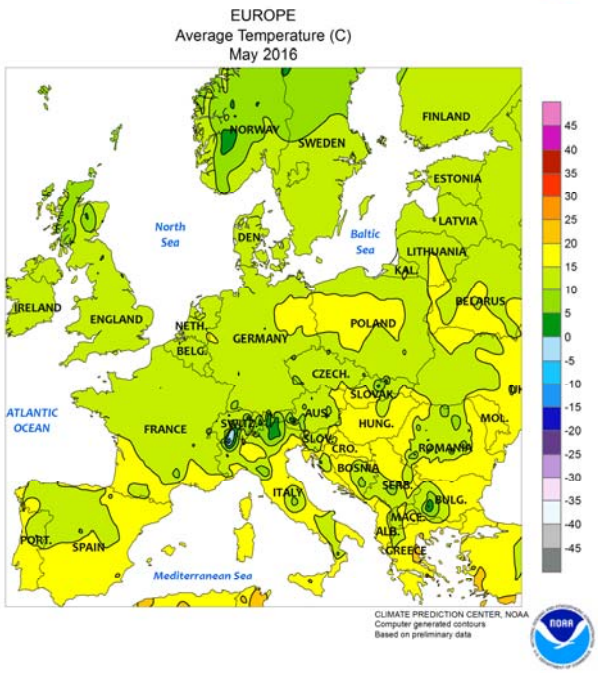
Mostly dry, generally mild weather spurred growth of summer crops, winter grains, and pastures. Following last week's rain, showers tapered off in southwestern Ontario, although some locations recorded moderate to heavy rain (10-50 mm). Little to no rain fell in Ontario's eastern farming areas and most of Quebec. Weekly average temperatures were near to slightly below normal, with nighttime lows falling below 5°C on several days in eastern Ontario. However, warmer weather developed by week's end, with daytime highs reaching the lower 30s (degrees C) across both Ontario and Quebec. Additional rain would be welcome for summer crops as seasonal warming continues.

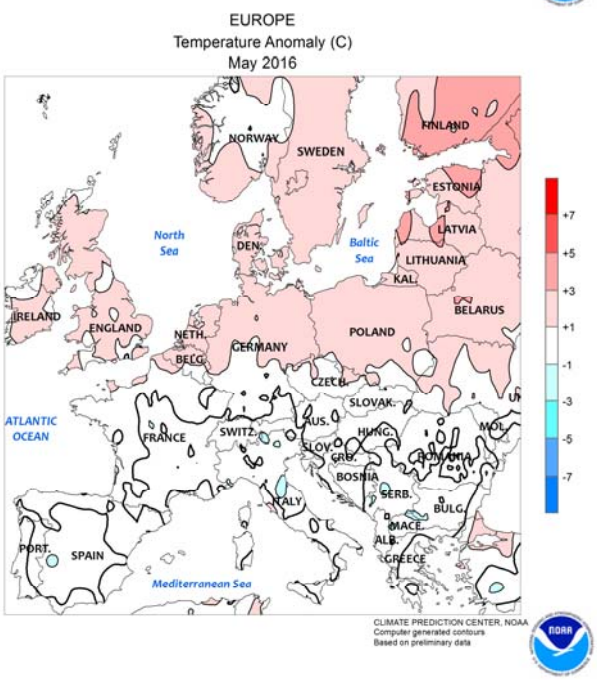
For additional information contact: mbrusberg@oce.usda.gov

May International Temperature and Precipitation Maps



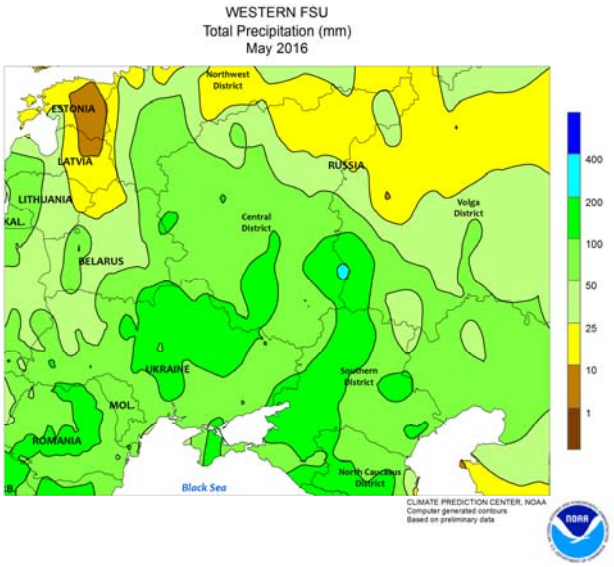


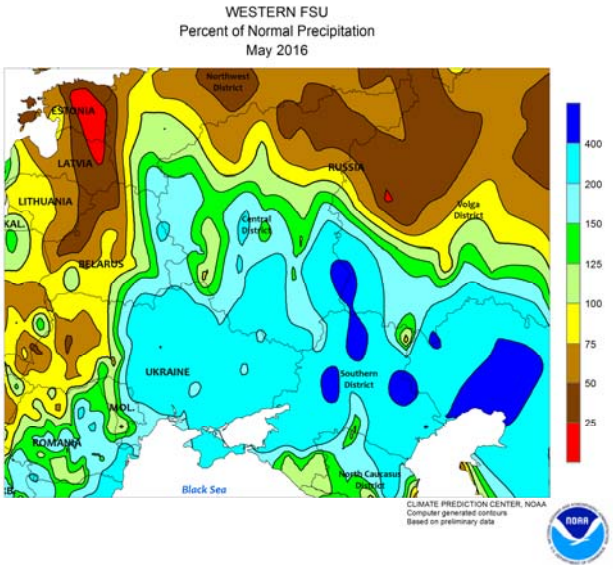


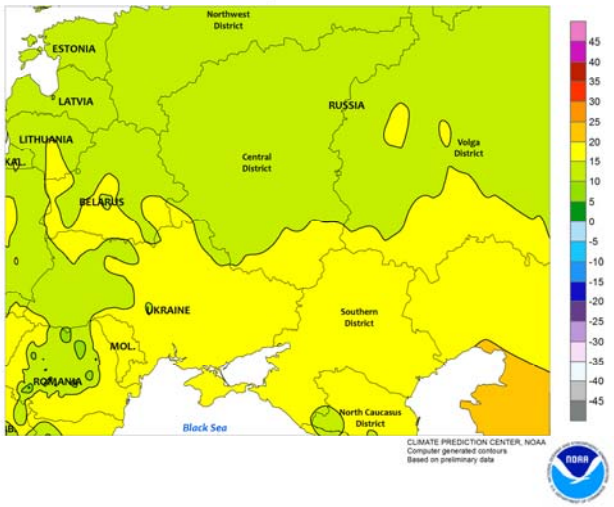


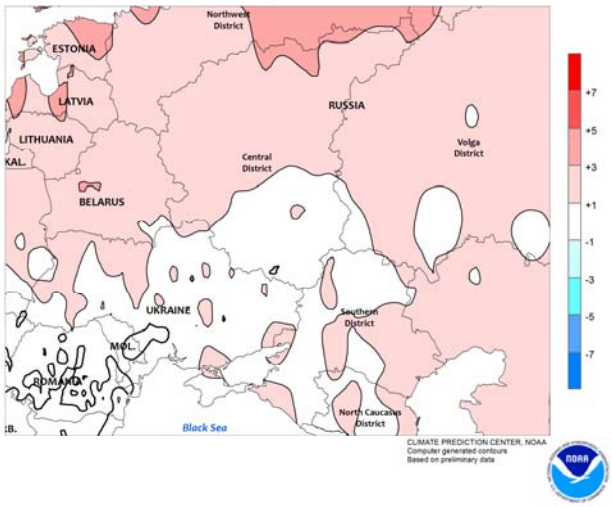
EUROPE

Heavy rain during May caused flooding and raised concerns over crop quality and potential yield losses for winter wheat and rapeseed. In northern France, monthly rainfall tallied 100 to 165 mm (200 percent of normal or more), while northern portions of Italy reported 150 to 250 mm (locally more than 300 percent of normal). Likewise, southern and eastern portions of the Balkans received locally more than twice the monthly normal. The persistent wet weather arrived during winter crop reproductive to early grain-fill stages; while not ideal for maturation, the rain was early enough in the filling stage of development to lessen the negative impacts on yields. Furthermore, drier weather in early June helped ease crop concerns somewhat, though spotty showers continued to maintain local quality issues. In contrast, timely spring rain boosted winter wheat and barley yields in Spain. In addition, soil moisture remained adequate to abundant for spring grain and summer crops in most major growing areas, despite drier-than-normal May weather in northeastern Europe.



