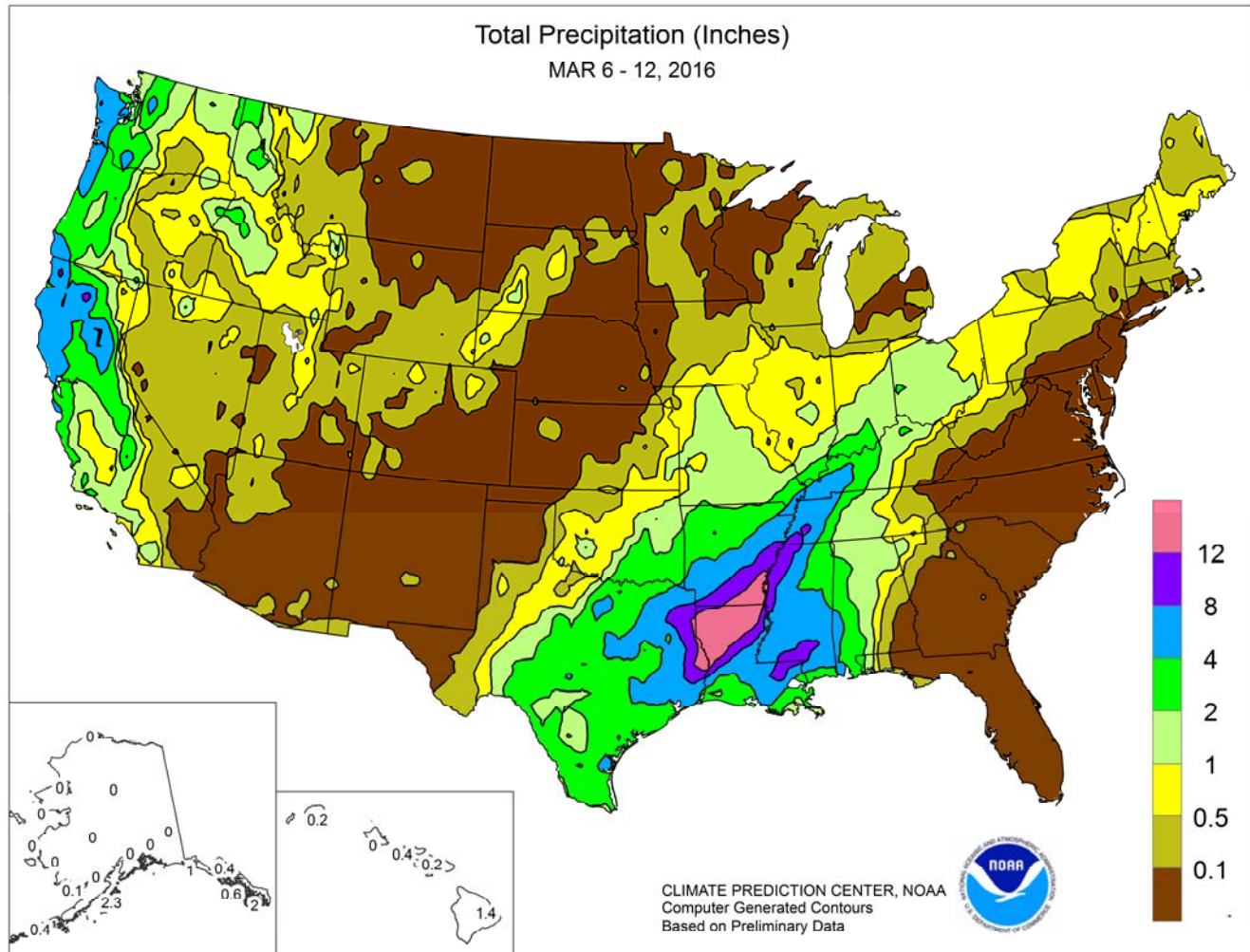


WEEKLY WEATHER AND CROP BULLETIN

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

March 6 – 12, 2016

Highlights provided by USDA/WAOB

Starting on March 8, torrential rainfall struck an area from **easternmost Texas to the Mississippi Delta**. In **northern Louisiana** and environs, historic rainfall totals of 12 to 20 inches or more triggered widespread flooding that persisted for days, as water slowly drained from creeks and bayous to larger rivers. Rain extended northward across the **southeastern Plains** and into parts of the **Midwest** and **Northeast**. However, heavy rain (2 inches or more) reached only as far north as the **lower Ohio Valley**. In contrast, warm, mostly dry weather

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Water Supply Forecast for the Western United States

Highlights

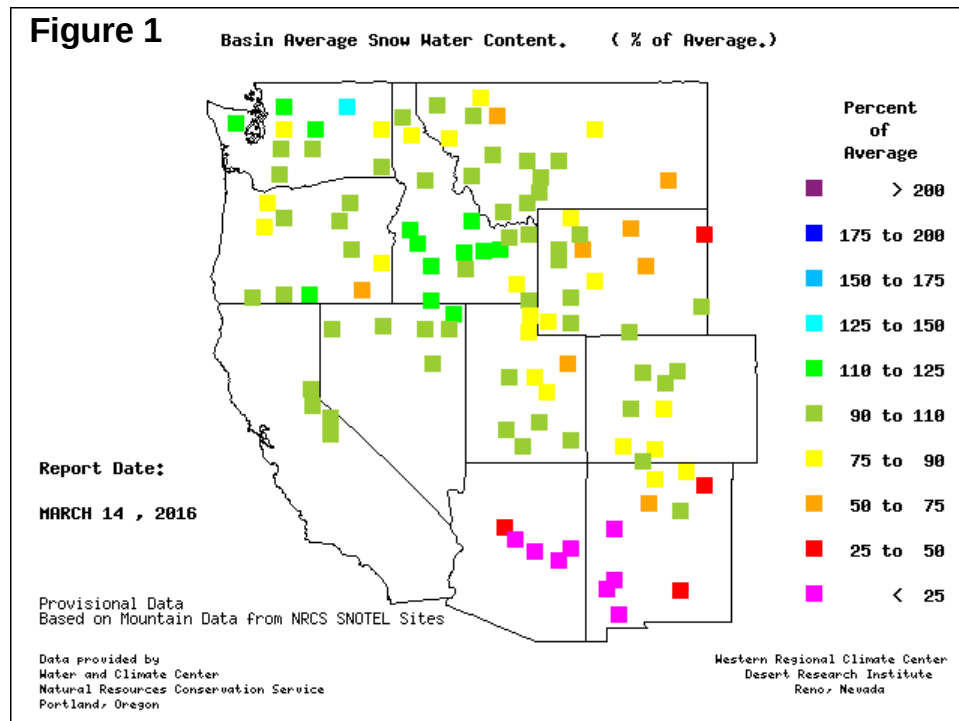
February was uncharacteristically dry across the western U.S., especially considering the ongoing strong El Niño. In addition, Southwestern warmth caused premature melting of high-elevation snowpack. In early March, however, a return to stormy weather brought much-needed precipitation to California and many other parts of the western U.S. Yet, most of the early-March precipitation bypassed the Southwest, where snow continued to melt under a warm weather regime. Farther north, early-March warmth limited new snow accumulations in California and the Northwest, despite widespread storminess.

Snowpack and Precipitation

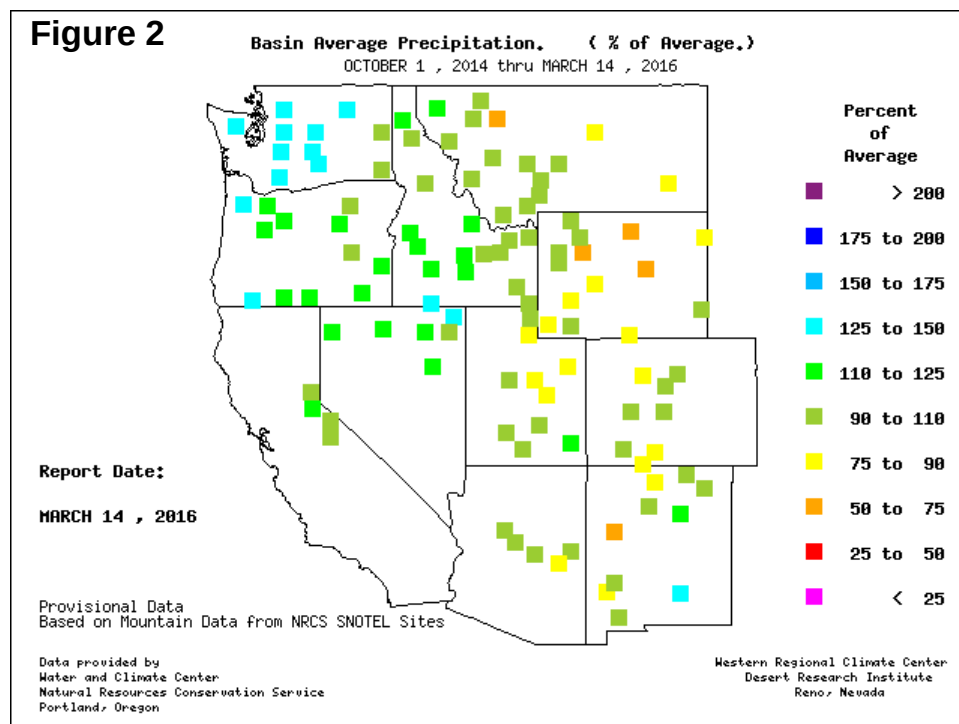
By March 14, 2016, deficient snowpack was a concern in a few river basins in Montana and Wyoming (figure 1). In addition, February and early-March warmth sharply reduced or eliminated snowpack in Arizona and parts of New Mexico. Many other Western river basins retained near- to above-average snowpack by mid-March, with the greatest concentrations of above-average snowpack focused across southern Idaho and northern Washington.

Season-to-date precipitation (October 1, 2015 – March 14, 2016) was near normal in many Western basins. The largest region of much-above-average basin precipitation totals covered the Pacific Northwest (figure 2). Due to the dry February, season-

SNOTEL – River Basin Snow Water Content



SNOTEL – River Basin Precipitation



to-date precipitation slipped below average in a few river basins, mainly from eastern Montana southward into the Four Corners States. However, significant, season-to-date precipitation deficits were mostly limited to a few basins in Wyoming.

Spring and Summer Streamflow Forecasts

By March 1, 2016, projections for spring and summer streamflow were indicating the likelihood of above-normal runoff in several Northwestern river basins (figure 3). Mostly near-normal runoff can be expected in other areas, including many Sierra Nevada river basins. However, below-normal runoff is a growing concern across the eastern slopes of the northern Rockies, including numerous basins in Montana and Wyoming, as well as several basins in Utah. And, premature melting of snowpack in parts of Arizona and New Mexico have sharply reduced forecasts for spring and summer runoff.

Reservoir Storage

On March 1, 2016, reservoir storage as a percent of average for the date was significantly below average in several Western States. Specifically, statewide storage was about one-third of the historical average for this time of year in Nevada and remained less than 80 percent of average in Arizona, California, and New Mexico (figure 4). In California, where storage was 70 percent of the March 1 average, reservoirs captured additional water due to rampant storminess during the first half of March and will also receive spring and summer runoff from melting snow.

For More Information

The National Water and Climate Center homepage provides the latest available snowpack and water supply information. Please visit: <http://www.wcc.nrcs.usda.gov>

Figure 3
Spring and Summer Streamflow Forecasts as of March 1, 2016

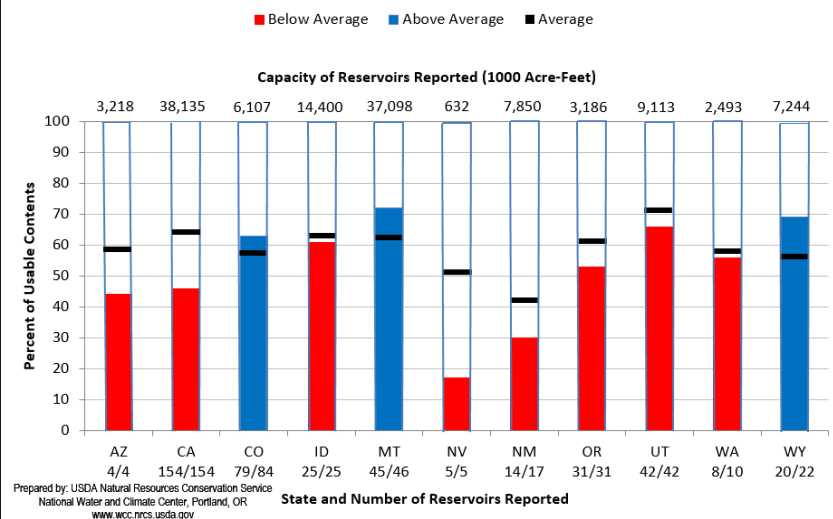
Percent of 1981-2010 Average

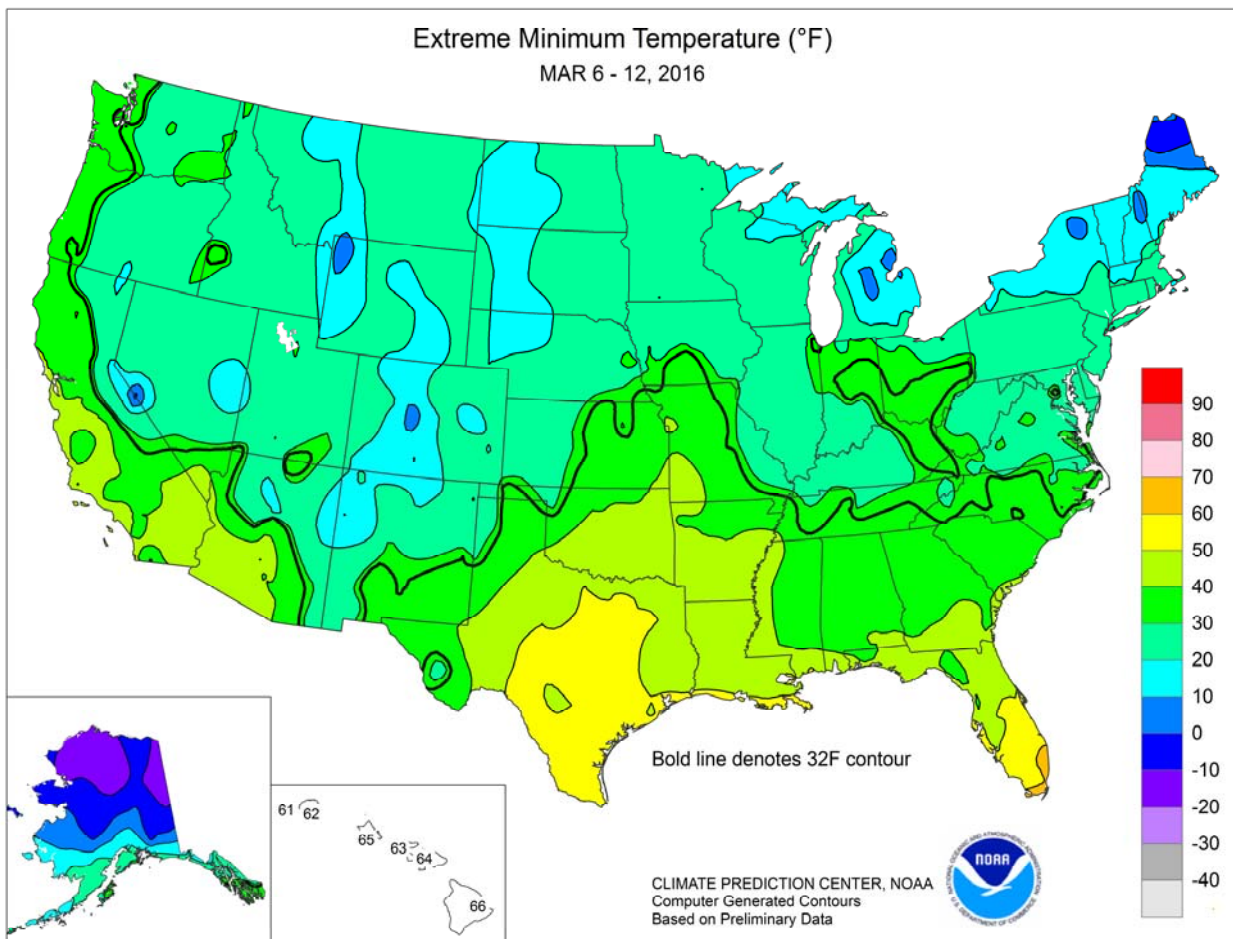
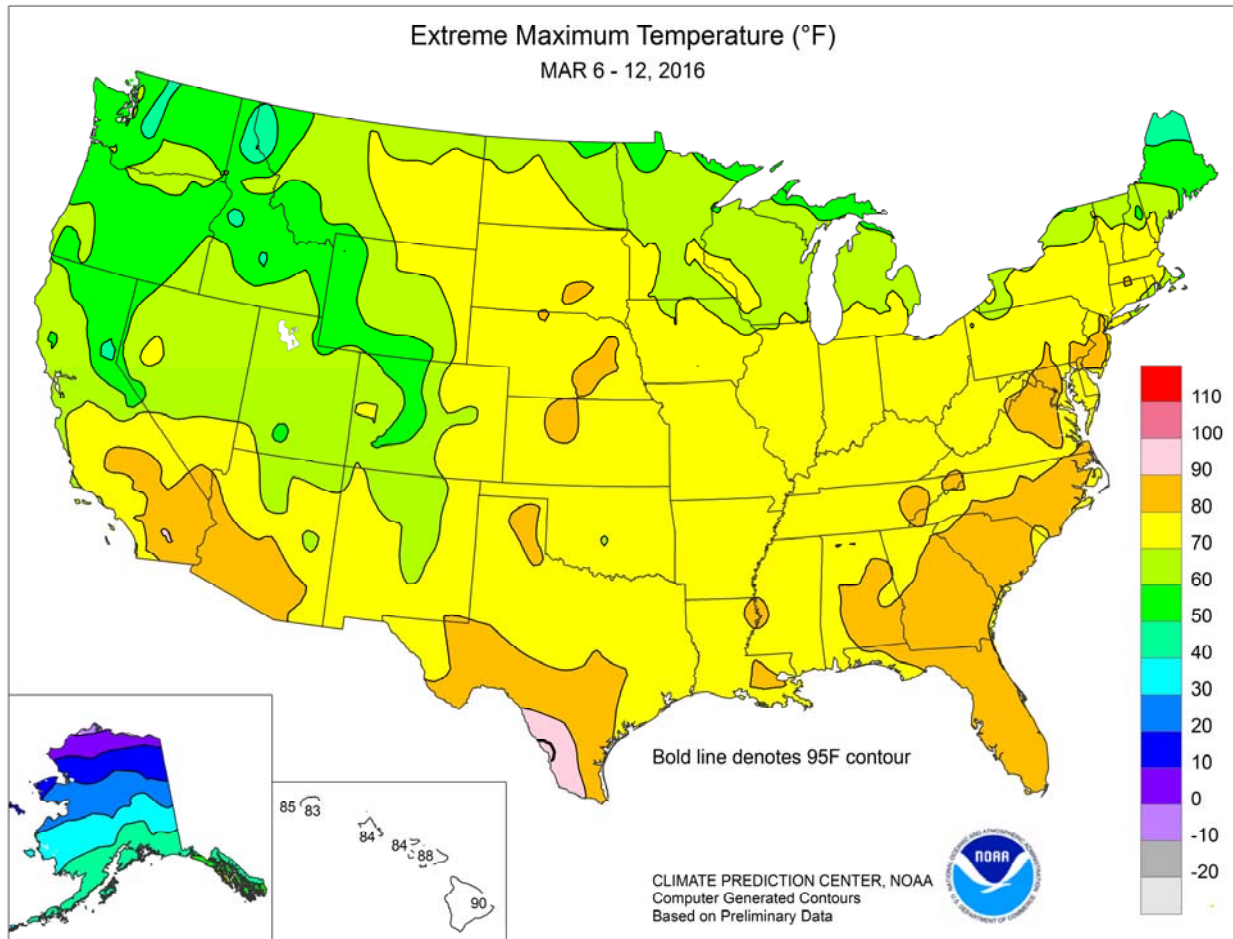
- > 180
- 150 - 180
- 130 - 149
- 110 - 129
- 90 - 109
- 70 - 89
- 50 - 69
- 25 - 49
- < 25

50% exceedance probability forecasts shown. For forecasts at other exceedance probabilities, see individual state reports.

Prepared by:
USDA Natural Resources Conservation Service
National Water and Climate Center
Portland, Oregon
<http://www.wcc.nrcs.usda.gov>
Created: 8 Mar 2016 07:54

Figure 4 Reservoir Storage as of March 1, 2016



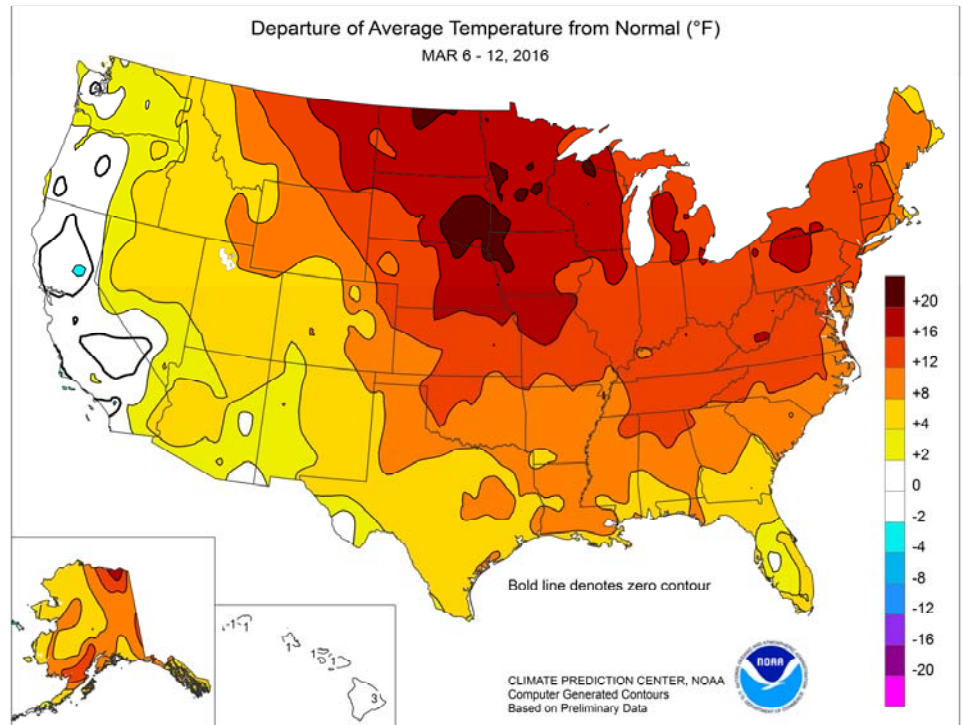


(Continued from front cover)

prevailed in the **middle and southern Atlantic States**, as well as large sections of the **Plains and Southwest**. The widespread U.S. warmth continued to accelerate winter wheat development, leaving the crop susceptible to potential spring cold outbreaks. In fact, warmth dominated the U.S., especially **east of the Rockies**. Weekly temperatures averaged at least 15 to 20°F above normal across the **north-central U.S.** and were above normal nationwide, except in portions of the **Pacific Coast States**. Elsewhere, significant storms continued to push across **California and the Northwest**. March storms have provided a nice boost in the **Sierra Nevada** snowpack (from 20 to 25 inches of water equivalency), while other recent **California** impacts have included large improvements in soil moisture and reservoir storage.

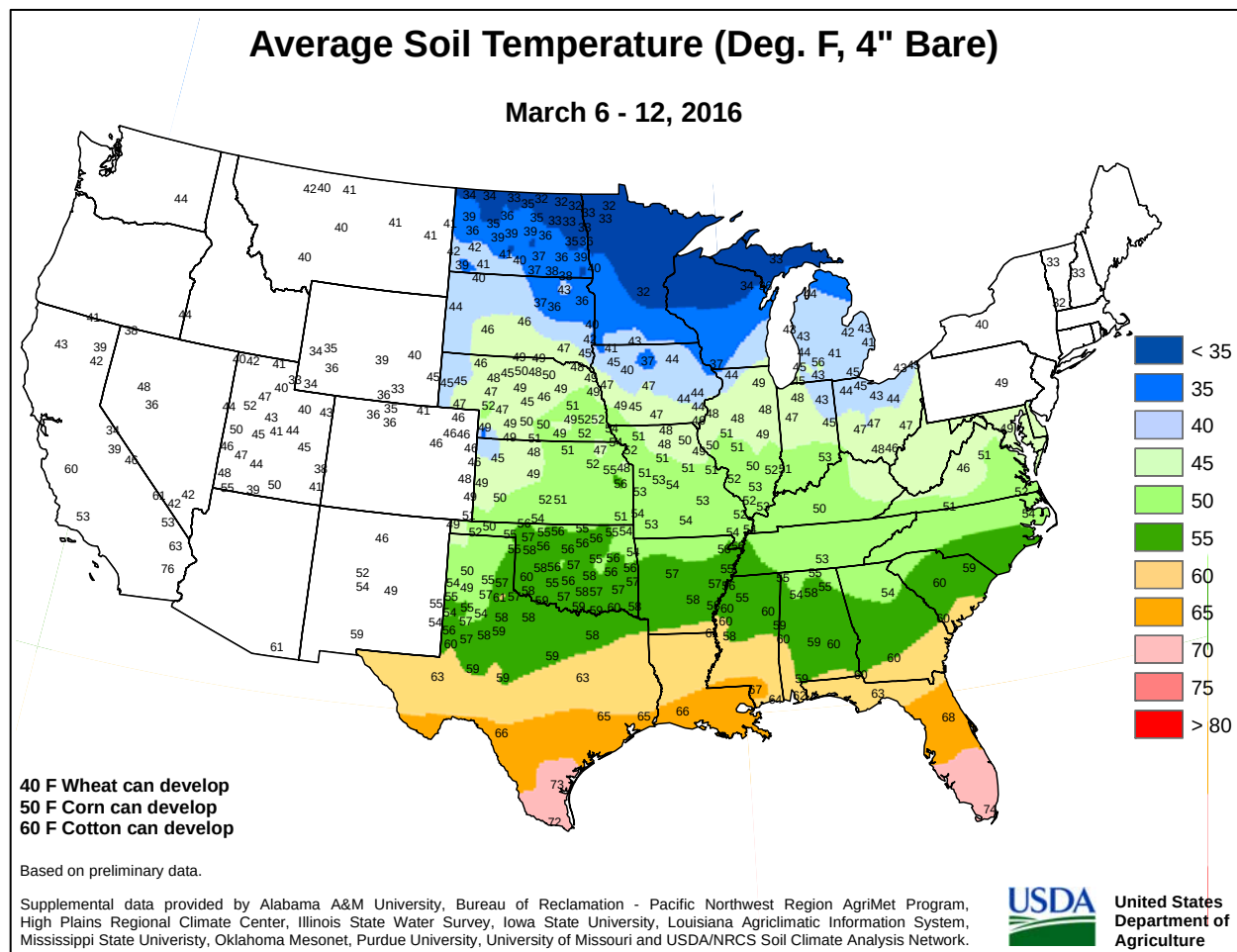
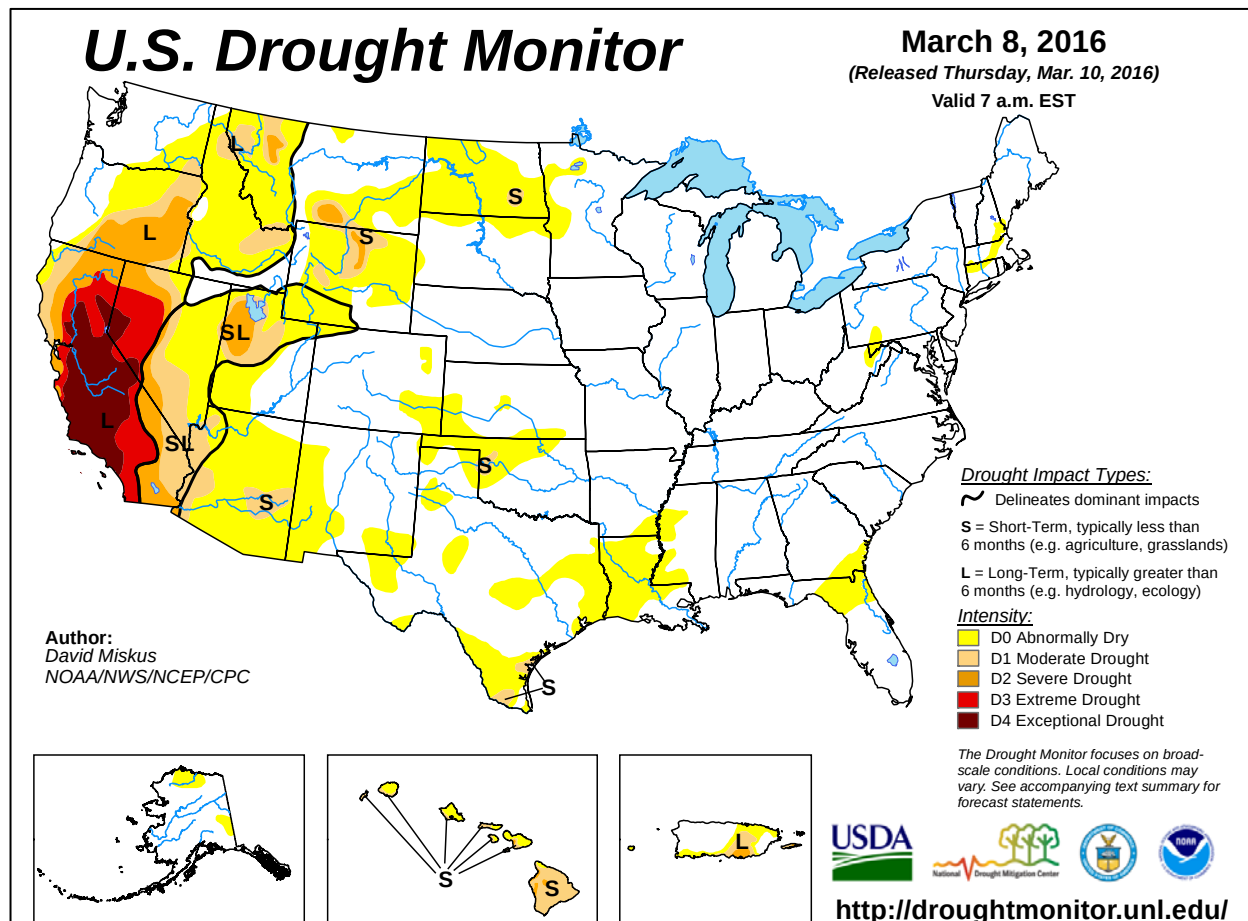
Heavy precipitation fell in the **West** before reaching the **South**. During a 72-hour period ending on the morning of March 7, **California** rainfall totals reached 11.60 inches at **Bucks Lake (Plumas County)**; 11.04 inches at **Strawberry Valley (Yuba County)**; and 10.66 inches on **Mount Umunhum (Santa Clara County)**. Meanwhile, locally heavy showers across the **Intermountain West** and the **High Plains** led to daily-record totals on March 7 in **Scottsbluff, NE** (1.49 inches), and **Lander, WY** (0.50 inch, including 2.2 inches of snow). Farther east, downpours erupted on March 8 in the **western and central Gulf Coast States**. In **Louisiana**, record-setting totals for the 8th reached 5.62 inches in **Monroe** and 5.12 inches in **Shreveport**. **Monroe** was inundated with 10.86 inches of rain the following day, March 9, breaking an all-time daily rainfall record (previously, 7.40 inches on September 2, 2008). **Monroe's** wettest March day had been March 21, 1955, when 5.48 inches fell. Selected daily-record totals for March 9 included 5.68 inches in **Longview, TX**; 5.64 inches in **Greenville, MS**; 5.30 inches in **Monticello, AR**; and 5.15 inches in **Corpus Christi, TX**. **Corpus Christi's** wettest March day had been March 11, 1903, when 4.66 inches fell. During the 6-day period from March 8-13, **Louisiana** rainfall totals burgeoned to 21.29 inches in **Monroe** and 12.02 inches in **Shreveport**. Elsewhere, the March 8-13 deluge resulted in 13.35 inches in **Greenville, MS**; 11.68 inches in **Monticello, AR**; 10.58 inches in **Memphis, TN**; and 10.08 inches in **Longview, TX**. Along the **Texas-Louisiana border**, the **Sabine River** surged to record-high levels in **Texas** locations such as **Bon Wier** (14.21 feet above flood stage on March 13, topping a high-water mark set in April 1913) and **Deweyville** (more than 9 feet above flood stage and still rising, eclipsing a May 1884 record). In **Louisiana**, crest records from April or May 1991 were topped in locations such as **Bayou Dorcheat at Lake Bistineau** (on March 13) and **Bayou Bartholomew at Beekman** (on March 12). A crest record from 1991 was also broken (on March 15) along the **Coldwater River near Marks, MS**. And, high-water marks from April 1983 were surpassed in **Louisiana** communities such as **Bush** (along the **Bogue Chitto River** on March 12) and **Folsom** (along the **Tchefuncte River** on March 11). Late in the week, heavy precipitation returned to **California**, where 72-hour rainfall totals ending the morning of March 14 included 10.44 inches at **Strawberry Valley** and 9.76 inches at **Bucks Lake**.

Significant wind accompanied the storminess, especially in the **Northwest**. On March 9-10, wind gusts topped 100 mph at several locations in the **Cascades of Washington and northern Oregon**. Gusts were clocked to 74 mph (on March 9) in **Astoria, OR**, and 67 mph (on March 10) in **Bellingham, WA**. During the second wave of storminess, **Bellingham** reported a gust to 64 mph on March 13. Elsewhere, the primary headline was rampant warmth. On March 6, daily-record highs



surged to 76°F in **Mobridge, SD**; 75°F in **Bismarck, ND**; and 74°F in **Miles City, MT**. On March 7 in **Nebraska**, highs of 81°F in **Hastings** and **Grand Island** represented the second-earliest readings of 80°F or higher (previously, March 6, 1972, in both locations). Elsewhere on March 7, daily-record highs included 82°F in **Hill City, KS**, and 80°F in **Sioux City, IA**. In the **Northeast**, the earliest 80-degree readings on record occurred on March 9 in locations such as **Poughkeepsie, NY** (82°F); **Philadelphia, PA** (82°F); **Allentown, PA** (80°F); and **Trenton, NJ** (80°F). In all cases, previous records had been set on March 12 or 13, 1990. The parade of **Eastern** records continued on March 10, when **Atlantic City, NJ** (81°F), reported its earliest 80-degree reading (previously, 85°F on March 12, 1990). On March 9-10, consecutive daily-record highs were broken at numerous sites, including **Baltimore, MD** (82 and 80°F); **Philadelphia** (82°F both days); and **New York's Central Park** (77 and 79°F). Similarly, **Elizabeth City, NC**, collected daily-record highs (82 and 81°F, respectively) on March 10-11. Late in the week, warmth re-intensified across the **nation's mid-section**. On March 11-12, daily-record highs attained the 70-degree mark on consecutive days in **South Dakota** locations such as **Sisseton** (70 and 71°F) and **Aberdeen** (71 and 72°F). With a high of 81°F on March 11, **Valentine, NE**, tied a record for its second-earliest reading of 80°F or higher, behind only March 10, 1972 and 1995.

Slightly cooler weather prevailed in **Alaska**, although temperatures remained above normal statewide. In fact, temperatures averaged at least 10°F above normal across parts of **southern and eastern Alaska**, where **Yakutat** posted consecutive daily-record highs (50 and 51°F, respectively) on March 6-7. Later, **Juneau** logged a pair of daily-record highs (50 and 49°F, respectively) on March 12-13. Meanwhile, mostly dry weather covered most of the **Alaskan mainland**, while light to moderately heavy precipitation fell across the southern tier of the state. In **Kodiak**, weekly precipitation totaled 2.22 inches—mostly rain and one-tenth of an inch of snow. Farther south, parts of **Hawaii** experienced a slight increase in shower activity, although warm conditions persisted. Most of **Hawaii's** rain fell at midweek and again at week's end. For example, **Kokee, Kauai**, netted 4.08 inches of rain in a 24-hour period on March 8-9. Later, 24-hour, **Big Island** totals on March 12-13 included 2.26 inches in **Glenwood** and 2.06 inches in **Mountain View**. Elsewhere on the **Big Island**, **Hilo's** 1.55-inch total on March 12 boosted its month-to-date sum to 2.14 inches (43 percent of normal). **Hawaii** also continued to experience unusual warmth, which pushed **Hilo** to three consecutive daily-record highs (88, 87, and 90°F) from March 6-8.