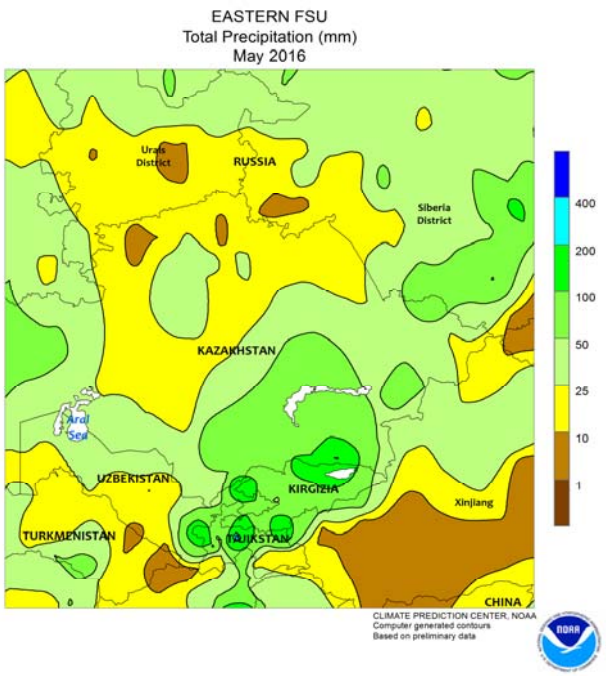


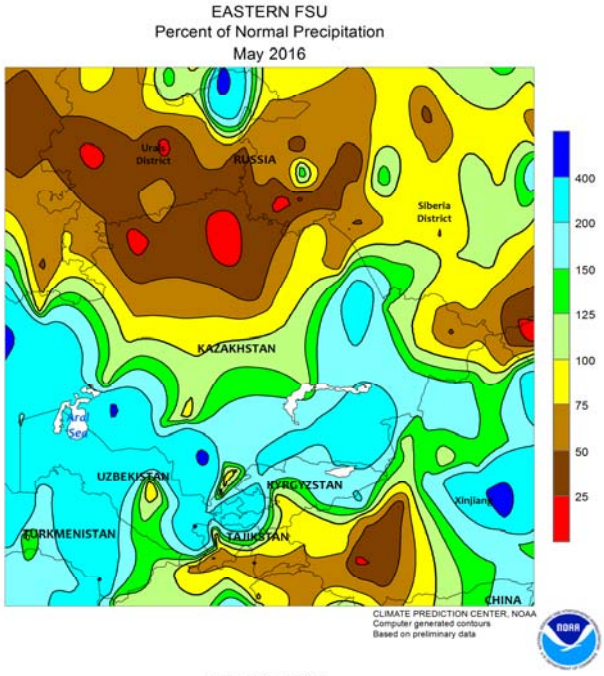


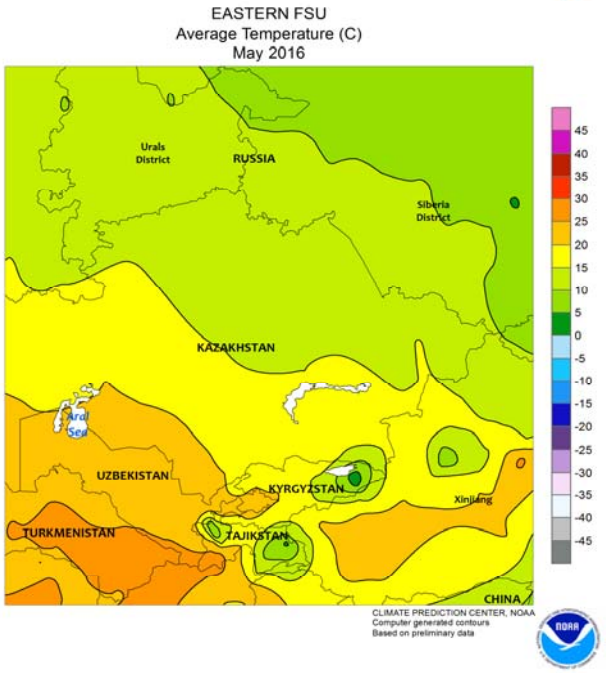


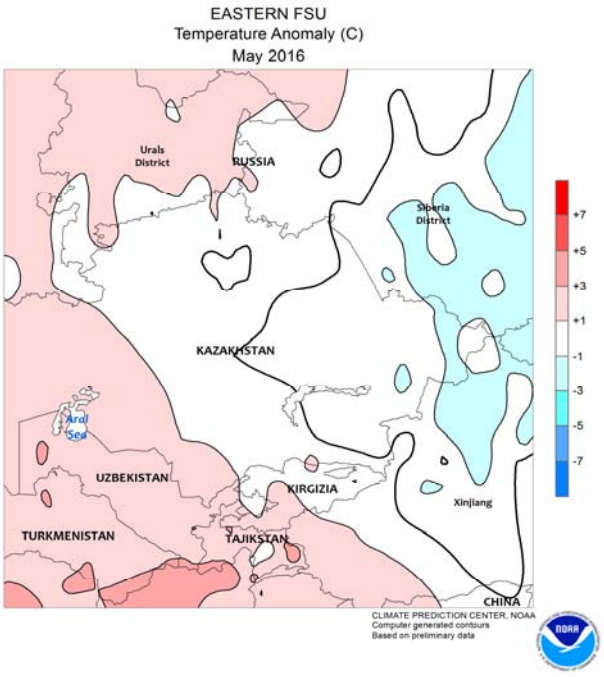
WESTERN FSU

During May, widespread moderate to heavy rain was generally beneficial for reproductive to filling winter wheat in Ukraine and Russia. However, locally excessive downpours (130-205 mm) caused some concerns over local reductions in crop quality and yield in northern Ukraine as well as central and southern Russia. Nevertheless, overall, wheat yield prospects remained good to excellent due to favorable spring rains and a lack of winterkill. Despite occasionally heavy May rainfall, producers were able to sow corn and sunflowers in order to take advantage of the locally abundant soil moisture for summer crop establishment.



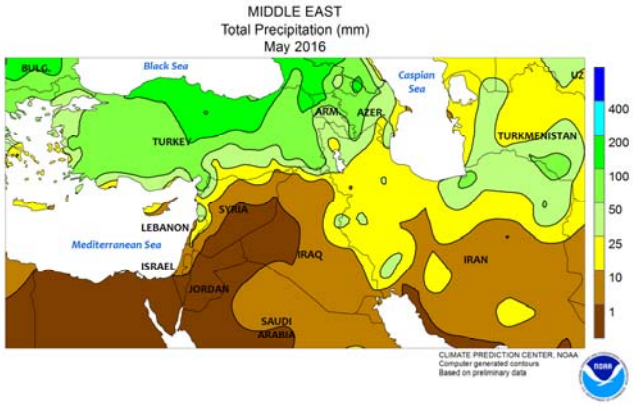


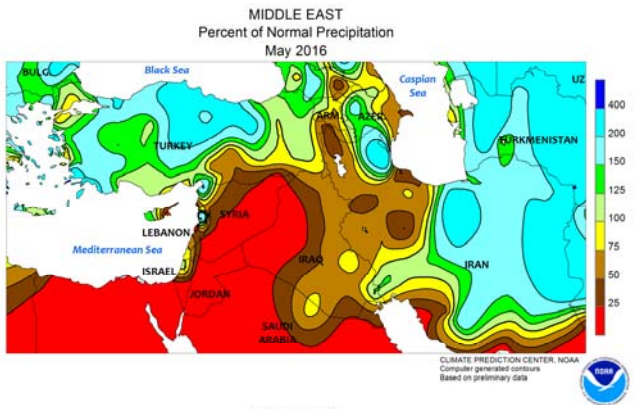


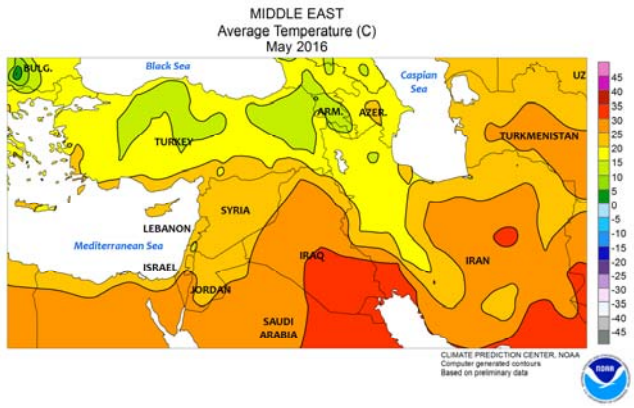


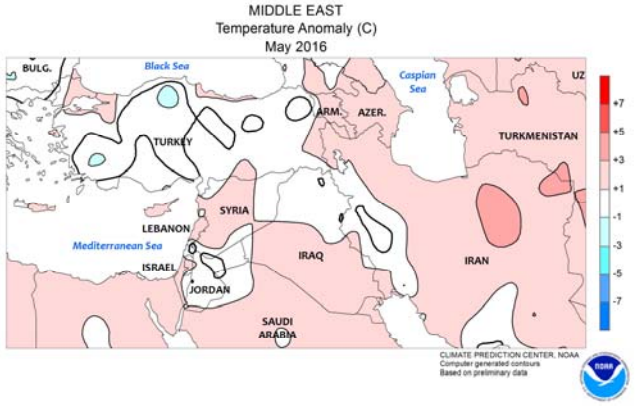
EASTERN FSU

The return of dry weather in May — following excessive early-spring rain — accelerated spring wheat planting and emergence over northern Kazakhstan and central Russia. Monthly rainfall totaled less than 25 mm (less than 50 percent of normal, locally less than 25 percent) over many spring wheat areas, though the dry weather was conducive to rapid crop planting and emergence. Heavier rain (25-75 mm) lingered over southern and eastern portions of Russia's Siberia District, though there were enough days suitable for fieldwork to enable spring wheat planting to near completion. Farther south, above-normal rainfall in Uzbekistan provided supplemental moisture for irrigated winter wheat as it progressed through the reproductive and filling stages of development.





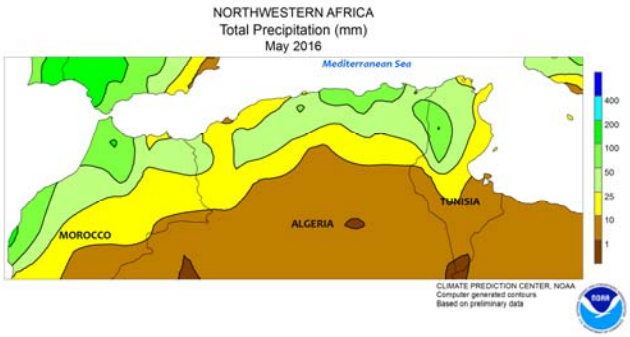


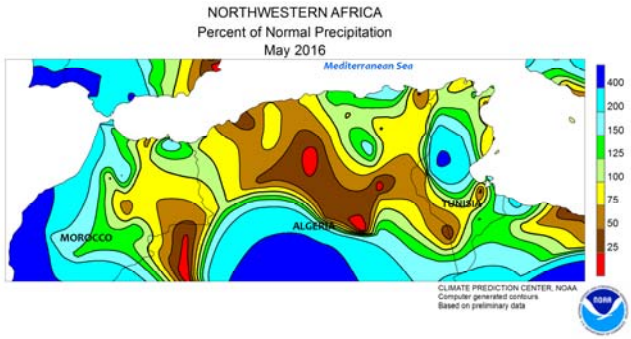


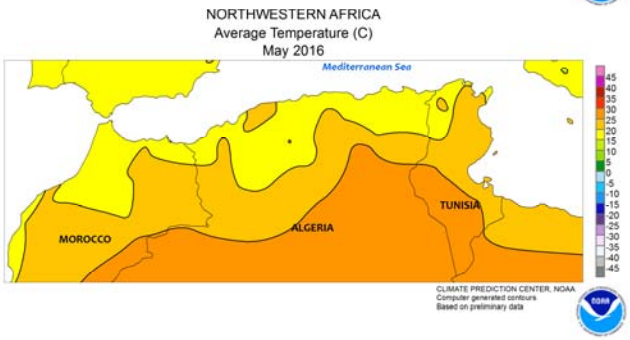
MIDDLE EAST

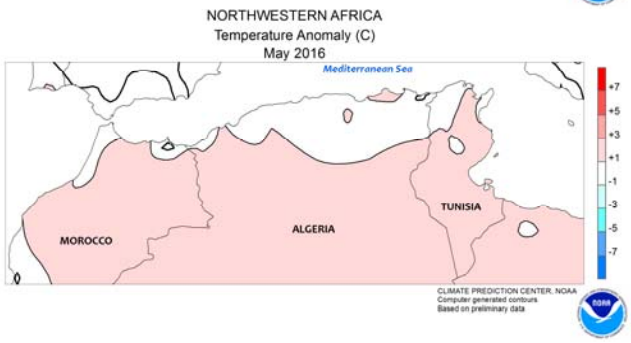
During May, late-season rain in Turkey and northern Iran maintained or improved prospects for reproductive to filling winter grains. Rainfall totaled 50 to 140 mm over much of central and northern Turkey (100-300 percent of normal, locally more). In addition, irrigated summer crops benefited from the supplemental soil moisture. In contrast, seasonably dry, hot weather from Syria into southern Iraq facilitated winter wheat drydown and harvesting.

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



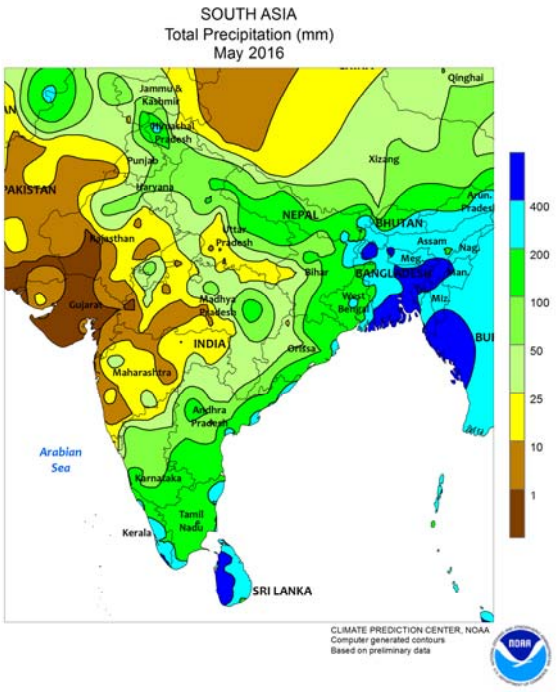


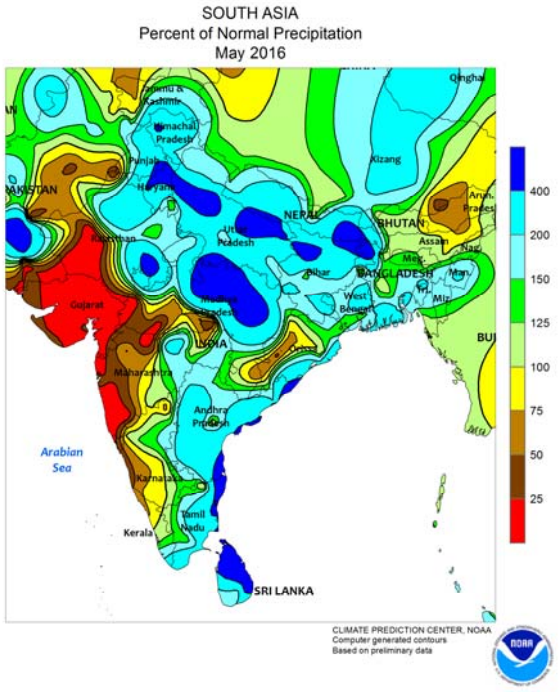


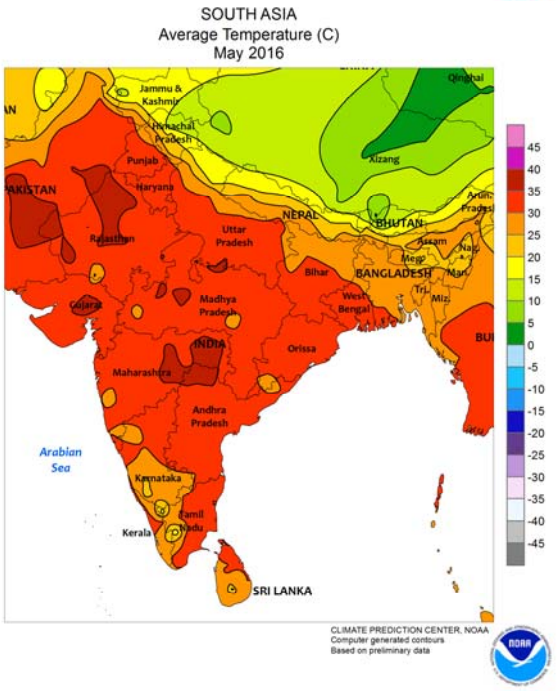


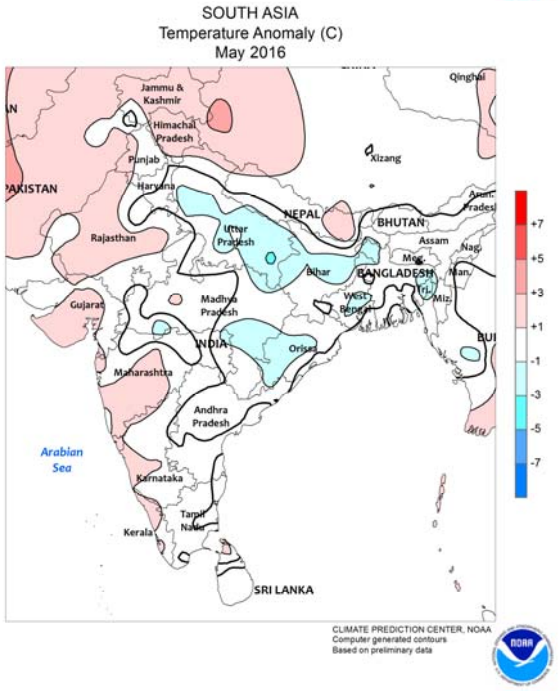
NORTHWESTERN AFRICA

Wet, warm weather during May hampered winter grain drydown and harvesting in Morocco, where crops were impacted by severe early-season drought. In contrast, occasional showers coupled with periods of sunny, warm weather favored filling wheat and barley in Algeria and Tunisia. Winter grain prospects in central and eastern portions of the wheat belt remained good to excellent.