National Weather Data for Selected Cities

Weather Data for the Week Ending March 12, 2016

Data Provided by Climate Prediction Center

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION								RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE MAR 1	PCT. NORMAL SINCE MAR 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	75	55	79	36	65	12	1.22	-0.13	0.65	3.08	138	13.82	116	86	47	0	0	2	2	
	HUNTSVILLE	75	54	80	36	64	14	1.17	-0.39	0.61	1.87	72	11.82	90	75	48	0	0	2	2	
	MOBILE	72	57	75	42	65	6	4.43	2.78	4.25	4.54	166	13.99	103	97	70	0	0	3	1	
	MONTGOMERY	78	54	82	38	66	10	0.26	-1.26	0.25	1.86	72	12.52	96	84	44	0	0	2	0	
AK	ANCHORAGE	41	26	46	22	33	9	0.00	-0.15	0.00	0.04	15	0.62	37	74	62	0	7	0	0	
	BARROW	-6	-12	-4	-15	-9	7	0.00	0.00	0.00	0.00	0	1.16	483	85	78	0	7	0	0	
	FAIRBANKS	29	5	42	-1	17	11	0.00	-0.06	0.00	0.00	0	0.06	6	74	66	0	7	0	0	
	JUNEAU	46	30	50	26	38	6	0.38	-0.48	0.25	0.47	31	10.26	99	92	76	0	5	4	0	
	KODIAK	43	36	47	32	40	8	2.31	1.14	0.76	2.63	129	25.92	163	95	84	0	1	7	2	
	NOME	19	5	23	-1	12	4	0.00	-0.12	0.00	0.02	9	1.04	55	75	68	0	7	0	0	
AZ	FLAGSTAFF	54	23	64	16	38	3	0.22	-0.43	0.21	0.22	19	4.00	68	86	25	0	7	2	0	
	PHOENIX	78	55	85	52	66	5	0.00	-0.28	0.00	0.00	0	1.31	64	39	22	0	0	0	0	
	PRESCOTT	62	34	73	29	48	5	0.16	-0.33	0.16	0.16	19	1.64	38	75	20	0	3	1	0	
	TUCSON	76	48	87	40	62	4	0.12	-0.10	0.12	0.12	32	1.83	82	44	21	0	0	1	0	
AR	FORT SMITH	67	53	76	47	60	10	3.08	2.21	2.16	3.67	253	5.82	91	82	64	0	0	5	2	
	LITTLE ROCK	68	54	77	44	61	10	5.79	4.79	2.53	6.72	402	12.41	144	93	65	0	0	5	3	
CA	BAKERSFIELD	68	47	83	44	58	2	0.45	0.12	0.23	0.45	79	2.58	87	78	53	0	0	3	0	
	FRESNO	64	47	77	44	56	1	1.96	1.42	1.01	2.75	296	7.50	144	89	66	0	0	4	2	
	LOS ANGELES	65	51	70	47	58	0	1.38	0.74	0.53	1.40	123	5.07	70	82	62	0	0	3	2	
	REDDING	56	47	62	41	52	0	5.02	3.76	1.92	5.60	256	19.19	135	87	69	0	0	6	4	
	SACRAMENTO	60	47	66	37	54	0	2.53	1.81	0.71	4.40	349	10.66	123	94	62	0	0	5	1	
	SAN DIEGO	67	54	71	48	61	2	0.43	-0.11	0.16	0.45	49	3.71	71	79	58	0	0	4	0	
	SAN FRANCISCO	61	51	65	47	56	2	2.51	1.68	0.77	4.12	284	10.55	106	90	72	0	0	6	2	
	STOCKTON	61	47	68	40	54	0	2.02	1.46	0.80	2.80	289	8.19	133	89	77	0	0	4	2	
CO	ALAMOSA	57	18	66	9	37	6	0.00	-0.08	0.00	0.00	0	0.98	166	73	28	0	7	0	0	
	CO SPRINGS	60	32	68	26	46	10	0.00	-0.19	0.00	0.00	0	1.54	166	62	15	0	5	0	0	
	DENVER INTL	63	30	74	22	46	9	0.01	-0.20	0.01	0.01	3	0.99	125	69	23	0	4	1	0	
	GRAND JUNCTION	58	35	71	26	46	5	0.27	0.06	0.27	0.27	79	1.64	114	70	47	0	4	1	0	
	PUEBLO	68	30	76	24	49	9	0.00	-0.17	0.00	0.00	0	0.87	102	60	26	0	4	0	0	
CT	BRIDGEPORT	56	37	68	28	47	10	0.05	-0.82	0.05	0.39	27	7.55	93	84	53	0	2	1	0	
	HARTFORD	63	35	81	24	49	14	0.05	-0.78	0.03	0.59	43	7.42	91	78	43	0	3	2	0	
DC	WASHINGTON	70	47	79	36	58	14	0.00	-0.83	0.00	0.17	12	6.64	92	77	38	0	0	0	0	
DE	WILMINGTON	66	40	81	27	53	13	0.00	-0.89	0.00	0.28	19	7.00	91	80	34	0	2	0	0	
FL	DAYTONA BEACH	77	56	81	48	67	3	0.00	-0.83	0.00	0.01	1	10.72	148	96	48	0	0	0	0	
	JACKSONVILLE	79	51	83	41	65	5	0.00	-0.85	0.00	0.16	11	7.81	94	97	45	0	0	0	0	
	KEY WEST	78	70	80	65	74	1	0.11	-0.26	0.11	0.11	18	7.19	165	88	66	0	0	1	0	
	MIAMI	81	70	84	65	75	4	0.00	-0.49	0.00	0.01	1	10.43	219	75	50	0	0	0	0	
	ORLANDO	82	58	86	51	70	4	0.00	-0.77	0.00	0.08	6	7.42	122	87	43	0	0	0	0	
	PENSACOLA	71	62	72	50	67	8	0.00	-1.45	0.00	0.00	0	8.65	69	90	67	0	0	0	0	
	TALLAHASSEE	79	52	83	41	66	6	0.00	-1.50	0.00	0.60	24	9.29	74	87	42	0	0	0	0	
	TAMPA	82	62	85	52	72	6	0.00	-0.68	0.00	0.00	0	8.71	143	80	38	0	0	0	0	
	WEST PALM BEACH	79	70	81	62	75	5	0.00	-0.72	0.00	0.01	1	12.56	168	68	49	0	0	0	0	
GA	ATHENS	76	48	84	35	62	11	0.00	-1.19	0.00	1.14	57	9.30	84	96	44	0	0	0	0	
	ATLANTA	74	53	79	41	63	11	0.00	-1.27	0.00	1.64	76	14.17	119	81	48	0	0	0	0	
	AUGUSTA	77	46	83	33	61	7	0.00	-1.07	0.00	1.18	65	6.60	63	96	49	0	0	0	0	
	COLUMBUS	77	51	81	40	64	8	0.01	-1.33	0.01	1.19	53	8.62	75	89	38	0	0	1	0	
	MACON	76	49	83	35	63	9	0.00	-1.16	0.00	1.32	67	7.05	61	93	44	0	0	0	0	
	SAVANNAH	78	52	83	41	65	7	0.00	-0.74	0.00	0.67	54	7.08	87	93	46	0	0	0	0	
HI	HILO	83	67	90	66	75	3	1.41	-1.56	0.92	1.51	31	6.09	26	79	65	1	0	4	1	
	HONOLULU	81	68	84	65	75	1	0.00	-0.48	0.00	0.02	2	0.46	8	69	61	0	0	0	0	
	KAHULUI	83	65	88	64	74	1	0.22	-0.28	0.22	0.22	26	1.77	25	79	68	0	0	1	0	
	LIHUE	79	67	83	62	73	1	0.18	-0.62	0.15	0.18	13	1.35	15	75	63	0	0	3	0	
ID	BOISE	57	42	65	35	50	8	0.30	0.00	0.22	0.40	78	1.90	63	80	54	0	0	4	0	
	LEWISTON	56	37	61	31	46	3	0.52	0.30	0.20	0.62	163	2.20	89	86	69	0	1	5	0	
	POCATELLO	54	36	63	27	45	9	0.99	0.69	0.78	1.03	202	2.31	87	83	52	0	3	2	1	
IL	CHICAGO/O'HARE	59	41	70	33	50	16	0.21	-0.27	0.18	0.45	58	2.52	61	83	62	0	0	2	0	
	MOLINE	65	40	77	25	53	18	0.33	-0.21	0.17	0.41	46	1.74	44	83	57	0	3	4	0	
	PEORIA	62	42	74	30	52	15	0.43	-0.14	0.22	0.50	52	1.88	46	89	55	0	1	4	0	
	ROCKFORD	61	38	71	29	50	17	0.28	-0.13	0.25	0.41	60	1.94	57	89	65	0	3	3	0	
	SPRINGFIELD	64	44	73	27	54	15	0.60	-0.06	0.37	0.75	69	3.08	68	91	58	0	1	4	0	
IN	EVANSVILLE	65	47	73	26	56	13	2.41	1.48	1.24	3.07	197	9.41	124	81	64	0	1	3	2	
	FORT WAYNE	59	39	70	32	49	14	0.50	-0.06	0.39	0.99	105	4.04	82	89	66	0	1	2	0	
	INDIANAPOLIS	64	45	74	33	54	15	0.95	0.21	0.64	1.41	114	5.12	84	81	52	0	0	4	1	
	SOUTH BEND	60	40	71	28	50	15	0.29	-0.27	0.29	0.87	95	4.65	90	86	61	0	2	1	0	
IA	BURLINGTON	63	42	74	27	53	16	0.46	-0.14	0.24	0.49	50	1.87	49	94	54	0	1	3	0	
	CEDAR RAPIDS	62	37	73	26	50	17	0.30	-0.10	0.15	0.35	55	1.88	67	97	57	0	2	3	0	
	DES MOINES	65	42	73	34	54	19	0.26	-0.13	0.21	0.26	41	2.03	71	76	56	0	0	2	0	
	DUBUQUE	60	36	68	27	48	16	0.36	-0.13	0.13	0.52	65	1.60	46	93	70	0	2	3	0	
	SIoux CITY	69	39	80	29	54	21	0.06	-0.30	0.06	0.07	12	1.91	107	76	49	0	2	1	0	
	WATERLOO	61	34	72	23	48	16	0.02	-0.36	0.01	0.31	51	2.03	81	84	61	0	3	2	0	
KS	CONCORDIA	68	43	78	35	55	15	0.07	-0.42	0.07	0.07	9	1.62	75	76	50	0	0	1	0	
	DODGE CITY	68	37	77	27	52	10	0.01	-0.34	0.											

Weather Data for the Week Ending March 12, 2016

STATES AND STATIONS		TEMPERATURE °F					PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS				
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN., SINCE MAR 1	PCT. NORMAL SINCE MAR 1	TOTAL IN., SINCE JAN01	PCT. NORMAL SINCE JAN01	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. °F		PRECIP	
																	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
KY	WICHITA	69	46	74	39	58	15	0.11	-0.46	0.06	0.11	12	0.85	31	79	54	0	0	2	0
	JACKSON	70	50	78	35	60	16	0.04	-0.98	0.02	0.90	51	10.46	116	77	40	0	0	2	0
	LEXINGTON	68	48	76	26	58	15	0.47	-0.55	0.47	0.98	57	7.32	88	77	57	0	1	1	0
	LOUISVILLE	68	48	76	30	58	14	1.73	0.72	1.02	2.20	129	8.02	97	82	51	0	1	3	1
LA	PADUCAH	67	50	75	27	58	13	3.71	2.77	1.82	4.34	268	9.80	109	84	59	0	1	4	2
	BATON ROUGE	76	60	81	47	68	9	8.24	7.15	4.04	8.28	440	17.59	134	90	61	0	0	5	3
	LAKE CHARLES	77	60	80	49	69	10	1.14	0.38	0.97	1.14	89	7.31	73	97	63	0	0	3	1
	NEW ORLEANS	77	64	81	50	71	10	0.68	-0.45	0.36	0.71	36	8.84	66	83	66	0	0	3	0
ME	SHREVEPORT	72	58	78	47	65	8	12.02	11.08	5.07	12.14	745	17.16	164	90	68	0	0	5	4
	CARIBOU	37	17	44	-5	27	6	0.56	0.02	0.37	1.37	149	6.84	115	85	49	0	7	3	0
	PORTLAND	52	31	66	24	42	11	0.90	0.04	0.72	1.82	126	9.36	108	88	47	0	4	3	1
	BALTIMORE	68	42	82	28	55	14	0.00	-0.91	0.00	0.45	29	9.65	120	76	40	0	2	0	0
MA	BOSTON	56	37	77	30	47	11	0.53	-0.30	0.39	0.91	65	8.35	97	80	37	0	2	2	0
	WORCESTER	56	34	74	24	45	13	0.34	-0.57	0.30	0.94	62	8.32	96	79	34	0	3	2	0
MI	ALPENA	52	29	63	12	40	15	0.20	-0.23	0.17	0.82	115	5.35	140	90	60	0	4	2	0
	GRAND RAPIDS	58	38	71	19	48	16	0.04	-0.43	0.04	0.96	126	5.89	136	86	57	0	3	1	0
	HOUGHTON LAKE	54	30	67	10	42	16	0.27	-0.12	0.21	0.69	108	3.81	109	92	75	0	4	3	0
	LANSING	58	37	70	14	48	17	0.00	-0.41	0.00	1.03	154	4.19	112	84	62	0	3	0	0
MN	MUSKEGON	56	38	66	28	47	16	0.24	-0.20	0.24	0.63	86	4.84	107	78	63	0	3	1	0
	TRAVERSE CITY	55	32	68	23	44	16	0.29	-0.05	0.21	0.37	65	4.15	78	88	55	0	4	2	0
	DULUTH	48	30	60	25	39	17	0.17	-0.13	0.15	0.33	70	2.21	91	92	76	0	5	2	0
	INT'L FALLS	48	27	61	25	37	17	0.10	-0.06	0.10	0.20	77	1.56	90	90	53	0	6	1	0
MS	MINNEAPOLIS	60	37	70	28	48	19	0.00	-0.33	0.00	0.05	10	1.45	62	82	62	0	2	0	0
	ROCHESTER	56	35	68	27	45	18	0.00	-0.31	0.00	0.29	60	1.69	78	91	71	0	3	0	0
	ST. CLOUD	58	32	68	26	45	20	0.00	-0.23	0.00	0.10	28	1.06	62	97	54	0	3	0	0
	JACKSON	74	56	78	38	65	10	8.21	7.01	4.78	8.42	417	20.01	164	91	61	0	0	4	3
MO	MERIDIAN	74	53	80	35	63	7	6.03	4.47	2.96	6.62	254	14.11	102	93	61	0	0	4	2
	TUPELO	73	55	79	36	64	13	1.93	0.48	1.27	3.11	127	10.28	84	81	59	0	0	4	1
	COLUMBIA	66	48	76	34	57	16	1.01	0.35	0.69	1.13	102	2.78	55	89	54	0	0	4	1
	KANSAS CITY	66	49	74	43	58	17	1.08	0.57	0.73	1.08	127	2.24	68	86	51	0	0	2	1
MT	SAINT LOUIS	66	49	76	31	58	15	0.41	-0.35	0.20	0.46	36	2.06	36	78	60	0	1	5	0
	SPRINGFIELD	64	48	72	41	56	12	1.25	0.49	0.96	1.43	115	2.71	48	79	65	0	0	5	1
	BILLINGS	61	35	71	27	48	13	0.00	-0.20	0.00	0.00	0	0.53	31	62	27	0	3	0	0
	BUTTE	46	27	53	22	37	9	0.19	0.02	0.10	0.22	81	0.69	54	89	45	0	6	4	0
NE	CUT BANK	55	27	63	15	41	12	0.00	-0.09	0.00	0.00	0	0.48	59	75	28	0	6	0	0
	GLASGOW	60	34	68	28	47	19	0.13	0.05	0.11	0.44	314	1.11	148	77	48	0	4	2	0
	GREAT FALLS	58	30	68	21	44	13	0.04	-0.15	0.04	0.04	13	0.69	46	76	25	0	3	1	0
	HAVRE	61	28	71	22	45	15	0.19	0.05	0.15	0.19	86	0.65	62	78	40	0	6	2	0
NV	MISSOULA	54	30	62	23	42	7	0.06	-0.13	0.02	0.10	30	1.21	56	87	66	0	4	4	0
	GRAND ISLAND	68	37	81	27	53	18	0.00	-0.39	0.00	0.02	3	2.20	120	77	47	0	1	0	0
	LINCOLN	70	38	80	28	54	18	0.06	-0.36	0.06	0.06	9	1.65	83	77	49	0	1	1	0
	NORFOLK	69	36	81	27	53	19	0.05	-0.32	0.05	0.05	8	2.20	115	82	46	0	3	1	0
NH	NORTH PLATTE	69	29	77	22	49	13	0.00	-0.24	0.00	0.00	0	1.26	98	80	25	0	5	0	0
	OMAHA	68	42	79	33	55	19	0.10	-0.31	0.10	0.10	15	1.82	82	79	49	0	0	1	0
	SCOTTSBLUFF	66	29	76	24	48	13	0.20	-0.01	0.09	0.20	57	0.97	66	86	36	0	6	3	0
	VALENTINE	68	30	81	16	49	16	0.00	-0.21	0.00	0.02	6	0.70	63	70	35	0	3	0	0
NJ	ELY	52	26	62	10	39	5	0.28	0.05	0.28	0.28	72	3.31	176	76	51	0	5	1	0
	LAS VEGAS	72	50	81	44	61	4	0.00	-0.16	0.00	0.00	0	0.55	35	43	23	0	0	0	0
	RENO	55	38	63	30	46	4	0.27	0.05	0.24	0.28	72	2.40	96	65	44	0	2	2	0
	WINNEMUCCA	55	33	67	28	44	4	0.45	0.28	0.33	0.46	164	2.57	149	85	58	0	5	6	0
NM	CONCORD	58	30	77	18	44	14	0.52	-0.13	0.43	1.31	121	7.09	111	86	35	0	5	3	0
	NEWARK	67	41	82	27	54	14	0.03	-0.88	0.03	0.27	18	8.32	98	76	39	0	2	1	0
	ALBUQUERQUE	64	39	72	34	52	6	0.00	-0.13	0.00	0.00	0	0.42	37	44	17	0	0	0	0
	ALBANY	60	35	81	24	48	16	0.21	-0.43	0.19	0.29	27	5.60	98	77	40	0	4	2	0
NY	BINGHAMTON	58	35	72	20	47	17	0.49	-0.12	0.47	0.57	55	6.28	103	84	54	0	4	2	0
	BUFFALO	54	34	69	20	44	12	0.80	0.18	0.80	1.14	109	6.42	97	86	54	0	4	1	1
	ROCHESTER	59	33	75	18	46	15	0.31	-0.22	0.31	0.37	42	5.67	108	84	55	0	4	1	0
	SYRACUSE	57	30	78	17	44	13	0.79	0.18	0.79	0.93	93	7.65	134	94	53	0	5	1	1
NC	ASHEVILLE	71	44	76	30	58	14	0.00	-1.05	0.00	0.24	13	9.22	95	82	40	0	1	0	0
	CHARLOTTE	74	48	82	33	61	10	0.00	-1.02	0.00	0.06	3	6.84	74	88	38	0	0	0	0
	GREENSBORO	73	50	79	35	61	14	0.00	-0.87	0.00	0.25	17	6.39	79	86	39	0	0	0	0
	HATTERAS	65	53	74	37	59	9	0.00	-1.11	0.00	2.82	152	15.93	137	89	64	0	0	0	0
ND	RALEIGH	74	50	80	35	62	14	0.04	-0.92	0.04	0.25	15	6.65	73	86	49	0	0	1	0
	WILMINGTON	77	50	86	35	63	10	0.00	-0.99	0.00	1.16	69	13.22	134	89	40	0	0	0	0
	BISMARCK	64	25	75	17	45	18	0.00	-0.15	0.00	0.09	38	0.73	61	83	45	0	7	0	0
	DICKINSON	60	27	72	16	43	15	0.00	-0.07	0.00	0.10	91	0.52	57	76	29	0	4	0	0
OH	FARGO	55	31	66	27	43	20	0.08	-0.14	0.08	0.10	29	1.09	64	92	63	0	5	1	0
	GRAND FORKS	51	29	64	25	40	18	0.03	-0.14	0.03	0.03	11	0.61	40	89	61	0	6	1	0
	JAMESTOWN	57	29	68	23	43	18	0.00	-0.16	0.00	0.00	0	0.19	14	91	47	0	6	0	0
	WILLISTON	58	27	70	19	43	17	0.00	-0.14	0.00	0.06	27	1.19	103	81	52	0	4	0	0