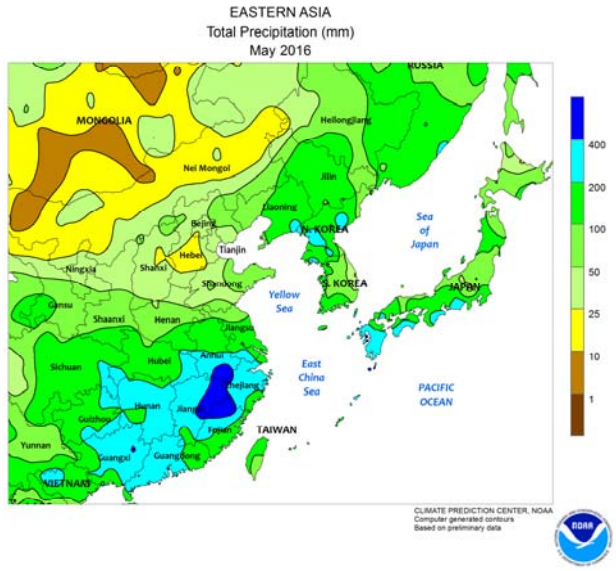


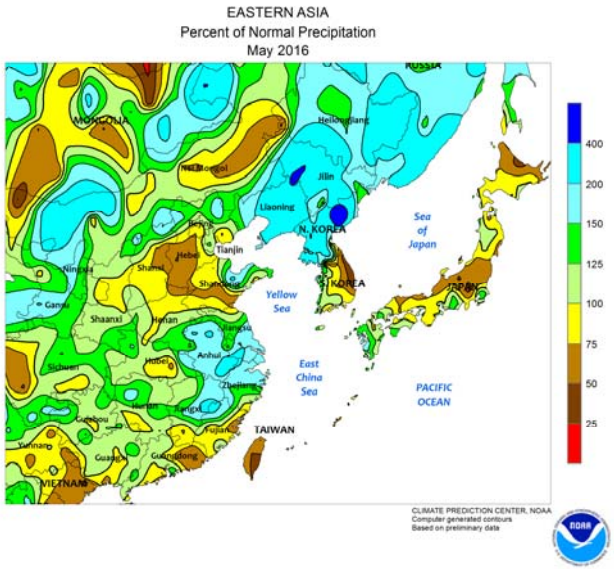


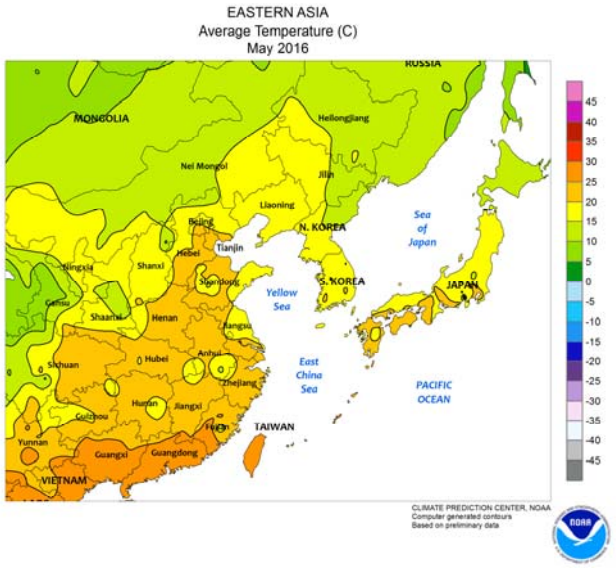
SOUTH ASIA

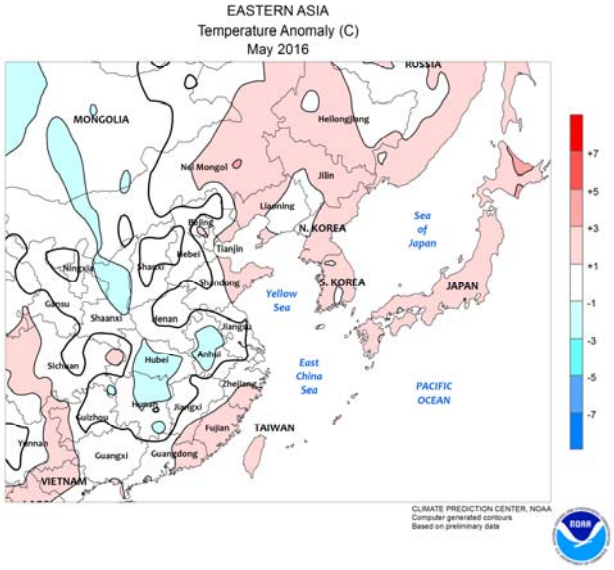
The summer monsoon had yet to begin by the end of May, although pre-monsoon showers and a tropical cyclone (Roanu) produced above-normal rainfall for the month across India, Bangladesh, and Sri Lanka. In fact, flooding was reported in Sri Lanka and Bangladesh, where locally as much as 600 mm of rain occurred. Despite the isolated flooding, the rainfall increased soil moisture and irrigation supplies for summer-grown rice. Meanwhile, intense pre-monsoon showers (over 100 mm) spurred rice and other summer (kharif) crop planting in southern India. Growers will await the onset of monsoon rainfall before beginning widespread planting across India (planting of irrigated cotton and rice commenced in April across northern India).

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



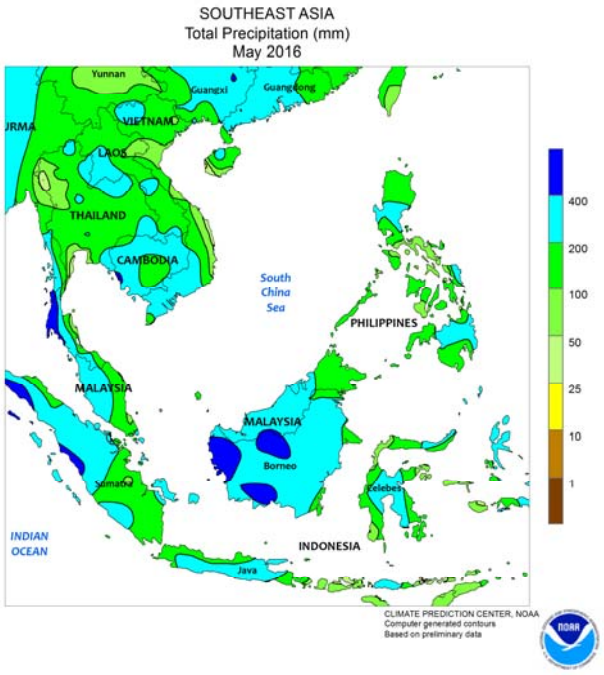


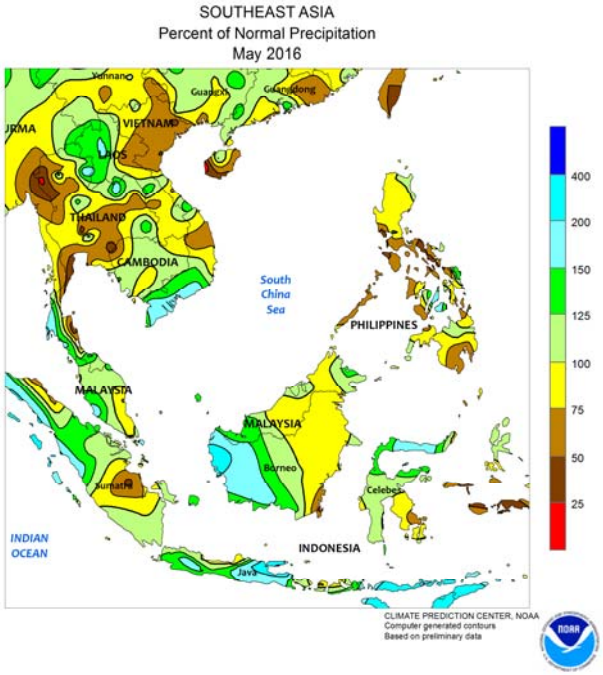


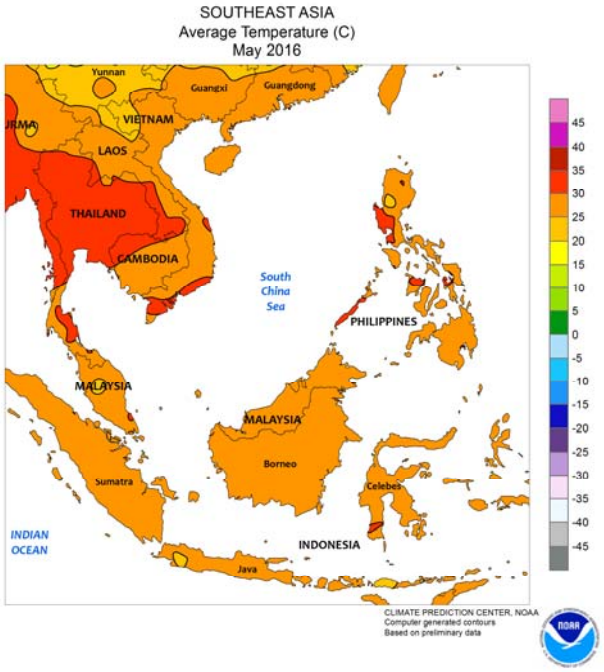


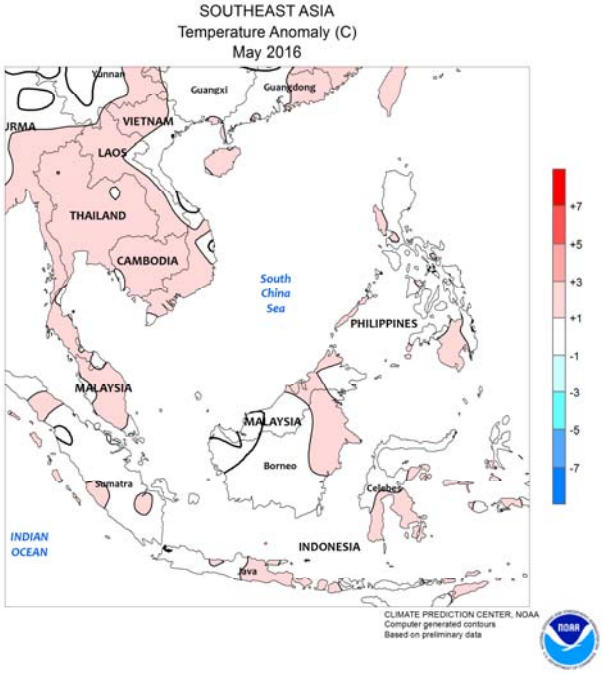
EASTERN ASIA

During May, above-normal rainfall occurred across most growing areas of eastern China. The wet weather likely slowed corn, soybean, and rice planting in the northeast but aided emergence and establishment of recently sown crops. Similarly, frequent, occasionally heavy, showers throughout southern China supported establishment of single-crop rice and other summer crops. Although in some southeastern provinces, where rainfall was heaviest, field ponding likely occurred, hindering crop development but not causing significant damage. Meanwhile, above-normal rainfall was reported in southern sections of the North China Plain, creating unfavorably wet conditions for maturing winter wheat. Temperatures in China were near normal, with no stressful heat in major growing areas. However, a brief period of cooler-than-normal weather in western China necessitated replanting of cotton in some districts. Elsewhere in the region, heavy showers provided ample soil moisture and water supplies for rice in western areas of the Korean Peninsula. Some flooding was likely in western North Korea, though, where the highest totals occurred. In Japan, portions of central Honshu received below-normal rainfall, while other rice growing areas benefited from near-normal amounts.









SOUTHEAST ASIA

The summer monsoon was underway in the latter half of May, slightly later than usual. The late start of the monsoon left large swaths of Indochina, including sections of Thailand, with below-normal rainfall for the month. Similarly, much of the Philippines also received below-normal rainfall as a result of the late monsoon onset. Most countries in the northern portions of the region, and in particular Thailand, have experienced a sub-par rainy season over the last two years, pushing reservoirs and other irrigation supplies to historically low levels. Normal to above-normal seasonal rainfall will be needed to improve rice prospects and water stores in the region. Meanwhile, the heaviest showers remained in southern parts of the region (Malaysia and Indonesia), improving soil moisture for oil palm in Malaysia and maintaining favorable soil moisture and irrigation water for oil palm and rice in Indonesia.

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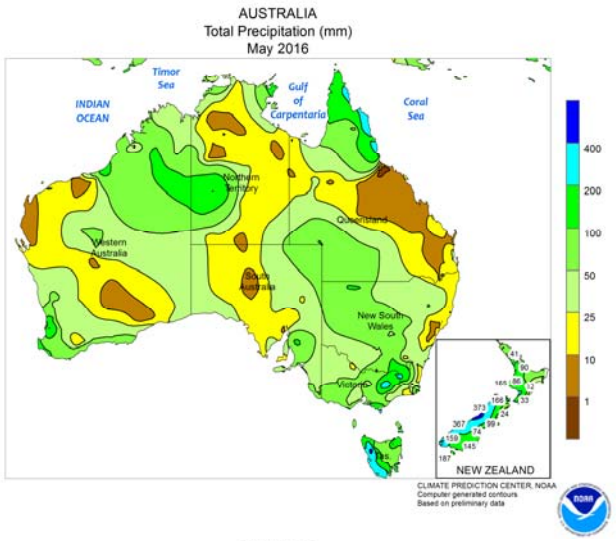
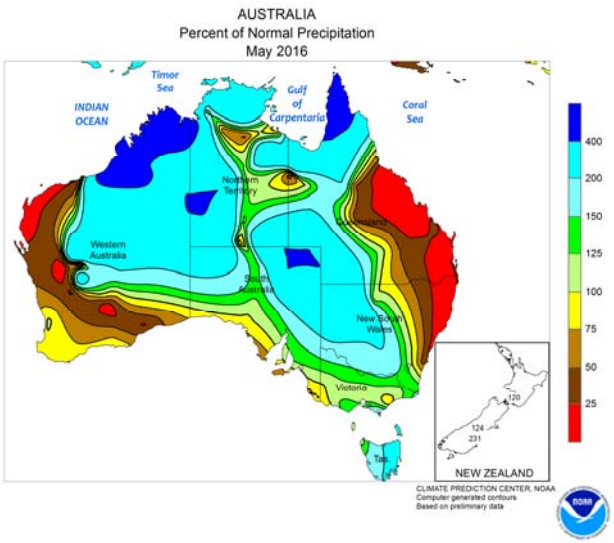
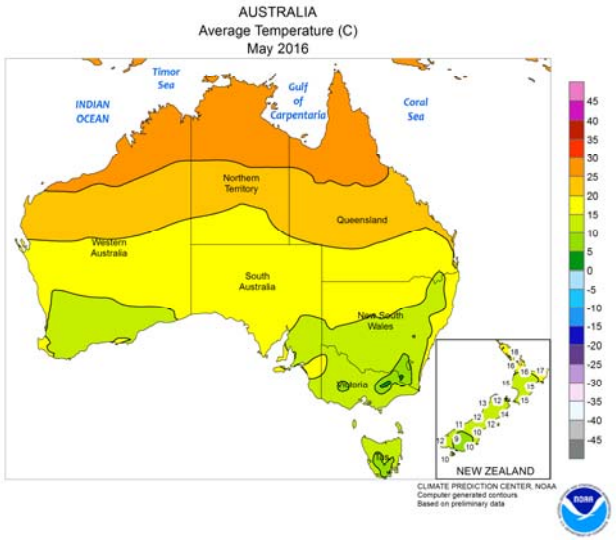
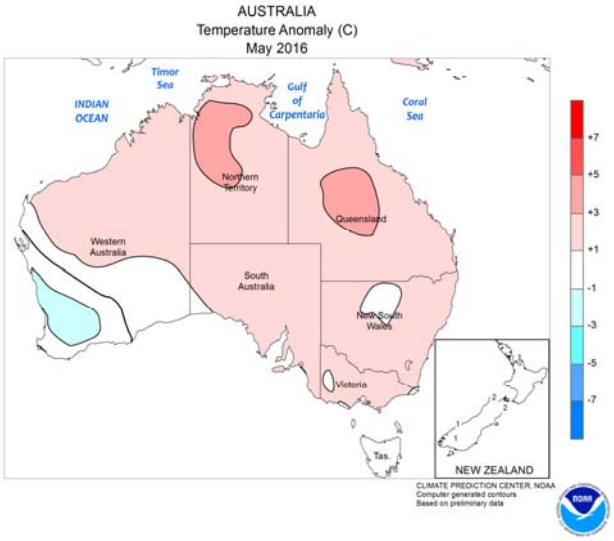


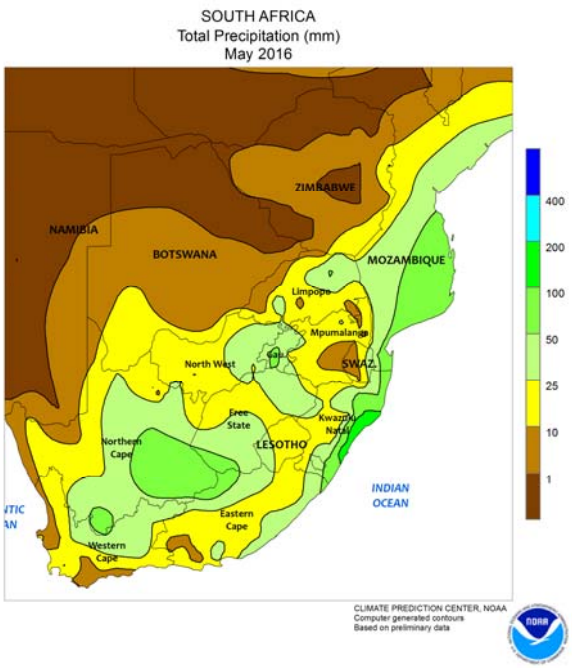


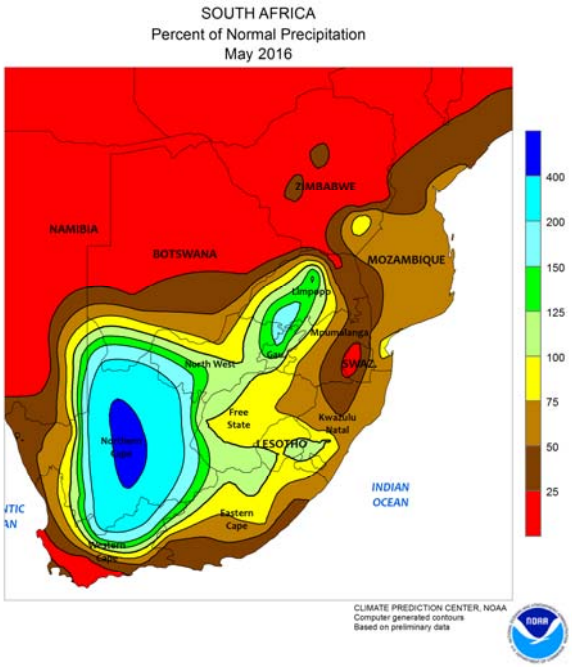


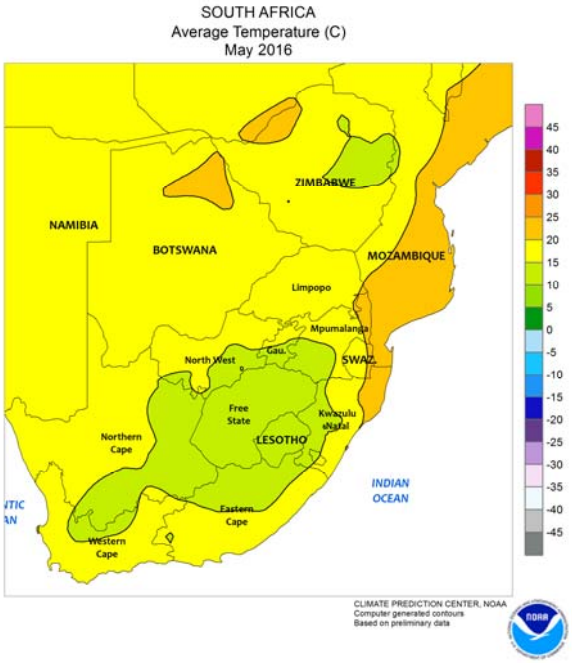


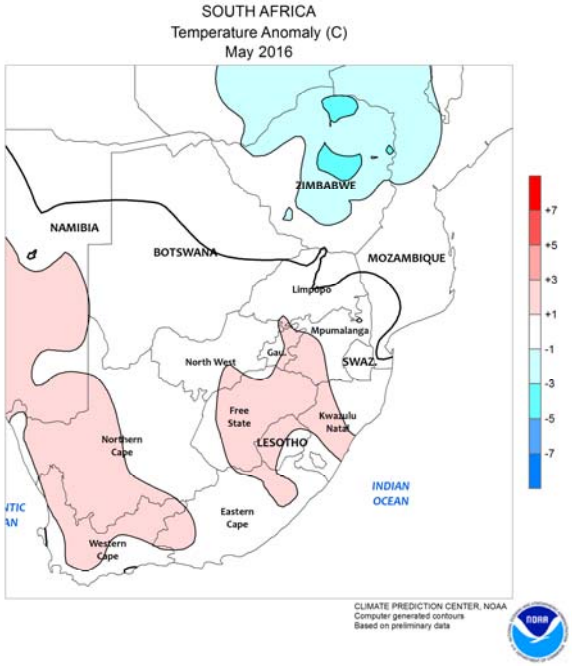
AUSTRALIA

In May, above-normal rainfall in the southeast provided a timely boost in soil moisture, triggering widespread winter grain and oilseed sowing. Similarly, occasional rain in the west maintained adequate to locally abundant moisture supplies for wheat, barley, and canola development. The rain in western and southeastern Australia resulted in good to excellent early season yield prospects for winter crops. Elsewhere, periodic showers in southern Queensland and northern New South Wales aided winter wheat development as cotton and sorghum harvesting to progress with little delay.