Weather Data for the Week Ending March 12, 2016

STATES AND STATIONS		TEMPERATURE °F					PRECIPITATION								RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE MAR 1	PCT. NORMAL SINCE MAR 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
OK	TOLEDO	59	40	73	29	49	15	0.41	-0.10	0.36	0.99	116	4.21	90	85	64	0	3	2	0
	YOUNGSTOWN	59	38	73	27	48	14	0.86	0.24	0.79	1.46	142	6.65	123	77	63	0	3	2	1
	OKLAHOMA CITY	67	51	72	47	59	10	0.85	0.20	0.67	0.87	80	2.33	59	77	63	0	0	3	1
OR	TULSA	67	52	77	45	60	11	1.60	0.82	1.08	1.95	152	3.14	65	90	74	0	0	4	1
	ASTORIA	53	44	57	37	49	3	4.95	3.21	1.79	7.64	254	29.92	146	91	83	0	0	7	3
	BURNS	48	32	54	23	40	4	0.85	0.55	0.43	0.97	190	2.69	96	88	67	0	4	6	0
	EUGENE	54	39	60	33	47	2	1.74	0.35	0.52	2.40	99	12.24	75	89	78	0	0	7	1
	MEDFORD	56	40	64	33	48	2	0.90	0.46	0.34	1.39	178	6.63	124	91	55	0	0	5	0
	PENDLETON	56	36	64	31	46	2	0.51	0.23	0.15	0.80	170	3.17	101	90	55	0	1	5	0
	PORTLAND	53	43	59	38	48	2	1.70	0.81	0.57	2.88	186	14.21	132	88	76	0	0	7	1
	SALEM	54	42	59	35	48	2	1.98	0.96	0.66	3.15	174	13.88	109	89	76	0	0	7	2
	ALLENTOWN	68	34	80	24	51	15	0.05	-0.73	0.05	0.12	9	9.15	121	79	40	0	3	1	0
	ERIE	58	38	73	22	48	14	1.00	0.37	0.94	1.25	118	7.46	127	77	61	0	3	3	1
	MIDDLETOWN	68	39	79	29	54	16	0.00	-0.74	0.00	0.04	3	9.96	141	81	31	0	2	0	0
	PHILADELPHIA	68	42	82	33	55	14	0.00	-0.83	0.00	0.32	23	7.31	96	69	39	0	0	0	0
	PITTSBURGH	63	41	74	29	52	15	0.40	-0.28	0.24	0.82	72	5.75	93	78	45	0	3	1	0
	WILKES-BARRE	62	36	76	27	49	14	0.53	-0.01	0.44	0.57	63	6.37	117	85	37	0	4	2	0
	WILLIAMSPORT	67	36	80	27	51	16	0.26	-0.41	0.21	0.30	27	6.72	102	83	45	0	3	2	0
	PROVIDENCE	59	36	72	23	47	11	0.09	-0.84	0.08	0.38	25	8.75	93	85	43	0	3	2	0
	BEAUFORT	76	52	81	41	64	9	0.00	-0.76	0.00	0.75	59	6.73	80	97	50	0	0	0	0
	CHARLESTON	77	51	83	39	64	8	0.00	-0.87	0.00	0.76	52	9.05	105	92	47	0	0	0	0
	COLUMBIA	78	48	84	34	63	10	0.00	-1.03	0.00	0.67	39	7.30	71	85	42	0	0	0	0
	GREENVILLE	74	49	81	34	61	11	0.00	-1.27	0.00	0.19	9	8.44	78	87	39	0	0	0	0
	ABERDEEN	62	32	72	23	47	20	0.09	-0.14	0.05	0.12	32	0.81	61	87	68	0	3	2	0
	HURON	65	35	79	24	50	21	0.00	-0.30	0.00	0.01	2	0.88	58	90	47	0	2	0	0
	RAPID CITY	64	31	74	19	47	14	0.00	-0.18	0.00	0.04	13	0.90	80	71	28	0	4	0	0
	SIOUX FALLS	64	35	75	23	50	21	0.00	-0.31	0.00	0.03	6	1.71	115	79	55	0	2	0	0
	BRISTOL	73	41	82	28	57	13	0.01	-0.90	0.01	0.39	25	7.79	92	93	33	0	3	1	0
	CHATTANOOGA	74	48	78	36	61	12	0.23	-1.19	0.21	0.72	30	11.46	91	86	47	0	0	2	0
	KNOXVILLE	75	46	82	32	60	13	0.00	-1.20	0.00	0.39	19	10.28	97	86	38	0	1	0	0
	MEMPHIS	69	55	79	42	62	11	9.61	8.41	4.52	10.69	524	18.54	175	84	64	0	0	5	3
	NASHVILLE	72	53	77	33	63	15	1.52	0.40	0.93	2.36	125	8.99	94	77	47	0	0	4	2
	ABILENE	67	54	75	46	60	6	2.31	2.01	1.48	2.31	444	3.03	116	94	78	0	0	4	2
	AMARILLO	69	41	79	34	55	9	0.02	-0.20	0.02	0.02	6	0.71	46	87	31	0	0	1	0
	AUSTIN	75	60	82	53	67	7	3.19	2.67	2.54	3.19	351	5.37	112	92	82	0	0	5	1
	BEAUMONT	76	61	79	48	69	8	4.10	3.30	2.69	4.11	309	10.07	97	96	67	0	0	5	2
	BROWNSVILLE	80	62	83	51	71	4	2.22	2.08	1.94	2.22	854	4.10	146	93	66	0	0	2	1
	CORPUS CHRISTI	76	64	81	56	70	6	5.25	4.85	5.14	5.25	750	7.54	181	90	75	0	0	3	1
	DEL RIO	73	59	88	53	66	4	2.08	1.89	1.29	2.08	594	2.83	151	88	75	0	0	5	1
	EL PASO	72	47	80	38	60	5	0.01	-0.05	0.01	0.01	9	0.54	57	43	15	0	0	1	0
	FORT WORTH	68	58	73	54	63	8	2.10	1.36	0.97	2.10	165	5.34	96	90	73	0	0	6	2
	GALVESTON	72	64	74	58	68	6	1.24	0.65	1.08	1.24	124	5.20	68	100	81	0	0	4	1
	HOUSTON	74	59	76	47	67	7	2.70	1.98	1.43	2.70	220	6.81	86	95	69	0	0	5	2
	LUBBOCK	71	46	77	39	59	10	0.20	0.06	0.12	0.20	77	0.59	40	91	65	0	0	2	0
	MIDLAND	73	50	80	43	62	8	0.34	0.23	0.33	0.34	170	0.82	63	86	60	0	0	2	0
	SAN ANGELO	68	55	78	52	62	7	3.35	3.12	1.78	3.35	798	4.15	172	89	77	0	0	4	2
	SAN ANTONIO	73	60	82	52	67	7	3.01	2.60	1.98	3.01	418	5.94	144	94	69	0	0	5	2
	VICTORIA	76	61	80	51	68	6	2.94	2.44	2.66	2.94	346	7.88	148	99	74	0	0	4	1
	WACO	70	58	77	54	64	7	4.58	3.98	1.93	4.58	432	7.03	130	93	84	0	0	6	4
	WICHITA FALLS	69	54	74	50	61	9	0.79	0.29	0.48	0.79	94	2.49	71	92	72	0	0	4	0
	SALT LAKE CITY	58	39	68	32	49	8	0.65	0.24	0.58	0.65	94	3.11	92	73	35	0	1	3	1
	BURLINGTON	52	31	70	18	42	14	0.49	0.04	0.44	0.74	99	5.07	109	82	46	0	4	3	0
	LYNCHBURG	71	45	77	29	58	15	0.00	-0.86	0.00	0.66	45	7.95	98	82	42	0	2	0	0
	NORFOLK	70	48	81	32	59	12	0.00	-0.92	0.00	0.70	45	11.57	131	79	46	0	1	0	0
	RICHMOND	70	44	80	29	57	12	0.00	-0.93	0.00	0.25	16	7.90	98	86	46	0	2	0	0
	ROANOKE	72	48	79	31	60	15	0.00	-0.85	0.00	0.38	26	8.61	111	75	43	0	1	0	0
	WASH/DULLES	70	40	82	29	55	14	0.00	-0.79	0.00	0.12	9	8.37	117	80	39	0	2	0	0
	OLYMPIA	52	37	55	32	44	1	3.25	2.00	1.09	6.02	275	21.16	133	95	80	0	1	7	2
	QUILLAYUTE	52	41	55	36	46	3	4.98	2.31	2.17	8.22	175	39.69	129	93	82	0	0	6	3
	SEATTLE-TACOMA	55	41	60	36	48	3	2.13	1.26	1.03	3.64	239	17.06	158	90	71	0	0	7	1
	SPOKANE	48	35	53	30	42	4	1.42	1.06	0.53	1.88	308	5.34	136	93	65	0	2	6	1
	YAKIMA	55	35	61	27	45	4	0.82	0.68	0.48	1.51	581	4.23	190	78	55	0	3	6	0
	BECKLEY	68	45	77	32	56	16	0.04	-0.79	0.04	0.71	50	7.00	92	69	46	0	1	1	0
	CHARLESTON	69	41	79	28	55	12	0.30	-0.61	0.18	1.32	86	8.49	106	88	41	0	2	3	0
	ELKINS	67	31	78	21	49	11	0.20	-0.69	0.16	0.55	36	6.22	76	90	35	0	4	2	0
	HUNTINGTON	69	44	78	31	56	13	0.45	-0.43	0.28	1.63	109	9.09	117	86	45	0	1	2	0
	EAU CLAIRE	58	32	70	20	45	18	0.00	-0.30	0.00	0.06	13	1.44	62	91	49	0	4	0	0
	GREEN BAY	54	35	66	29	45	17	0.06	-0.31	0.06	0.29	49	2.77	99	93	69	0	3	1	0
	LA CROSSE	60	37	72	26	48	17	0.00	-0.31	0.00	0.28	57	2.45	92	83	47	0	3	0	0
	MADISON																			

National Agricultural Summary

March 7 – 13, 2016

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

Above-normal temperatures blanketed much of the nation. The only exception was the Pacific Coast States, where slightly below-normal temperatures prevailed. Temperatures averaged at least 10°F above normal in a band from the northern Great Plains to the mid Atlantic Coast. Meanwhile, a line

of heavy rainfall from eastern Texas to southwestern Tennessee caused flooding of numerous roadways. A portion of northern Louisiana received more than 20 inches of precipitation during the week, producing historically high levels on many rivers and lakes.

Arizona: Alfalfa conditions were rated mostly good to excellent, depending on location. Harvesting continued on slightly more than two-thirds of the state's alfalfa acreage. Rangeland conditions varied widely, depending on location, but were rated mostly fair to good. Central Arizona growers shipped broccoli, cabbage (green and red), cilantro, kale greens, and parsley. Western Arizona growers shipped anise, arugula, Bok Choy, broccoli, cabbage (green and red), cauliflower, celery, Chinese cabbage, cilantro, endive, escarole, kale greens, varieties of lettuce (Boston, Iceberg, green leaf, red leaf, romaine and other), oranges, parsley, radicchio, and spinach. Warm, windy weather continued to deplete soil moisture. The highest temperature was 91°F at Paloma. The lowest temperature was 14°F at Springerville.

California: It was a wet week for much of the state, with rain falling on most days. Temperatures were low enough in the mountains that some of the precipitation fell as snow. Heavy rain caused some lodging of grain fields and left some fields saturated. Rain continued to benefit winter forage crops, reducing the need for irrigation. Dry-farmed grain crops were taking off with adequate rain. Cotton fields were very wet, slowing preparation. Alfalfa was growing rapidly and some fields were sprayed for weevils. Corn seed was received in advance of spring planting. In San Luis Obispo County, some wheat fields were heading out, while many were in the boot stage. Navel oranges, Oro Blanco hybrid grapefruit, Mandarins, Minneola tangelos, grapefruit, and lemons continued to be packed for export for foreign and domestic markets. In Sutter County, field preparation was often suspended due to the wet conditions, though planting and cultivation of vegetables for farmer's markets continued. In Tulare County, broccoli, cabbage, cauliflower, carrots, and Brussels sprouts were harvested and sold at farmer's markets. Summer vegetable fields benefited from the warm, rainy weather. Range and pasture conditions continued to improve. In Tulare County, bee keepers continued to move hives into stone fruit orchards to facilitate pollination. In Yuba County, rangeland forage growth looked good in most areas, except in heavier, red soils and low-lying areas.

Florida: There was an average of 6.5 days suitable for fieldwork, compared with 6.2 days last week. Field conditions continued to improve, and more land preparation was underway in the Panhandle. The lifting of weight restrictions on cane trucks in Palm Beach County helped facilitate the sugarcane harvest pace. Irish potato planting was complete in Flagler and Putnam Counties. Warm, sunny weather favored vegetable crops and helped reduce disease pressure in the southwest. Miami-Dade County crops harvested included green beans, yellow squash, zucchini, sweet corn, tomato, eggplant, pepper, herbs, boniato, Malanga, avocado, and other tropical fruits. All vegetable fields were being irrigated. In the citrus region, temperatures rose

slightly. All processing plants were running Valencia oranges and some continued to accept grapefruit. Packinghouse activities focused on Valencia oranges, Honey tangerines, and grapefruit, as the tangelo harvest was basically complete. Ryegrass forage has been a failure this year in central Florida. Pastures and hay fields in Pasco County were being fertilized. Warmer weather helped pasture growth and quality in the southwest region. Pastures were in poor condition in the southeast region due to dry soil conditions; supplemental hay feeding was active.

Kansas: For the week ending March 13, temperatures averaged 9 to 12°F above normal across most of the state. Up to an inch of rain fell in portions of southeastern and east-central Kansas, while the rest of the state remained dry. There were 6.3 days suitable for fieldwork. Winter wheat condition was rated 1 percent very poor, 6 percent poor, 37 percent fair, 50 percent good, and 6 percent excellent. Winter wheat jointed was 6 percent, near the 5-year average of 2 percent. Calving progress was 54 percent complete. Cattle and calves death loss was rated 60 percent average and 40 percent light. Hay and roughage supplies were rated 4 percent short, 86 percent adequate, and 10 percent surplus.

Oklahoma: The first spring rains fell throughout much of the southern and eastern portions of the state, but the northwest remained mostly dry. Precipitation averaged 1.61 inches across the state, ranging from 0.12 inch in the Panhandle district to 3.53 inches in the Southeast district. Topsoil and subsoil moisture conditions were rated mostly adequate to short. There were 5.0 days suitable for fieldwork. Winter wheat jointing reached 10 percent, down 4 percentage points from the previous year and down 14 points from normal. Both rye and oats jointing reached 10 percent. Rangeland and pastures were rated 82 percent good to fair. Livestock condition was rated at 89 percent good to fair.

Texas: Most areas of the state received measurable rainfall, ranging from 0.10 to 10.00 inches. Parts of East Texas and the Upper Coast received the heaviest precipitation, with upwards of 10 inches reported. Winter wheat progressed well throughout the state. In parts of the Low Plains and South Texas, some producers were treating wheat for rust due to high humidity. Oats progressed well in the Southern High Plains. Cotton planting preparations continued on the Northern Low Plains. In parts of the Cross Timbers, South East Texas, and the Upper Coast, producers made good progress planting corn ahead of the rain. Planting activities (corn in parts of the Blacklands and sorghum in the Upper Coast) were interrupted due to rain. In the Lower Valley, harvest of sugarcane, citrus, and vegetables was temporarily interrupted due to wet fields. Livestock conditions were favorable throughout the state. Range and pasture continued to progress due to recent rainfall, and warm-season grasses were greening rapidly. Some producers in North East Texas experienced flooding and could not reach their pastures.

March 10 ENSO Update

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

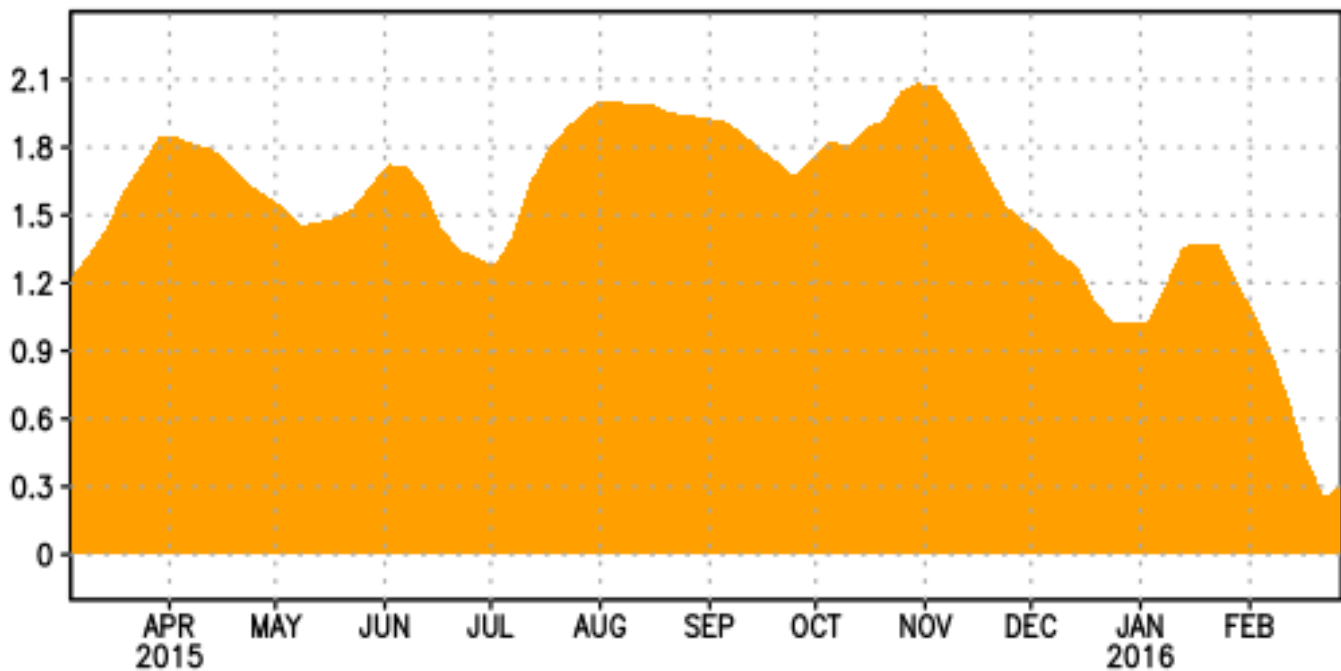


Figure 1: Area-averaged upper-ocean heat content anomaly (°C) in the equatorial Pacific (5°N-5°S, 180°-100°W). The heat content anomaly is computed as the departure from the 1981-2010 base period pentad means.

ENSO Alert System Status: **El Niño Advisory**

Synopsis: A transition to ENSO-neutral is likely during late Northern Hemisphere spring or early summer 2016, with close to a 50% chance for La Niña conditions to develop by the fall.

Sea surface temperature (SST) anomalies decreased across most of the central and eastern equatorial Pacific Ocean during February. The latest Niño-3.4 and Niño-3 weekly values were near 2°C, while the Niño-4 and Niño-1+2 indices were 1°C and 1.4°C respectively. The subsurface temperature anomalies in the central and eastern Pacific decreased substantially (Fig. 1) in association with the eastward shift of below-average temperatures at depth. Low-level westerly wind anomalies and upper-level easterly wind anomalies continued, but were weaker relative to January. The traditional and equatorial Southern Oscillation Index (SOI) remained strongly negative. In addition, convection was much enhanced over the central and east-central tropical Pacific and suppressed over parts of Indonesia and northern Australia. Collectively, these anomalies reflect the continuation of a strong El Niño.

All models indicate that El Niño will weaken, with a transition to ENSO-neutral likely during the late spring or early summer 2016. Thereafter, the chance of La Niña conditions increases into the fall. While there is both model and physical support for La Niña following a strong El Niño, considerable uncertainty remains. A transition to ENSO-neutral is likely during late Northern Hemisphere spring or early summer 2016, with close to a 50% chance for La Niña conditions to develop by the fall (click [CPC/IRI consensus forecast](#) for the chance of each outcome for

each 3-month period).

El Niño has already produced significant global impacts and is expected to affect temperature and precipitation patterns across the United States during the upcoming months (the [3-month seasonal outlook](#) will be updated on Thursday March 17th). The seasonal outlooks for March – May indicate an increased likelihood of above-median precipitation across the southern tier of the United States, and below-median precipitation over the Midwest and part of Pacific Northwest. Above-average temperatures are favored across the North and West, with below-average temperatures favored in the south-central region.

This discussion is a consolidated effort of the National Oceanic and Atmospheric Administration (NOAA), NOAA's National Weather Service, and their funded institutions. Oceanic and atmospheric conditions are updated weekly on the Climate Prediction Center web site ([El Niño/La Niña Current Conditions and Expert Discussions](#)). Forecasts are also updated monthly in the [Forecast Forum](#) of CPC's Climate Diagnostics Bulletin. Additional perspectives and analysis are also available in an [ENSO blog](#). The next ENSO Diagnostics Discussion is scheduled for **14 April 2016**. To receive an e-mail notification when the monthly ENSO Diagnostic Discussions are released, please send an e-mail message to: ncep.list.ens-update@noaa.gov.

International Weather and Crop Summary

March 6-12, 2016

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

HIGHLIGHTS

EUROPE: Early-week showers gave way to dry, cooler weather over much of the continent.

WESTERN FSU: Abnormally warm conditions accelerated fieldwork and hastened winter wheat development over Ukraine and southern Russia, though moisture supplies remained favorable.

MIDDLE EAST: Unusually warm weather continued to accelerate winter wheat development, with scattered showers adding to the existing adequate to locally abundant soil moisture.

NORTHWESTERN AFRICA: Dry weather returned to Morocco's drought-afflicted wheat areas, while rain maintained or improved favorable crop prospects in Algeria and Tunisia.

EASTERN ASIA: Early-week showers in eastern China provided beneficial moisture to vegetative winter crops and newly-sown spring crops.

SOUTHEAST ASIA: Drier-than-normal weather overspread much of the region, aiding ripening rice but lowering available water for immature crops and any subsequent dry-season cultivation.

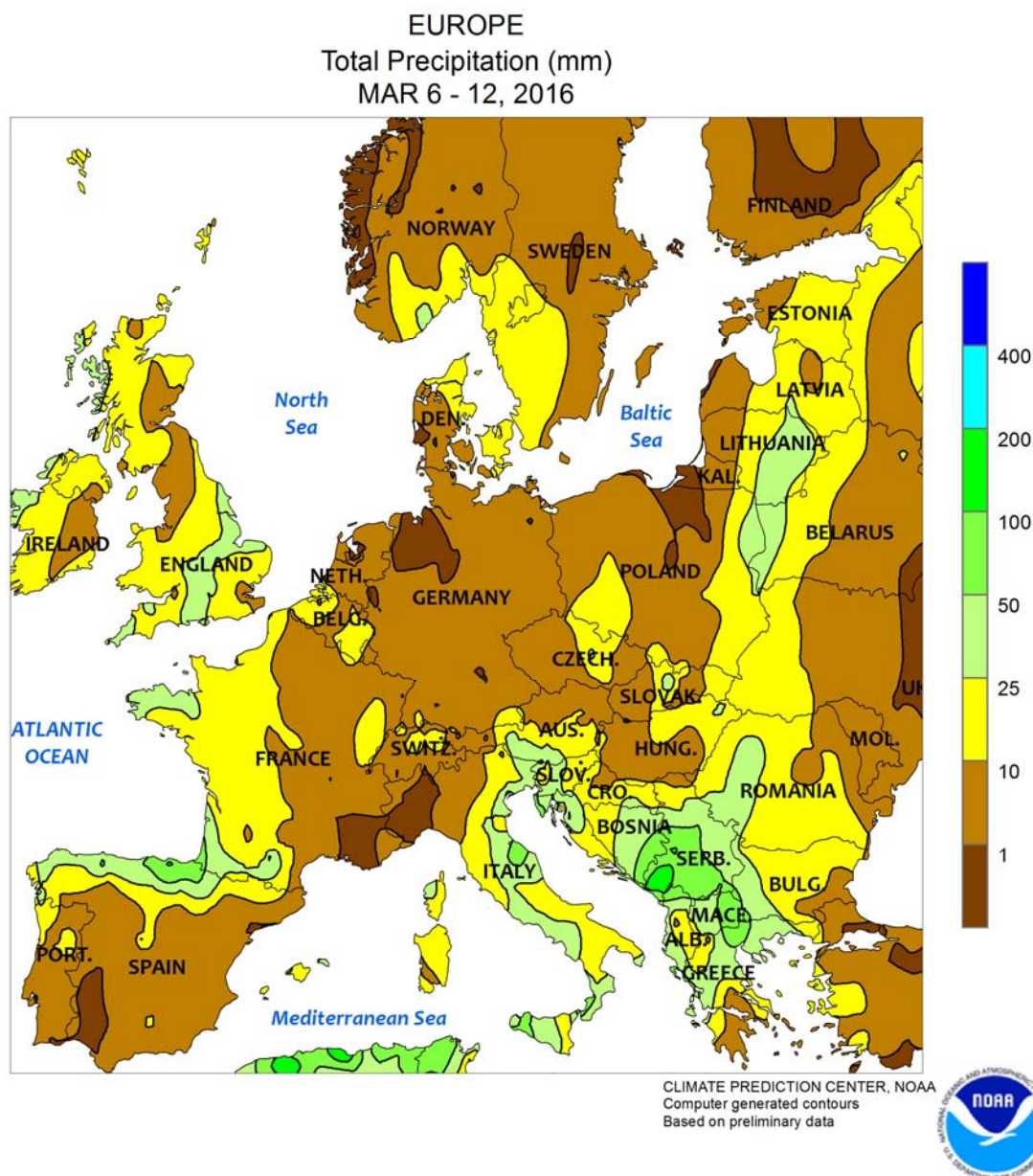
AUSTRALIA: Hot, mostly dry weather continued in southern Queensland and northern New South Wales, benefiting mature cotton and sorghum but stressing immature dryland crops.

SOUTH AFRICA: Rain brought needed relief from warmth and dryness, although the moisture came too late to significantly improve summer crop prospects.

ARGENTINA: Sunny skies promoted corn and soybean development in central Argentina.

BRAZIL: Showers returned to soybean and cotton areas of northeastern Brazil, giving a late-season boost to immature summer row crops.



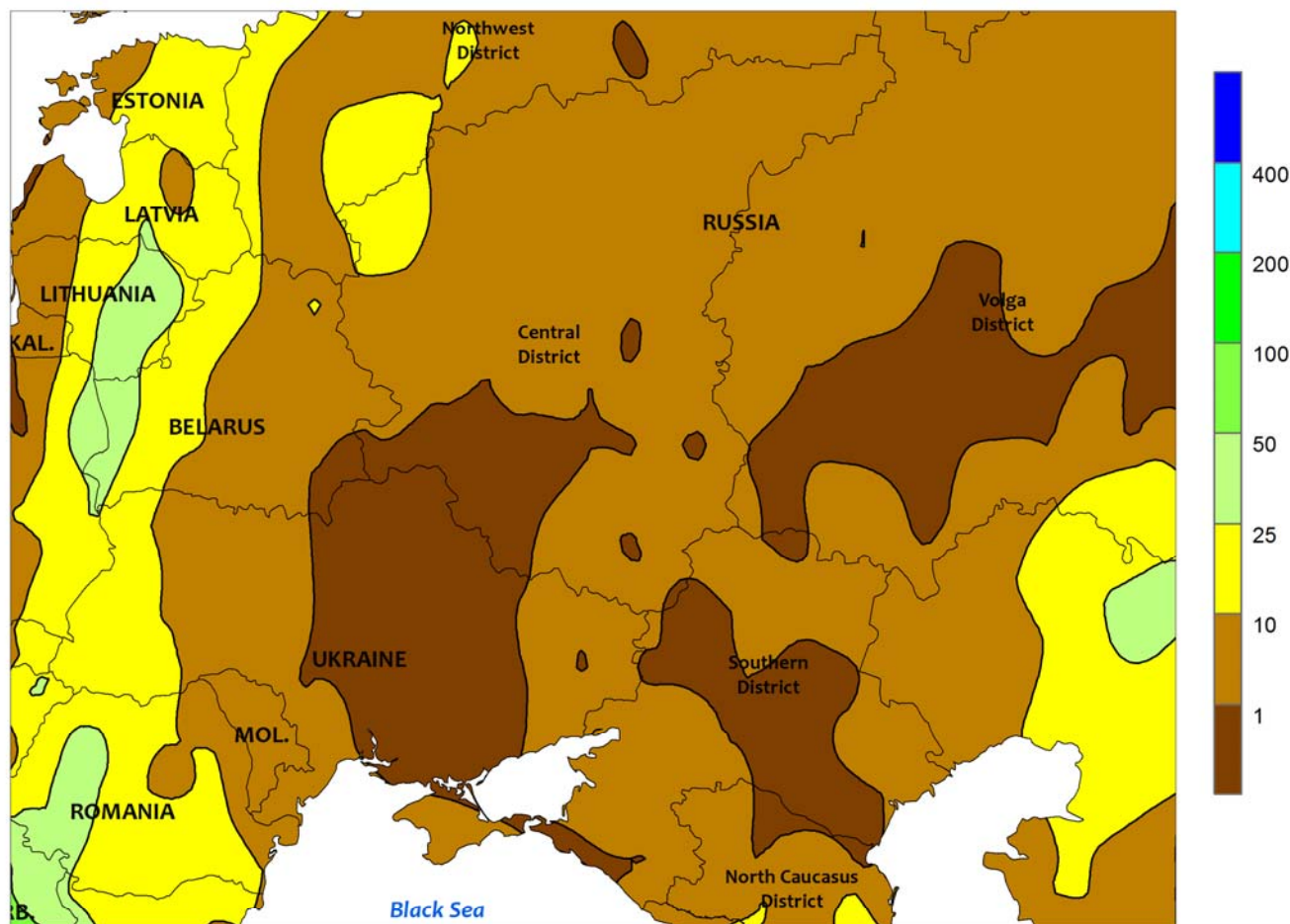


EUROPE

Unsettled weather early in the period gave way to sunny skies by week's end, though cooler conditions expanded over much of the continent. Widespread showers (2-20 mm, locally more) early in the period across northern wheat and rapeseed areas sustained adequate to abundant soil moisture for still-dormant winter crops in the United Kingdom, Germany, and Poland as well as greening grains and oilseeds in France. In Italy, drier weather returned to northern portions of the country after last week's deluge, while widespread moderate to heavy showers (10-50 mm) on the Italian Peninsula further increased soil moisture for vegetative winter grains. In Spain, mostly sunny albeit cool weather promoted fieldwork and wheat development, with nighttime freezes (-5 to -2°C) posing no

significant threat to vegetative winter wheat. Moderate to heavy rain overspread southeastern Europe, where totals of 15 to 100 mm boosted soil moisture supplies for vegetative winter crops. Below-normal temperatures (1-5°C below normal) over central and western Europe slowed crop growth in the south and west and kept wheat and rapeseed dormant in the typically colder northern growing areas. In contrast, readings averaged up to 7°C above normal for much of the week in the lower Danube River Valley, sustaining an unusually rapid pace of crop development. While the above-normal temperatures have not been detrimental to date, wheat and rapeseed in the Balkans are more vulnerable than normal to any potential hard spring freezes.

WESTERN FSU
Total Precipitation (mm)
MAR 6 - 12, 2016



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

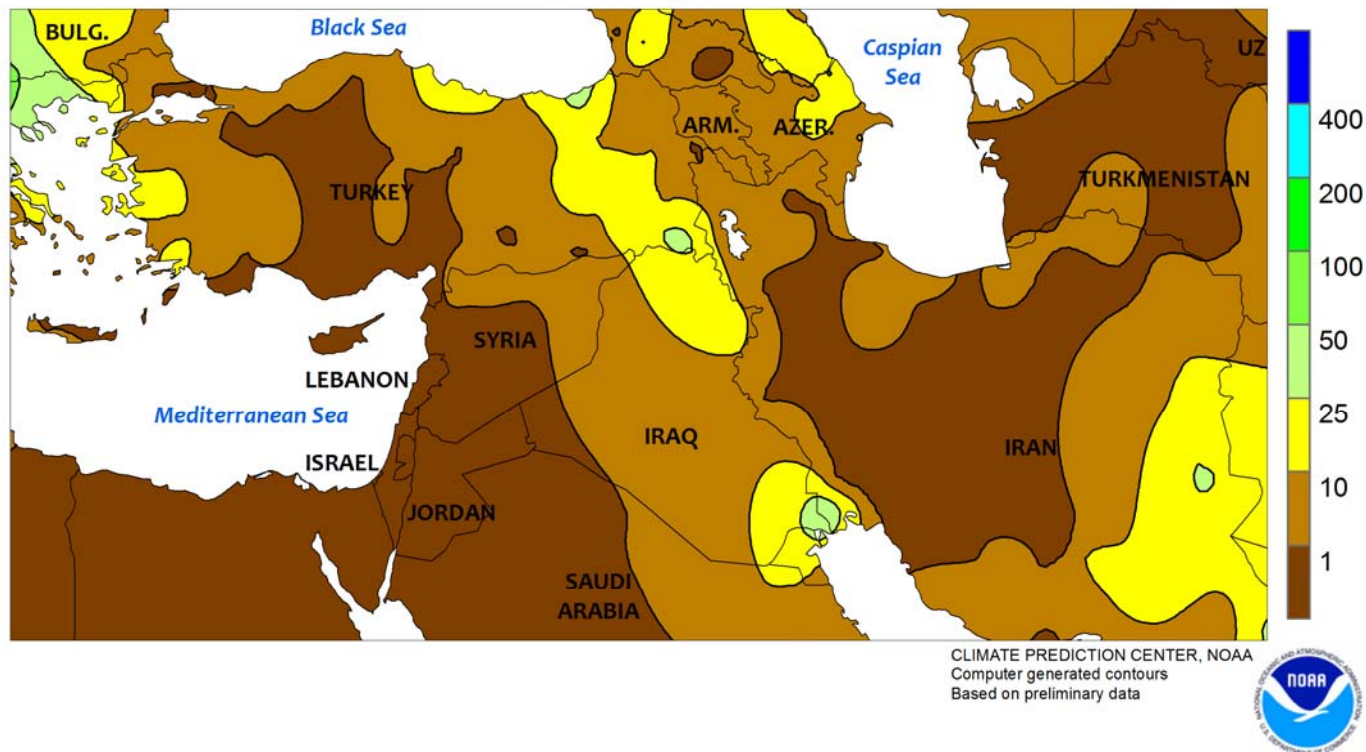


WESTERN FSU

Drier weather returned, though persistent unseasonable warmth promoted early winter wheat growth and kept most crop areas uncharacteristically devoid of snow cover. For much of the week, sunny skies coupled with temperatures up to 12°C above normal accelerated winter wheat development from central Ukraine into southern Russia. In addition, spring grain planting and other seasonal fieldwork were able to proceed at a faster-than-normal pace. Winter wheat broke dormancy from central Ukraine into Russia's Southern District in late February (south) and early March (farther north), more than a month

ahead of normal. While the early onset of spring-like warmth has not been detrimental to winter wheat, the advanced development left crops more susceptible to freeze damage from any potential incursions of late-season bitter cold. Soil moisture, aided by light late-week showers (1-10 mm) in the south, remained in good supply for spring growth following near- to above-normal winter precipitation. However, producers in Ukraine are still dealing with the aftereffects of autumn drought and the resultant poor winter wheat establishment in central and southern portions of the country.

MIDDLE EAST
Total Precipitation (mm)
MAR 6 - 12, 2016

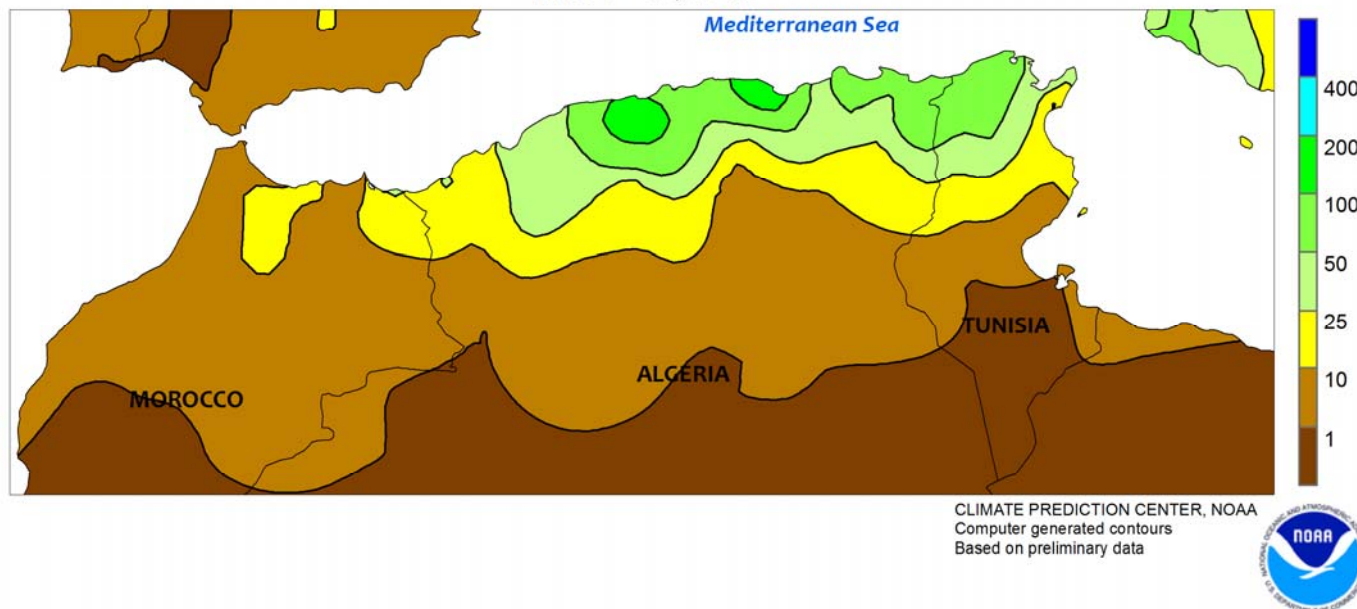


MIDDLE EAST

Abnormally warm weather continued, though sunny skies for much of the week promoted fieldwork and winter crop development. Precipitation was generally light (1-15 mm) and confined to portions of Turkey and eastern Iran. Nevertheless, soil moisture remained in good supply over most winter grain areas, but short-term dryness was increasing over the southern third of Turkey and

neighboring portions of northern Syria. More notably, temperatures averaged 5 to 9°C above normal from Turkey into central and northern Iran, accelerating the growth of winter grains up to a month ahead of normal. As a result, wheat remained more vulnerable than normal to any potential incursions of late-season bitter cold due to the advanced crop stage.