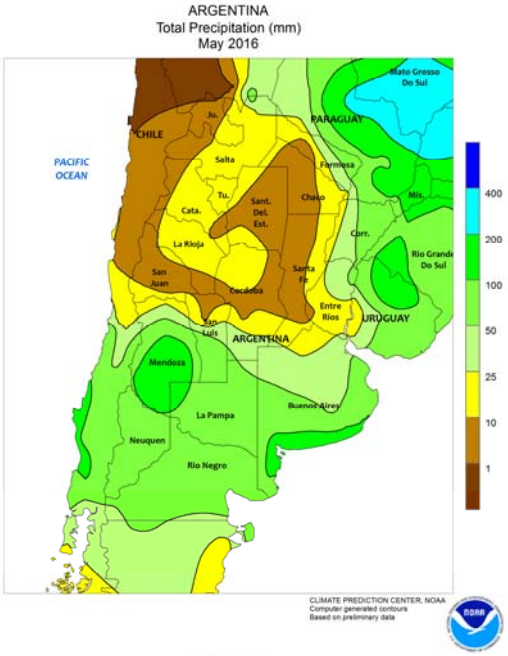


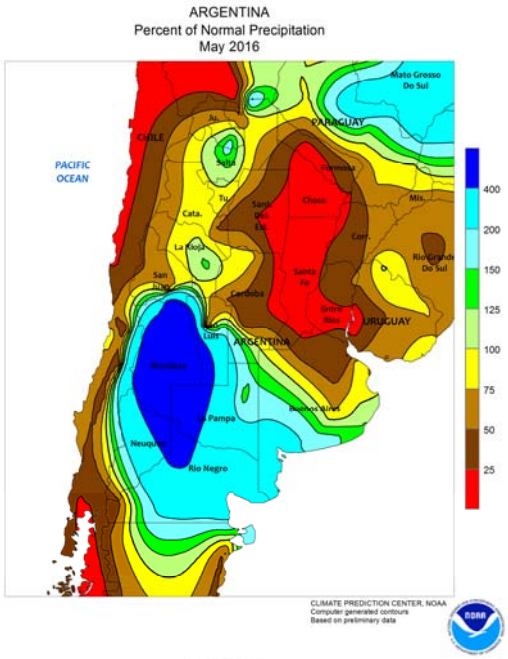


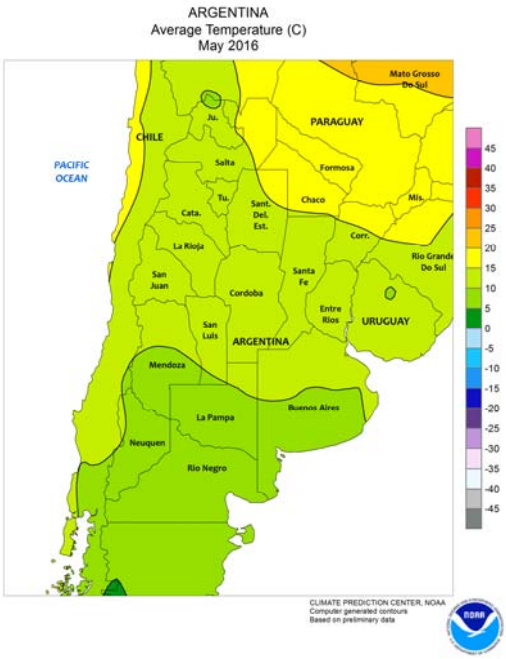


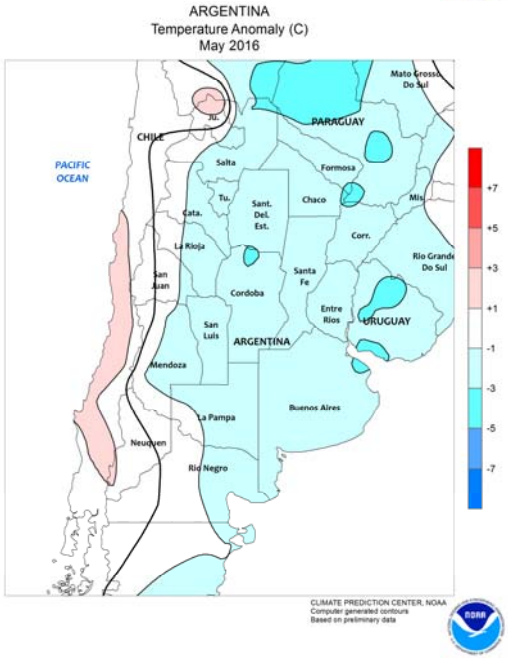
SOUTH AFRICA

Unseasonably heavy rain during the first half of May provided many agricultural areas with an unseasonable boost in moisture. The rain was overall beneficial for winter wheat in commercial eastern production areas (North West, Free State, and Gauteng) but hampered drydown of unharvested corn. Similarly, exceptionally heavy rain (amounts in excess of 100 mm) disrupted sugarcane harvesting along the coast of KwaZulu-Natal in the early part of the month. Much-above normal rainfall (25-50 mm or more, locally more than 400 percent of normal) was recorded in interior farming and ranching areas of the Cape Provinces; however, lighter rain was recorded in the main wheat production areas of the Western Cape. Monthly average temperatures were near to slightly above normal, favoring overwintering wheat. Seasonal cooling continued, with sub-freezing temperatures common at month's end in the corn belt, aiding drydown of corn awaiting harvest.



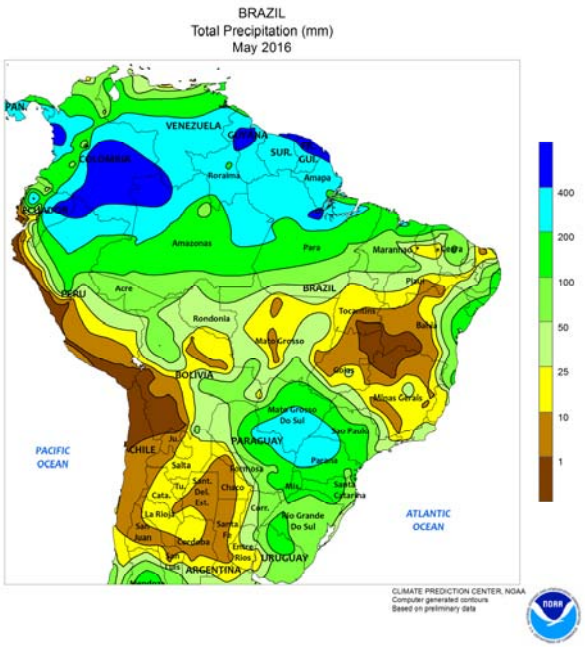


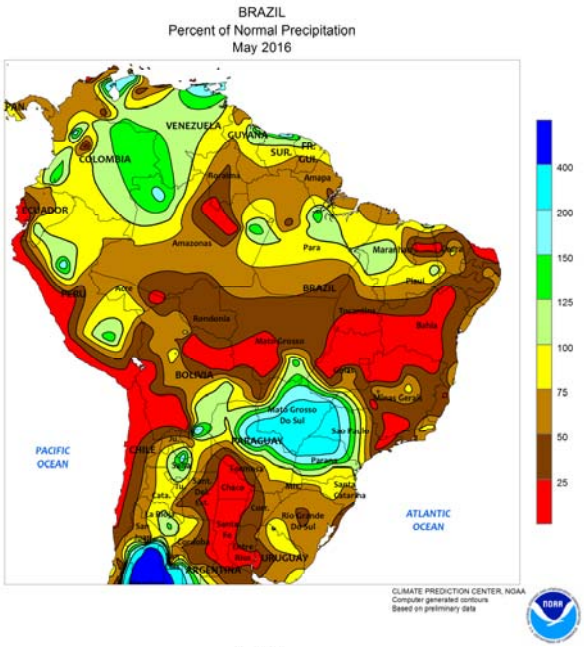


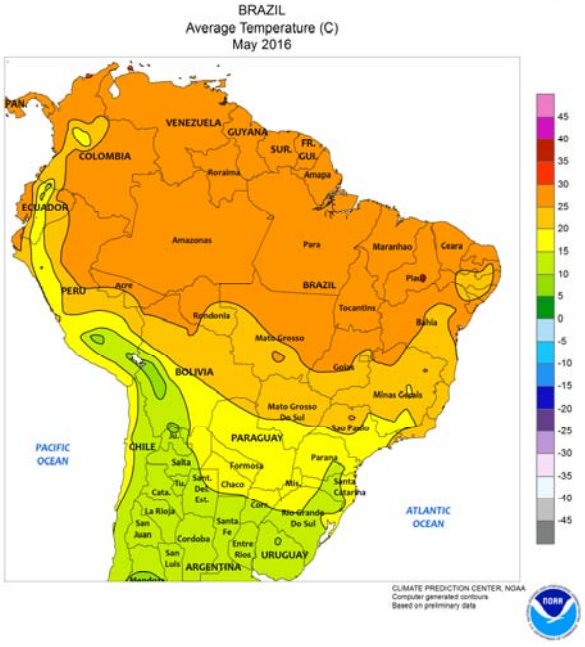


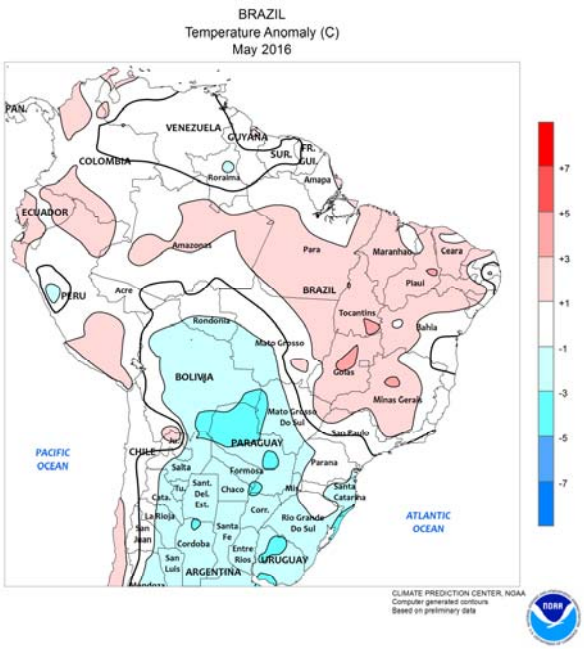
ARGENTINA

Favorably drier weather dominated previously flooded areas of central Argentina for most of May, improving conditions for drydown and harvesting of summer crops impaired by April's excessive wetness. The dryness was particularly welcome in the Parana Valley (notably portions of eastern Chaco, Santa Fe, and Entre Rios), which recorded the heaviest and most consistent rainfall during the previous month and was still experiencing standing water in fields. At month's end, locally heavy rain overspread southern Agricultural districts (La Pampa and southern Buenos Aires), disrupting fieldwork in those areas but boosting long-term moisture reserves for the upcoming winter grains crop. May temperatures averaged below normal; occasional freezes in La Pampa and Buenos Aires were typical for the time of year and aided the drying process for maturing corn and soybeans.