NORTHWESTERN AFRICA
Total Precipitation (mm)
MAR 6 - 12, 2016

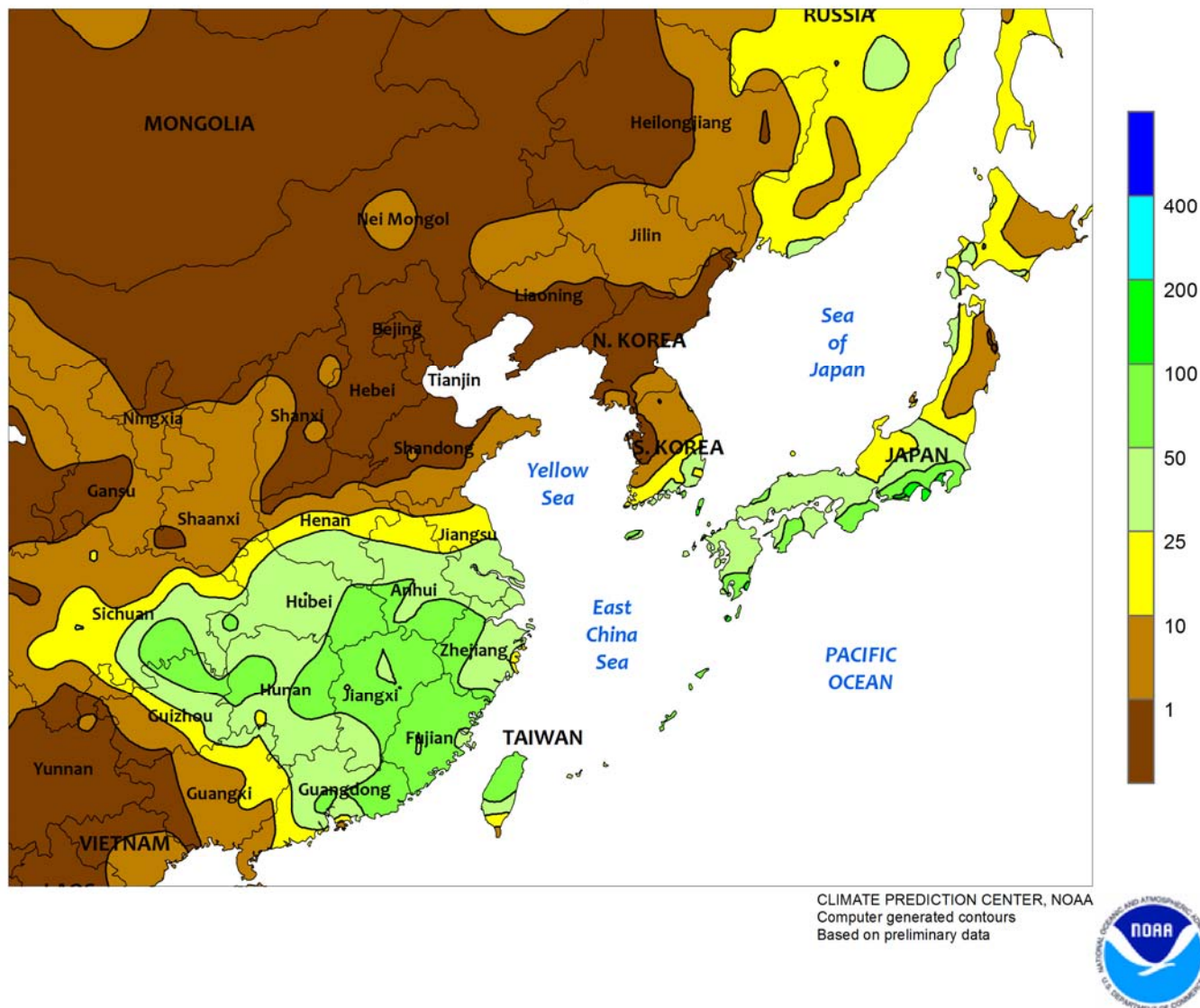


NORTHWESTERN AFRICA

Drought resumed in Morocco, while locally heavy rainfall sustained or improved winter grain prospects over the eastern half of the region. Following recent rain in Morocco, early-week light showers (less than 10 mm) were followed by a resumption of drier-than-normal conditions in the country's primary winter wheat areas.

Even with much-needed rainfall since mid-February, reports from the field have confirmed the negative impacts of this year's severe drought on non-irrigated winter wheat and barley. In sharp contrast, moderate to heavy rainfall (30-165 mm) boosted yield prospects for winter grains in Algeria and Tunisia.

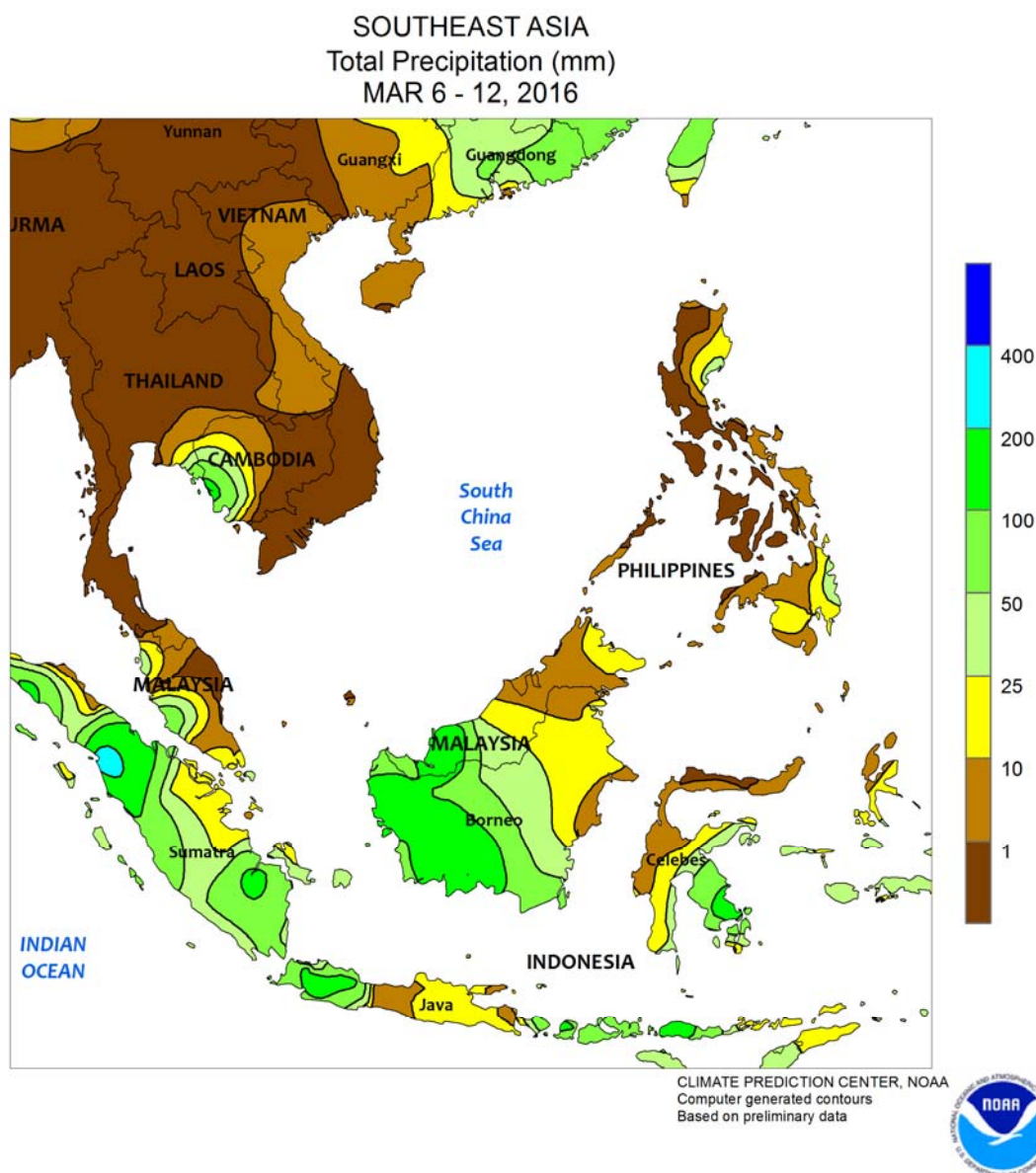
EASTERN ASIA
Total Precipitation (mm)
MAR 6 - 12, 2016



EASTERN ASIA

Showers during the early half of the week overspread much of eastern China's winter and spring crop areas. Nearly 50 mm of rain boosted soil moisture for vegetative winter wheat in southern sections of the North China Plain (Henan, Anhui, and Jiangsu), while 25 to over 75 mm benefited vegetative rapeseed and recently-sown spring crops such as corn in the Yangtze Valley. Farther south, heavy showers (over 50 mm)

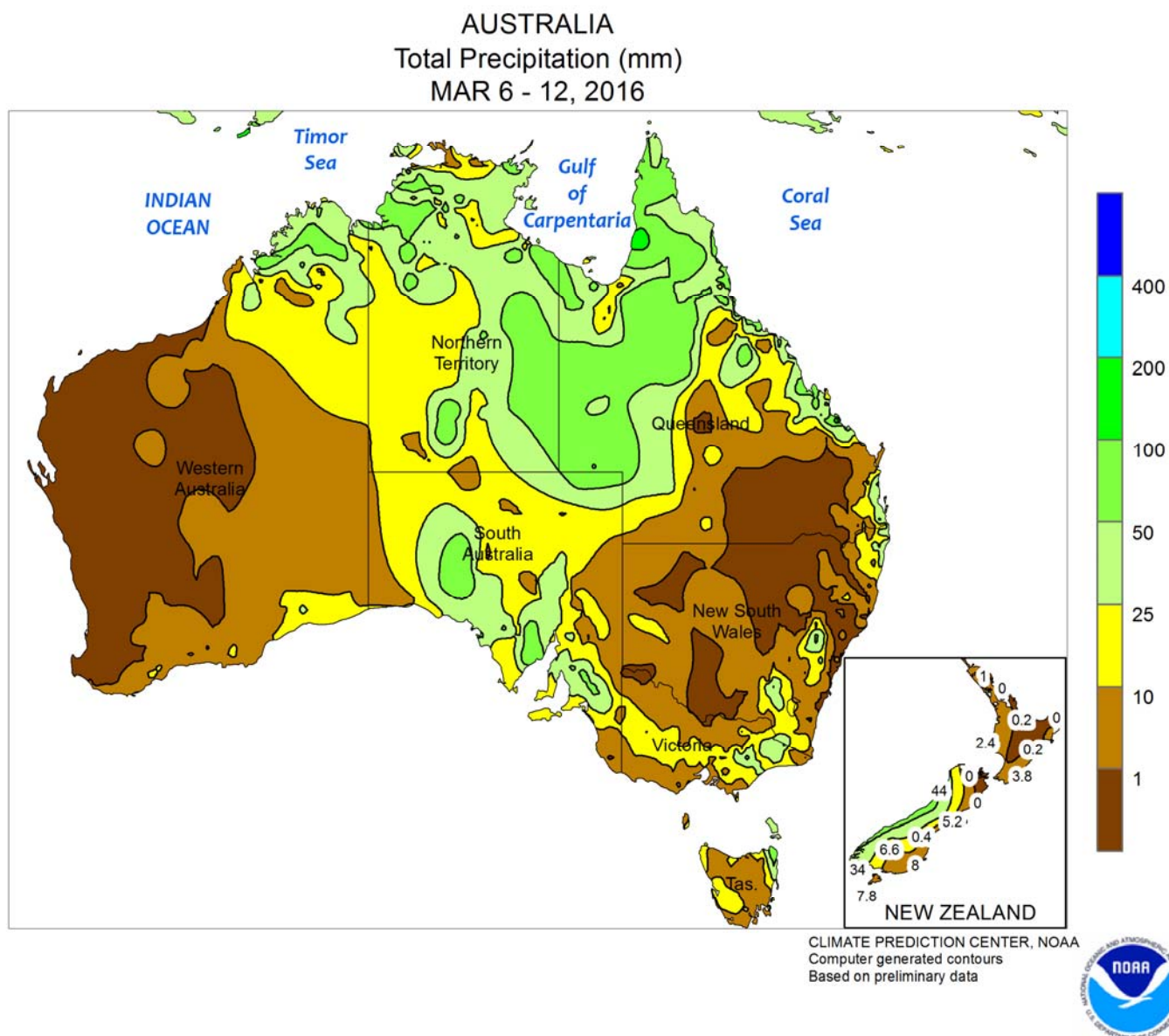
increased both soil moisture and water supplies for newly-cultivated early-crop rice. In contrast, seasonably dry weather persisted in northern portions of the North China Plain, where cooler weather (daytime temperatures averaging less than 20°C) kept water demands of wheat low. Temperatures across eastern winter and spring crop areas were near to slightly above normal.



SOUTHEAST ASIA

Unseasonably dry weather overspread central and eastern Java, Indonesia, helping to ripen the earliest planted portion of the rice crop but lowering recharge of water supplies for upcoming dry-season crops. Most of the rainfall was confined to western Java, where over 100 mm kept immature rice well watered and increased stored water for dry-season cropping. Showers (25-50 mm, locally more) in oil palm areas of Indonesia (Sumatra and Kalimantan) maintained favorable short-term soil moisture for trees, but longer-term moisture deficits continued. In Malaysia, dry

weather in key oil palm areas maintained reduced prospects, as both short-term and long-term rainfall deficits persisted. Mostly dry weather also overspread the Philippines, with showers (10-35 mm) limited to eastern Mindanao and eastern Luzon. The drier weather aided winter-grown rice and corn maturation and harvesting but was unfavorable for the smaller crop grown in the first half of the year. Meanwhile in Indochina, winter-grown, dry-season rice was ripening, while prospects remained poor for subsequent dry-season crops due to limited irrigation.

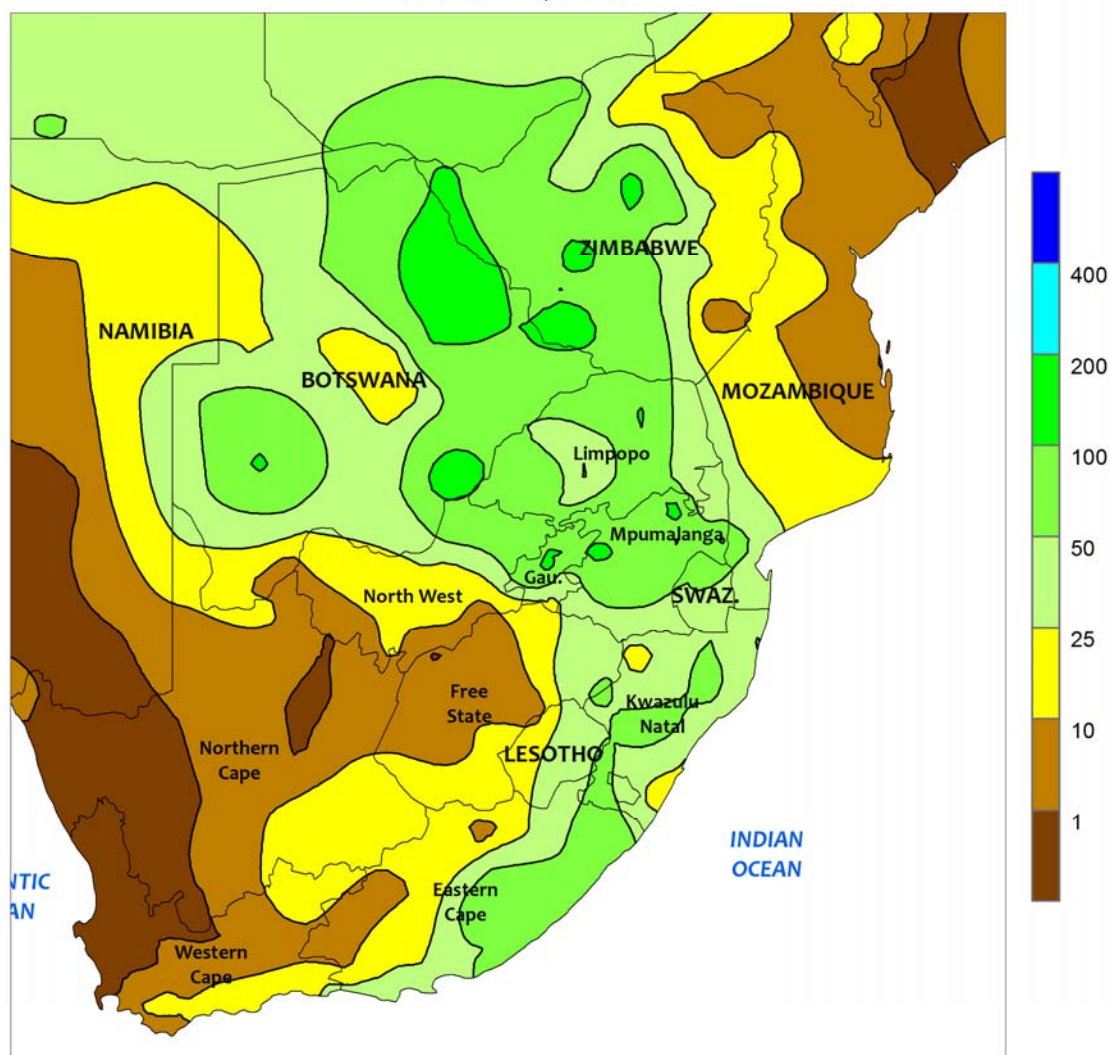


AUSTRALIA

Hot, mostly dry weather continued in southern Queensland and northern New South Wales. The persistent heat and dryness further benefited maturing cotton and sorghum, aiding drydown and harvesting of crops that were planted early in the growing season. However, the hot, dry weather

remained unfavorable for summer crops sown later in the growing season, especially immature dryland crops. Temperatures in major summer crop producing areas averaged 1 to 3°C above normal, with maximum temperatures often in the middle 30s degrees C.

SOUTH AFRICA
Total Precipitation (mm)
MAR 6 - 12, 2016



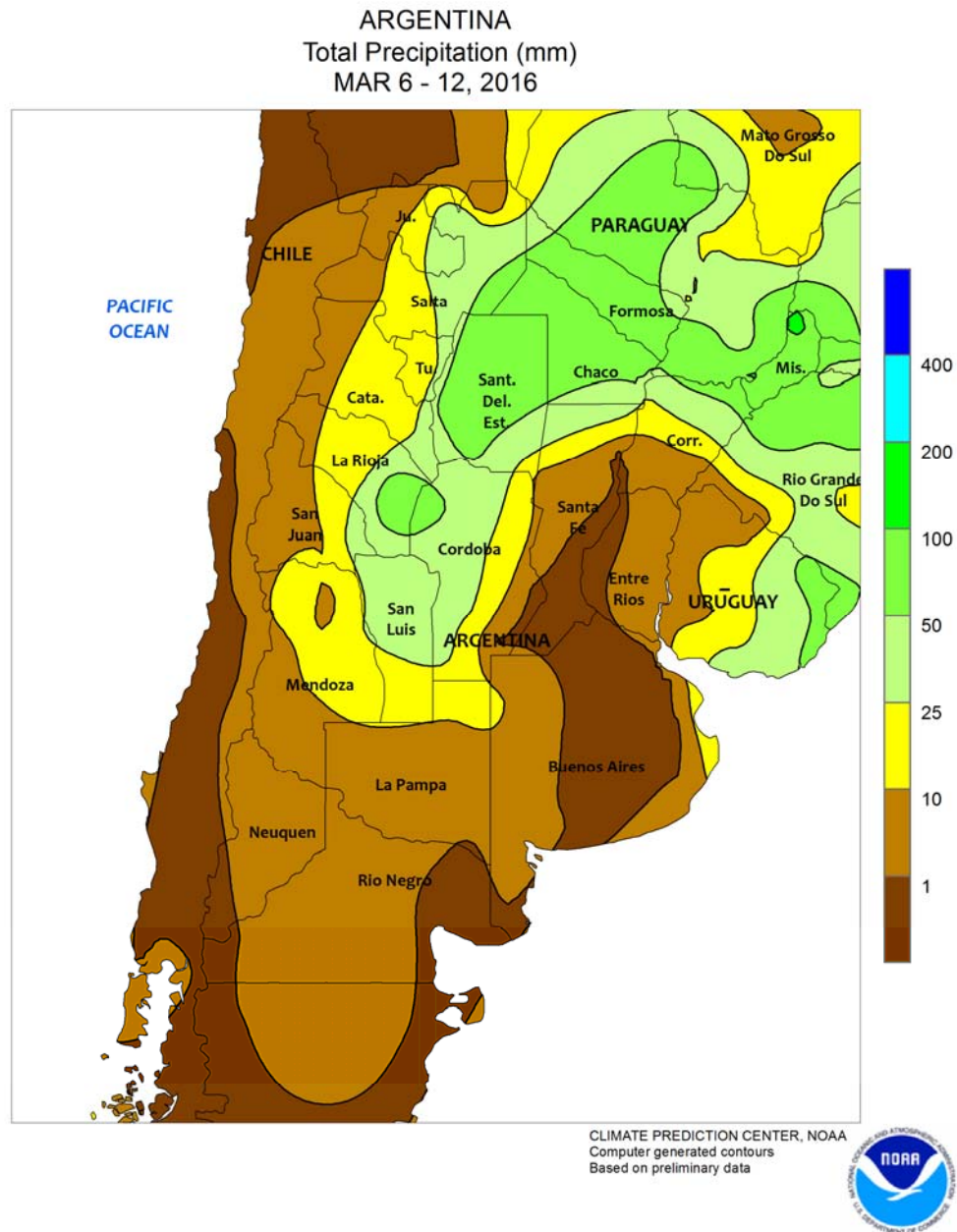
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data



SOUTH AFRICA

Widespread, moderate to heavy rain brought needed relief from warmth and dryness, although the moisture came too late for most summer crops. Rainfall totaled more than 25 mm over large sections of the corn belt; however, a notable exception was in central Free State and neighboring locations in North West, where rainfall totaled less than 10 mm. Weekly average temperatures were 1 to 2°C above normal in western and northern sections of the corn belt; daytime highs reached the middle and upper 30s (degrees C) before the onset of the rainy weather, otherwise temperatures reached more seasonable levels. While the moisture and milder weather

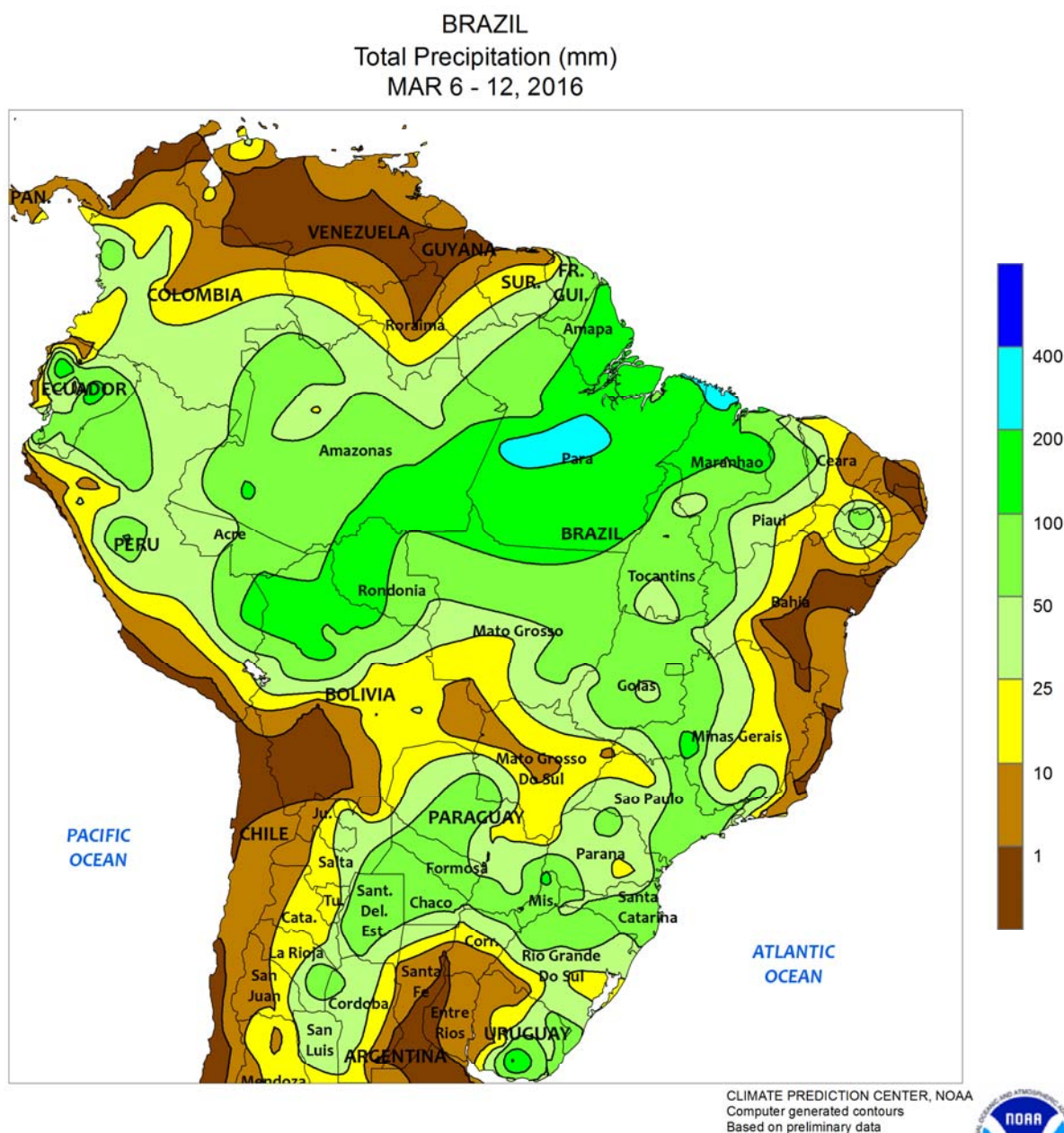
were overall favorable for summer crops, the improved weather came too late in the growing season to significantly improve prospects of corn and other summer crops in drought-stricken western farming areas. Elsewhere, moderate to heavy rain (25 to more than 50 mm) fell in sugarcane areas of KwaZulu-Natal and eastern Mpumalanga. As with corn, the rain was overall beneficial but generally came too late to affect national sugar production. Scattered showers (locally greater than 10 mm) boosted local irrigation reserves for summer row crops in the Cape Provinces, although dry weather supported late tree and vine crop harvesting in Western Cape.



ARGENTINA

Cool, mostly dry weather dominated a large section of central Argentina. Little to no rain fell from Buenos Aires and southern La Pampa northward through Entre Rios, including eastern Cordoba and most of Santa Fe. Weekly average temperatures were 2 to 3°C below normal throughout the region, with daytime highs mostly in the lower to middle 20s (degrees C). Despite the cooler conditions, the sunny weather promoted development of corn and soybeans in previously wet locations of central Argentina. An exception, however, was southern Buenos Aires, where additional moisture would be welcome for immature summer crops. Wetter conditions

continued farther north, with rainfall totaling 10 to 100 mm over a broad area spanning western Cordoba and Salta eastward through Chaco and Formosa. As in central Argentina, weekly average temperatures were 2 to 3°C below normal, although daytime highs occasionally reached the lower 30s in traditionally cooler locations in and around Santiago del Estero. According to Argentina's Ministry of Agriculture, sunflowers were 46 percent harvested as of March 10, 2 points ahead of last year. Harvesting was 14 percent complete in Buenos Aires — the country's largest producer — versus 17 percent last year.

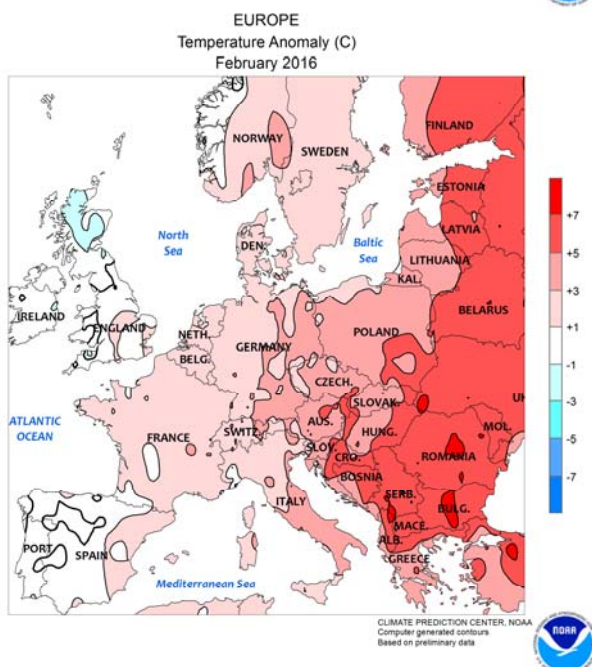
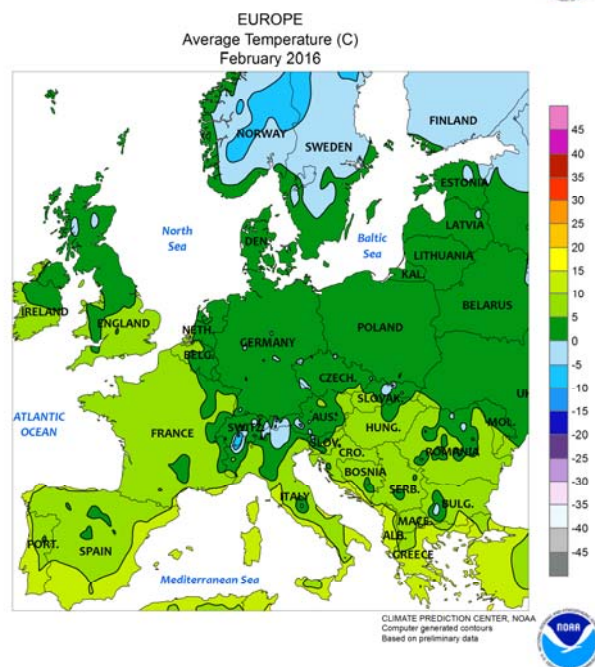
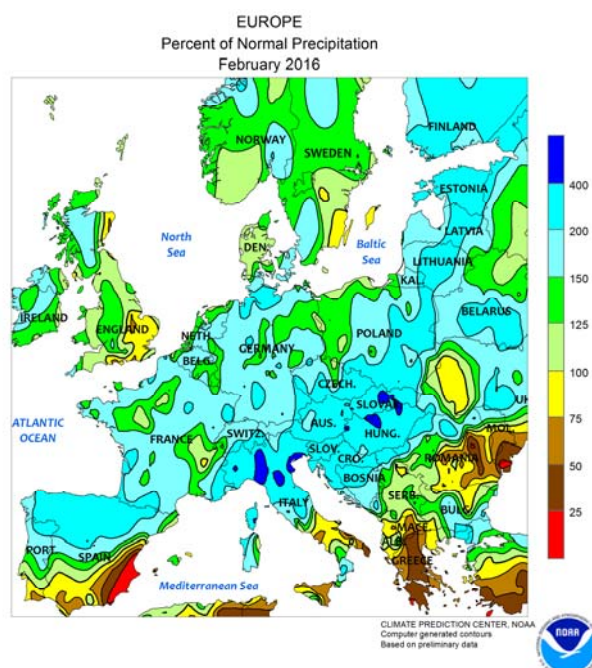
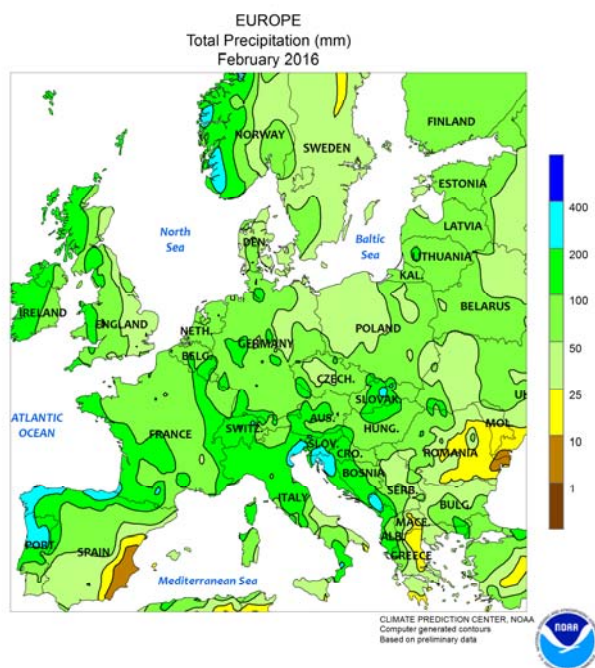


BRAZIL

Following a multi-week drying trend, rainfall intensified in the northeastern interior, giving a late-season boost in moisture to immature soybeans and cotton. Rainfall totaled more than 50 mm over much of the region encompassing western Bahia, Tocantins, Maranhao, and Piaui. Similar amounts were recorded in much of Mato Grosso and Goias, slowing soybean harvesting but increasing topsoil moisture for establishment of second-crop corn. Near- to above-normal temperatures (daytime highs reaching the middle 30s degrees C) maintained

high evaporative losses in these northern farming areas. Farther south, beneficial rain (25-50 mm, locally higher) continued from Rio Grande do Sul to southwestern Minas Gerais, maintaining moisture for second-crop corn, sugarcane, and other crops still dependent on seasonal rainfall while causing only minor delays in the harvest of soybeans and main-season corn. Showers were variable in Mato Grosso do Sul, although moisture was likely sufficient for emerging second-crop corn from earlier periods of beneficial rain.

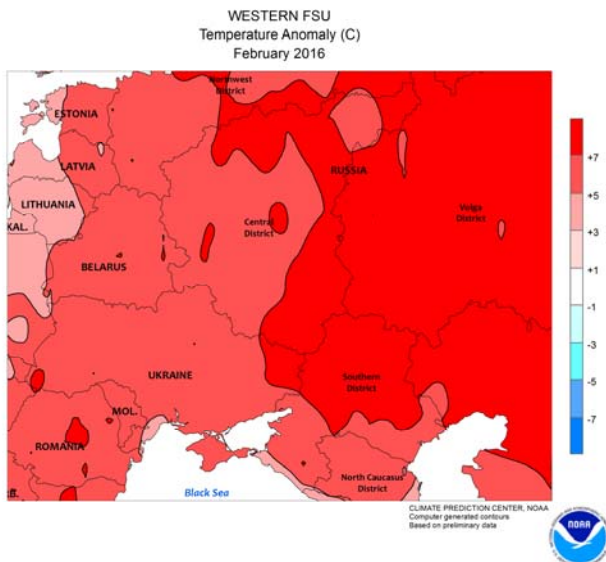
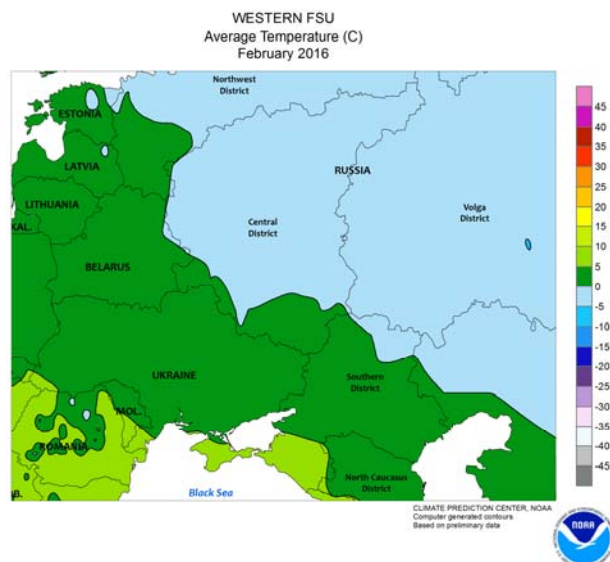
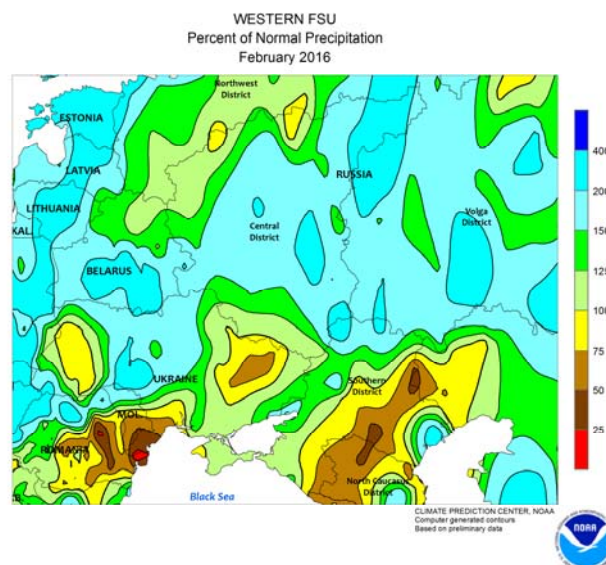
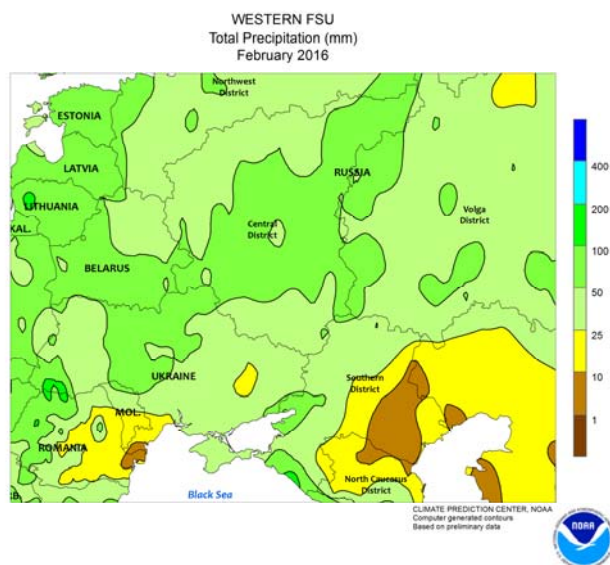
February International Temperature and Precipitation Maps



EUROPE

Warm, wet weather during February across much of the continent was largely beneficial to winter crops. Near- to above-normal precipitation increased soil moisture reserves for dormant winter wheat and rapeseed from the United Kingdom into France, Germany, and Poland. In addition, locally heavy rain improved winter grain prospects in Spain and boosted