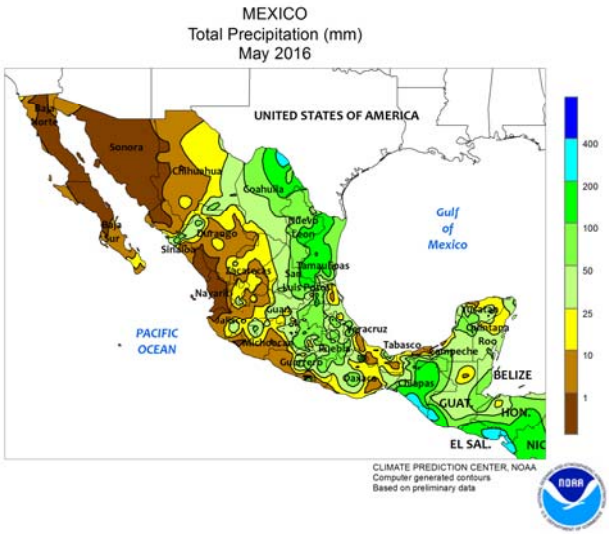


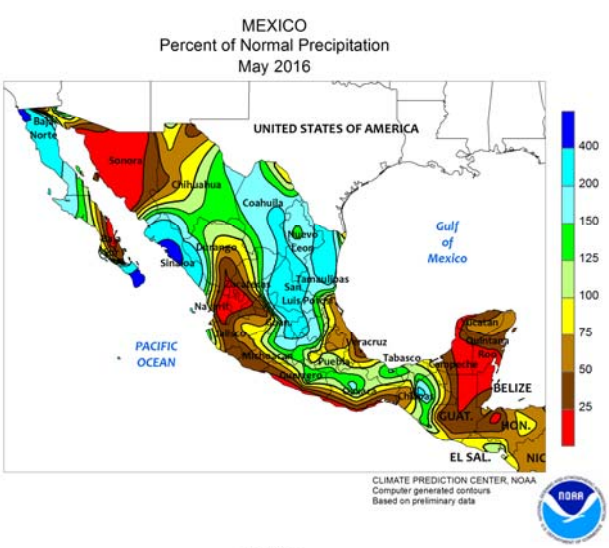


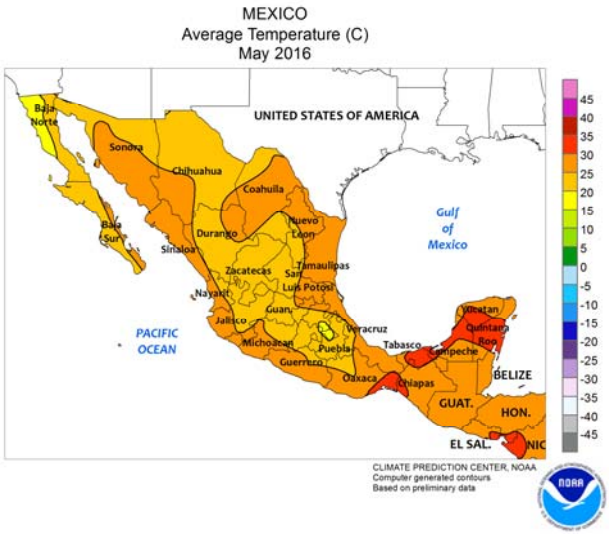


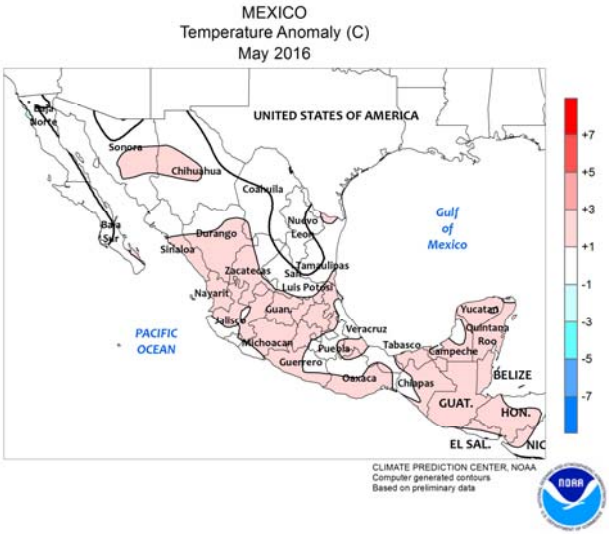
BRAZIL

During May, warmer- and drier-than-normal weather hastened maturation of second-crop corn and cotton in key production areas of central Brazil. Mato Grosso — Brazil's leading producer of winter corn — recorded sporadic showers that helped to stabilize crop conditions; however, rainfall totals were generally light (averaging 10 mm per event) and were interspersed with unseasonably high temperatures (daytime highs reaching the middle and upper 30s degrees C), sustaining high evaporative losses. As a result, monthly average temperatures were locally more than 3°C above normal. Elsewhere in the region, virtually no rain fell over northern Goias and neighboring locations in Minas Gerais, Tocantins, and Bahia, hastening drydown of cotton and other crops. Farther south, abundant rain (monthly accumulations in excess of 200 mm, or more than twice the normal monthly amount) maintained overall favorable yield prospects of second-crop corn in and around Parana and Mato Grosso do Sul, where crops reportedly advanced through reproductive and filling stages of development during the month. Temperatures were generally milder in southern production areas, averaging near to slightly below normal for the month with daytime highs mostly in the 20s degrees C fostering development in the absence of stressful heat.



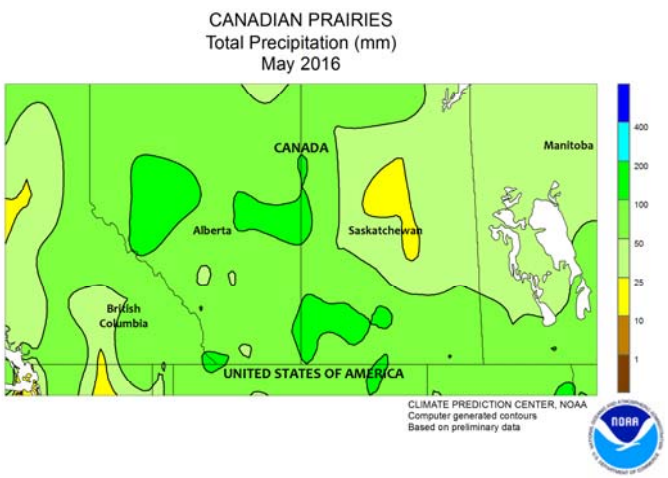


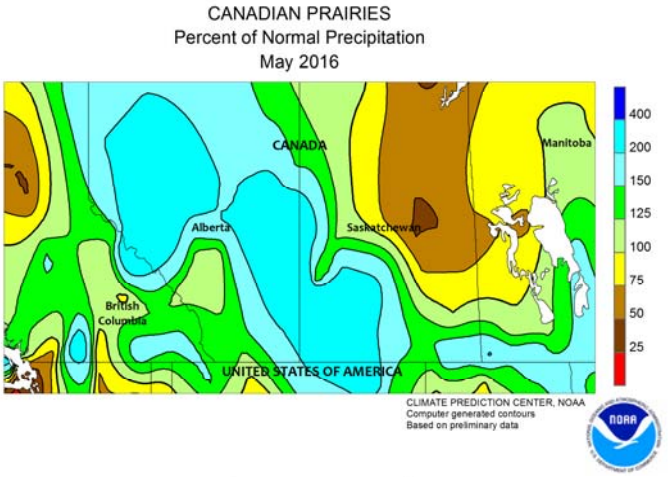


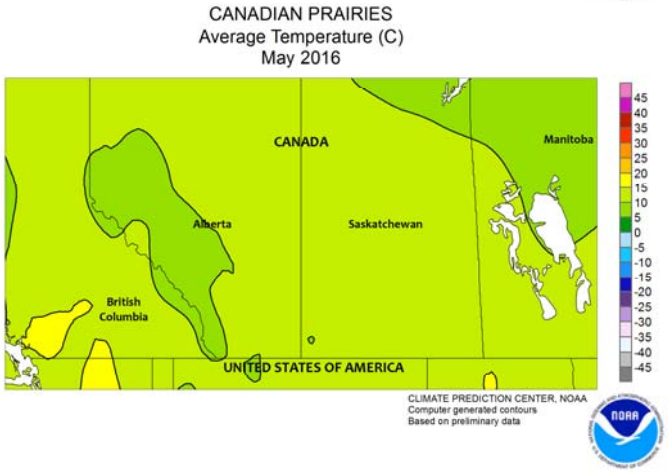


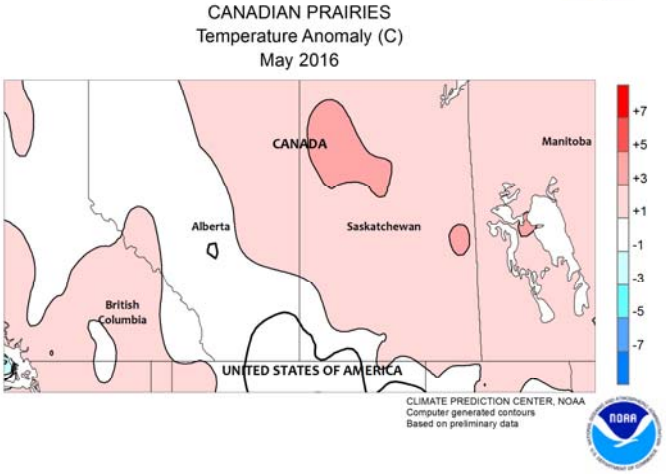
MEXICO

In May, seasonal rainfall intensified over Mexico's eastern agricultural areas, boosting irrigation reserves and providing timely moisture for planting corn and other main-season summer crops. The moisture was especially welcome for emerging corn in eastern sections of the southern plateau, most notably key producing states of Puebla and Mexico. Showers were more infrequent in sugarcane areas of Veracruz. Rainfall was also lighter than normal along the southern Pacific Coast and in the southeast, although locally heavy rain fell in Chiapas. Meanwhile, seasonably drier conditions prevailed in western Mexico. In the northwest, the dryness and the accompanying seasonal warmth aided drydown and harvesting of winter wheat and corn. Scattered, light showers were insufficient for corn planting in western sections of the southern plateau, including the main production states of Jalisco and Michoacan.



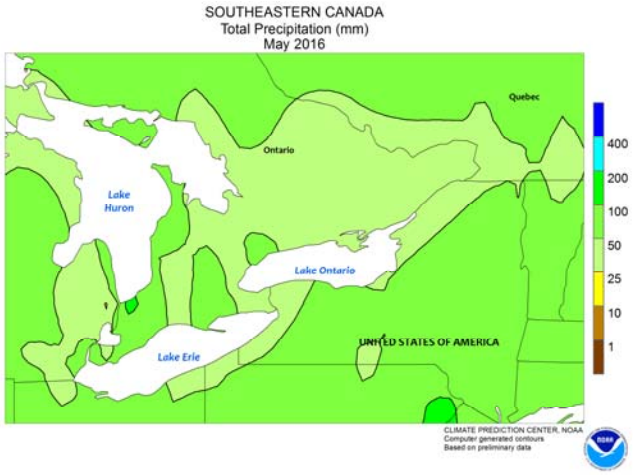


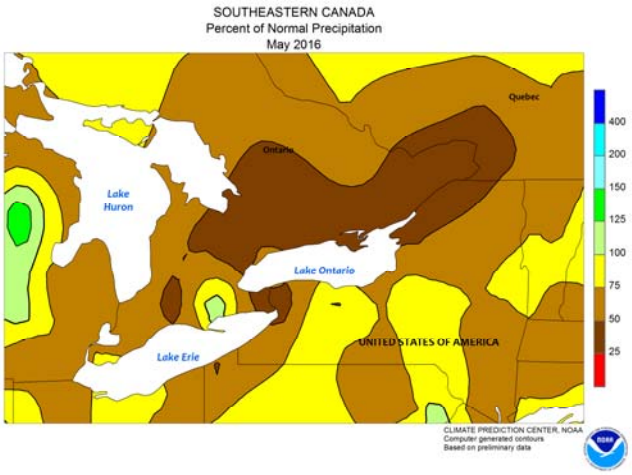


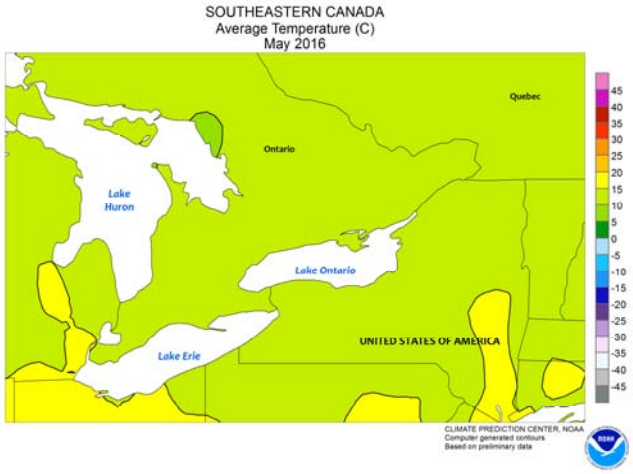


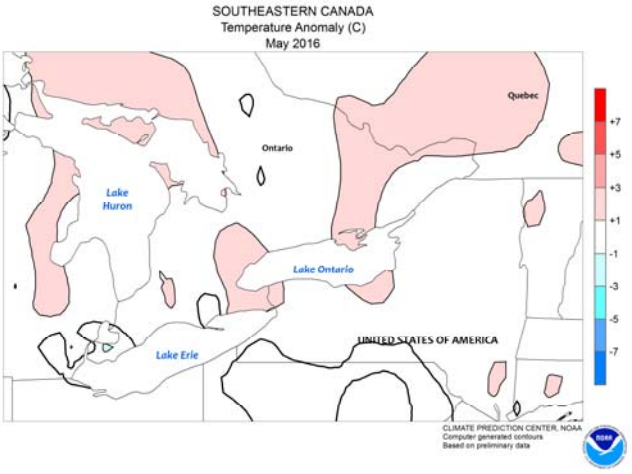
CANADIAN PRAIRIES

Much-needed rain fell throughout previously dry farming areas of Alberta during the latter part of May, providing timely moisture for germination and establishment of newly-sown spring grains and oilseeds. The rain also overspread most of Saskatchewan and Manitoba, the exception being northeastern Prairie farming areas, which remained mostly dry. Drier conditions during the early part of the month supported rapid spring grain and oilseed planting, which reportedly advanced at a higher-than-average pace in nearly all locations. Monthly average temperatures were near to above normal — spurring rapid emergence — although nighttime lows continued to fall below freezing in spots throughout the month. The early planting, followed by widespread rain and generally mild weather, engendered overall favorable prospects for spring grains and oilseeds as the month ended.









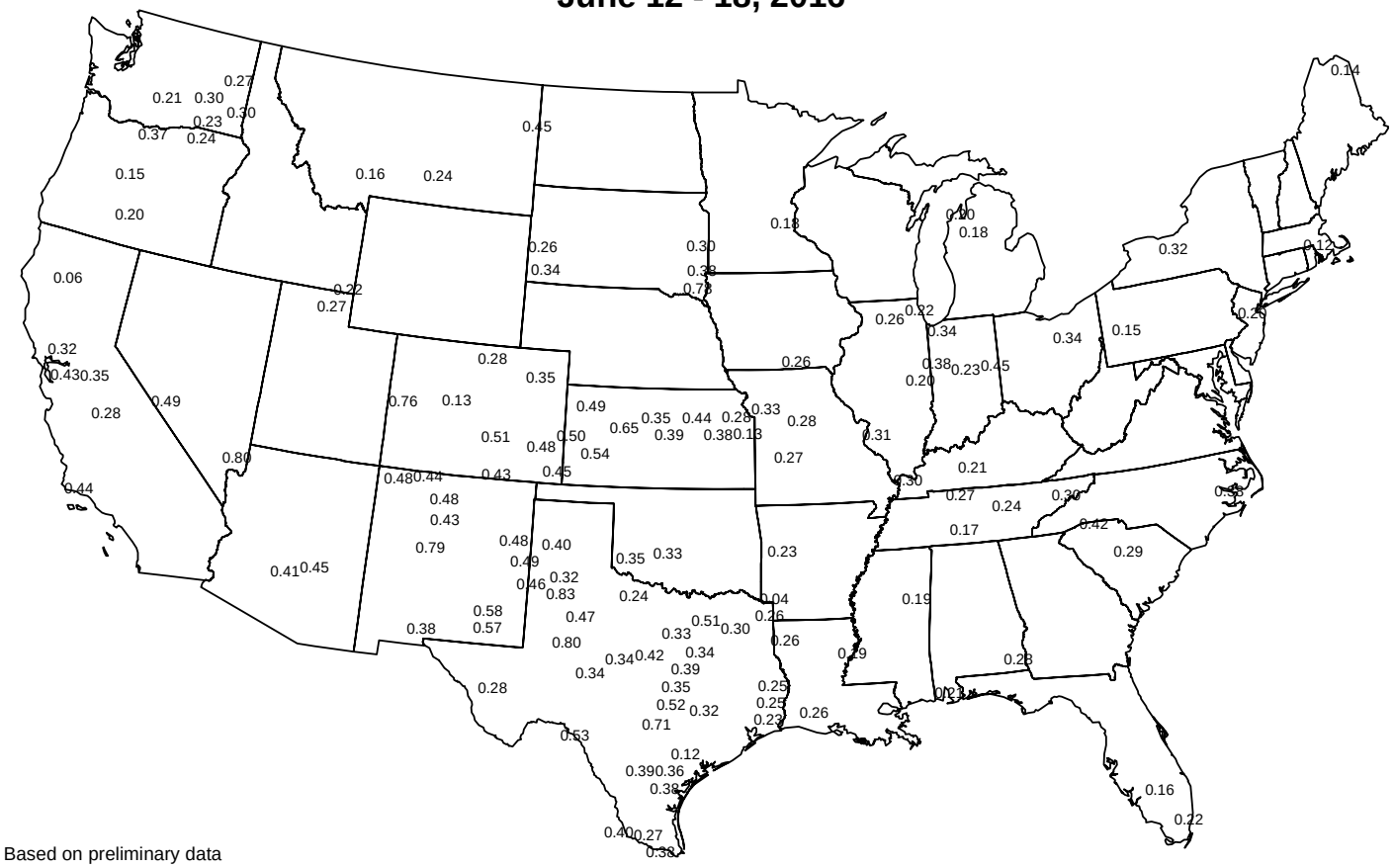
SOUTHEASTERN CANADA

In May, drier-than-normal conditions reduced topsoil moisture for germination of corn and soybeans and lingering cold likely delayed planting. Showers were sporadic and generally light, resulting in below-normal monthly rainfall totals throughout most of the region; however, parts of southwestern Ontario received rain throughout the month. In addition, nighttime lows fell below freezing in the far southwest into the middle part of the month, past the average date of the last spring freeze. The cold reportedly delayed soybean planting and may have burned emerged corn. A warming trend during the latter half of May spurred summer crop emergence as well as development of winter wheat and pastures. Despite the dryness, moisture should have been adequate for established wheat and pastures due to a more normal pattern of rain in the autumn and winter.

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

Average Pan Evaporation (inches/day)

June 12 - 18, 2016



Based on preliminary data

USDA Agricultural Weather Assessments

Data obtained from the NWS Cooperative Observer Network.

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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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