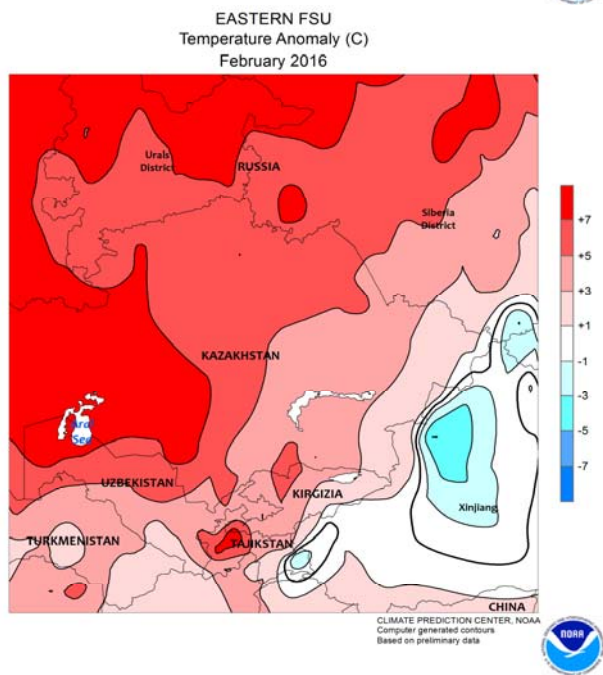
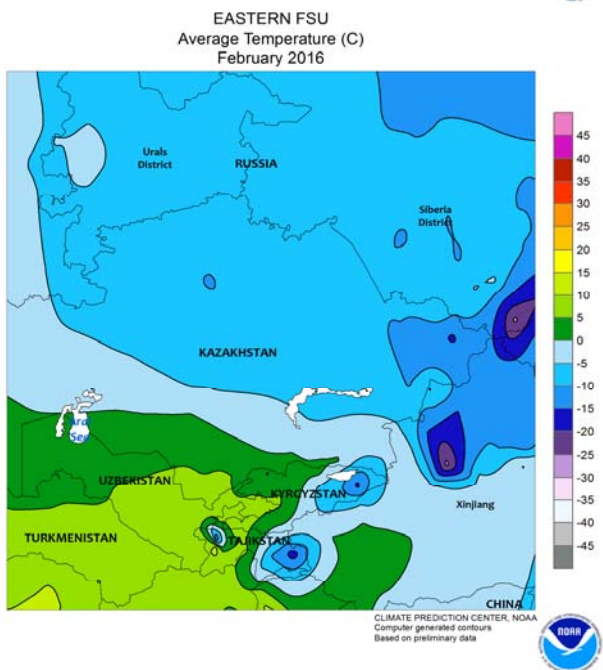
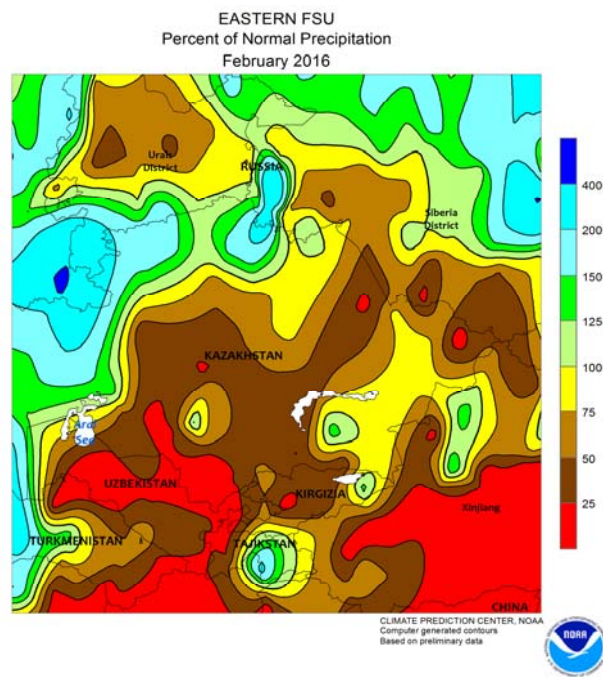
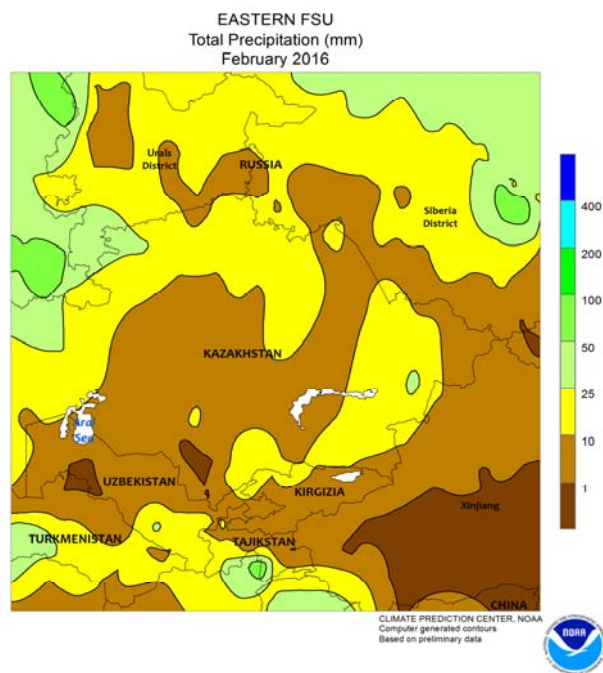
irrigation reserves and spring runoff prospects in northern Italy. In southeastern Europe, much-warmer-than-normal weather (up to 8°C above normal) accelerated winter wheat out of dormancy more than a month ahead of normal, enhancing the risk of freeze damage from any potential late-season cold snaps.



WESTERN FSU

Wet, unseasonably warm weather prevailed across the region in February. Monthly average temperatures up to 8°C above normal facilitated early winter crop greening in southern-most growing areas and maintained overall favorable conditions for dormant winter crops elsewhere.

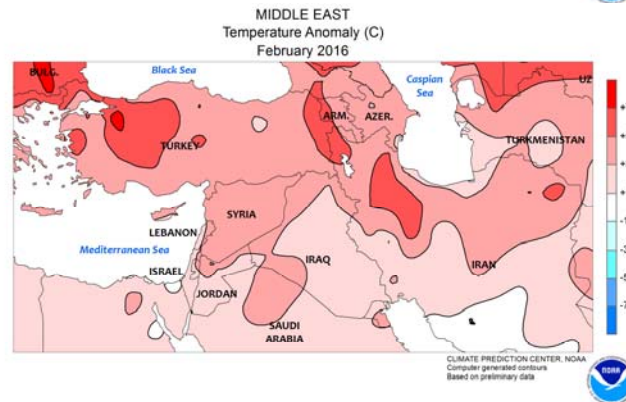
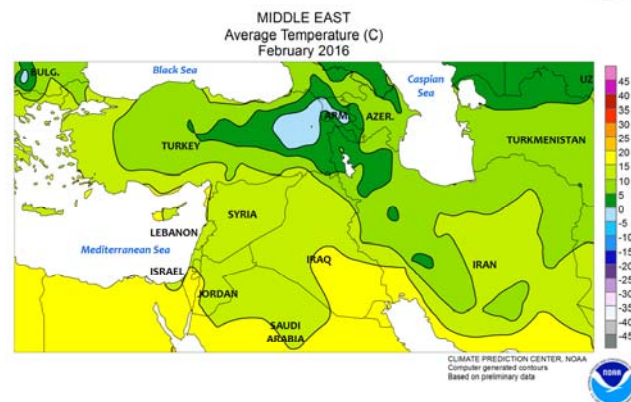
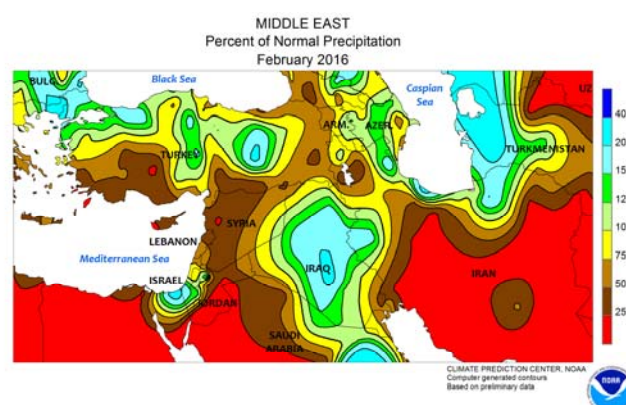
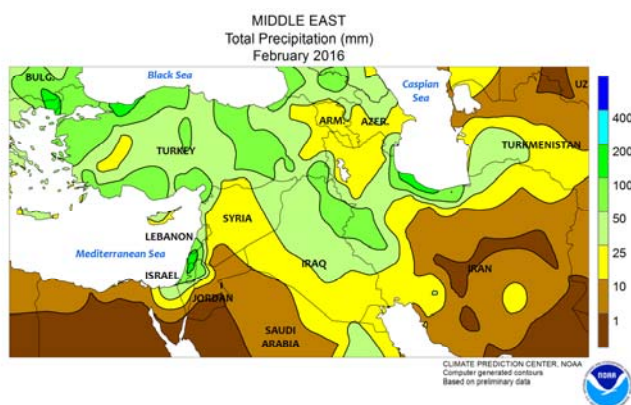
Precipitation was near to above normal in most major wheat districts, ensuring adequate to abundant soil moisture for spring growth. By month's end, most of the region's winter wheat was uncharacteristically devoid of snow and rapidly breaking dormancy.



EASTERN FSU

Unusually mild conditions prevailed during February, with snowy weather in the north contrasting with dry conditions over southern crop areas. Agricultural activity in the northern spring wheat belt was minimal due to the lingering deep snowpack (50-80 cm), despite temperatures averaging 6

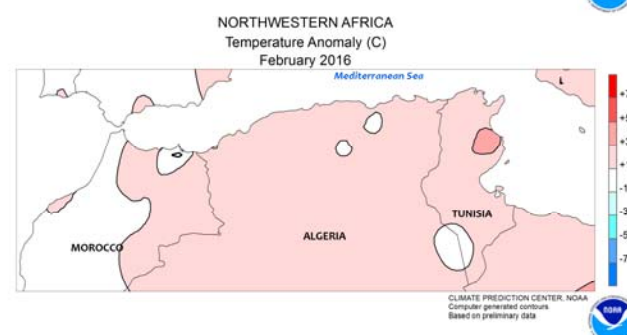
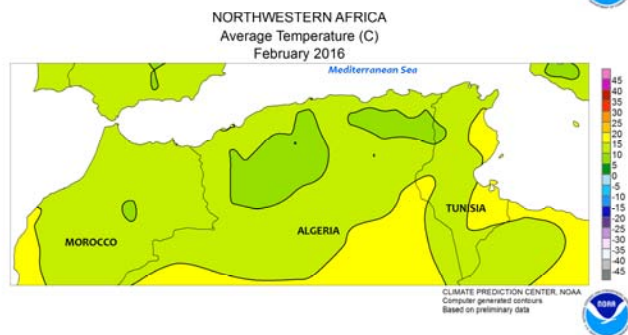
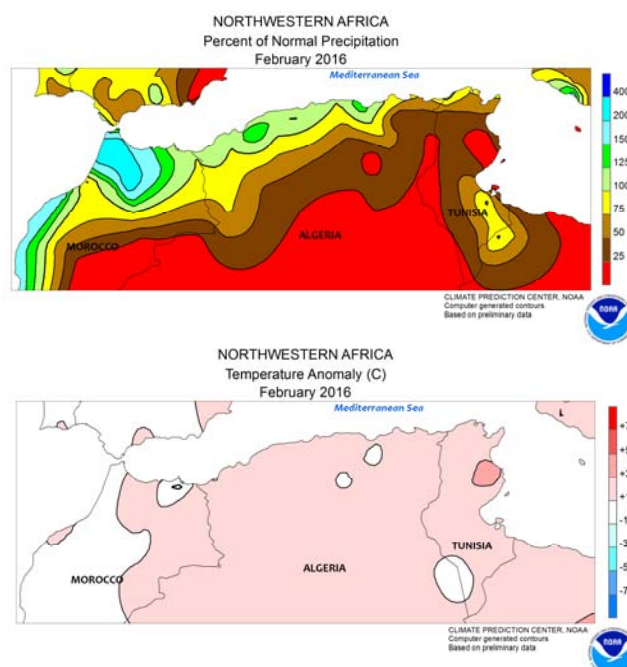
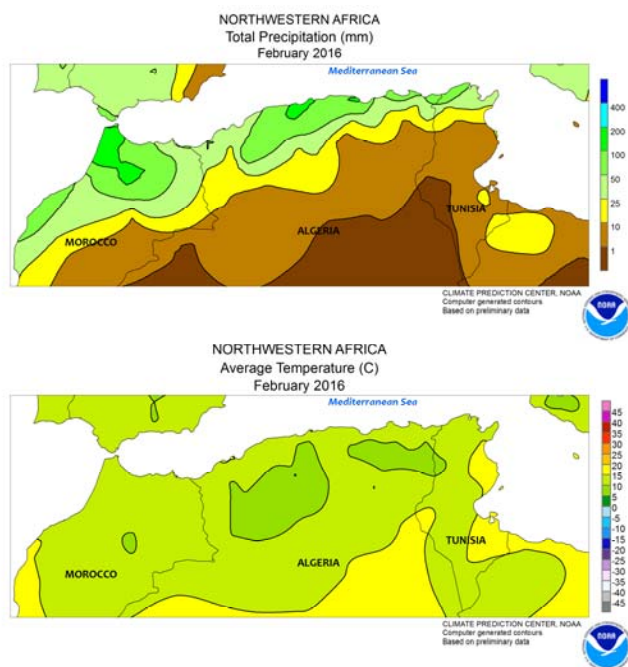
to 8°C above normal. Farther south, dry albeit warm weather (up to 6°C above normal) across Uzbekistan accelerated winter wheat development but necessitated irrigation, though moisture reserves should be in good supply following a wetter-than-normal autumn.



MIDDLE EAST

Unsettled, increasingly warm weather during February sustained the overall favorable growing season for winter crops. Precipitation averaged near to above normal in most major wheat and barley areas, though dry conditions settled over the eastern Mediterranean Coast. More notably,

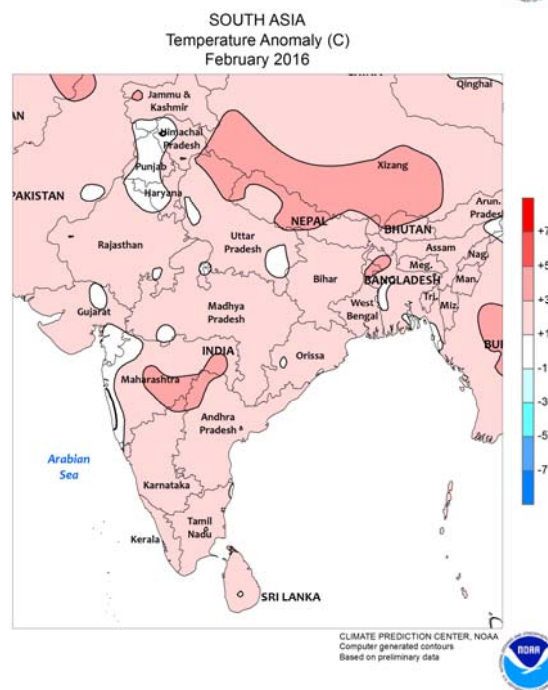
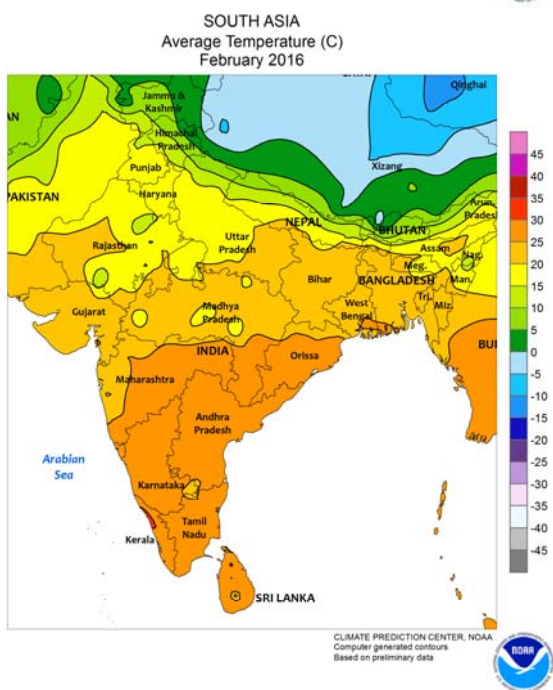
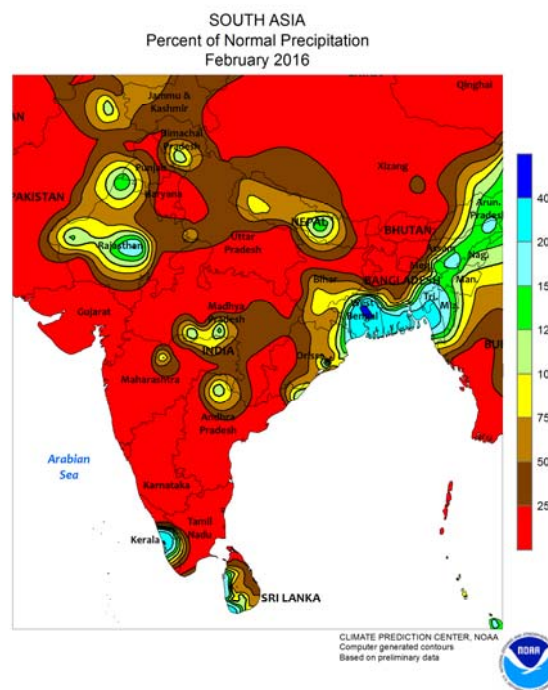
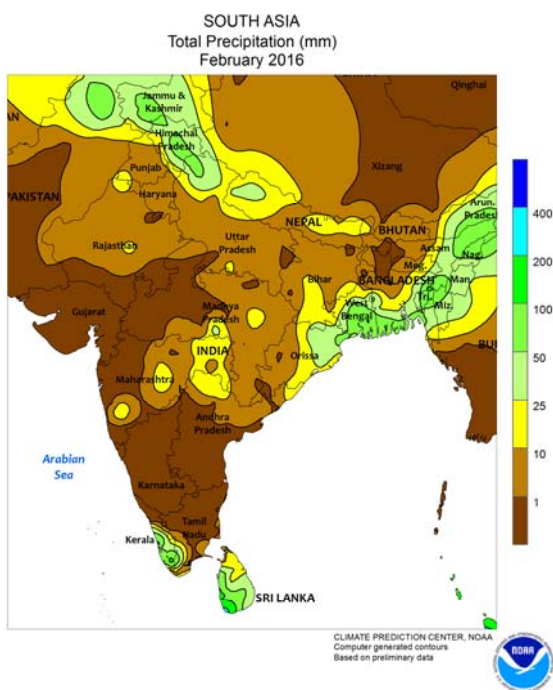
abnormal warmth (4-7°C above normal) allowed winter wheat to break dormancy a month ahead of normal from Turkey into central Iran. In southern growing areas, temperatures up to 4°C above normal accelerated wheat into the heading stage of development.



NORTHWESTERN AFRICA

In February, rain expanded and intensified across the region, easing western drought while maintaining favorable crop prospects over the eastern half of the region. The first significant rainfall of the season arrived in Morocco, with locally more than 50 mm providing relief from the

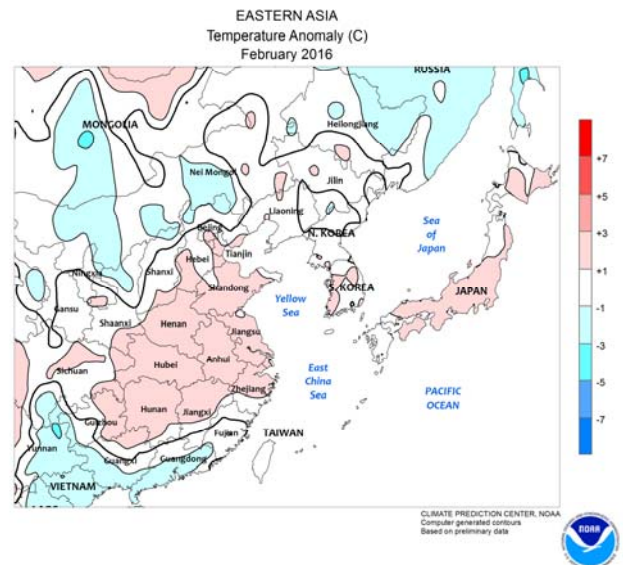
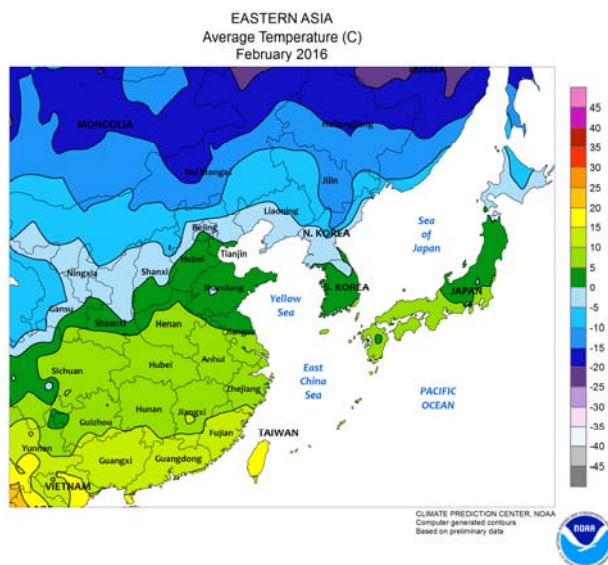
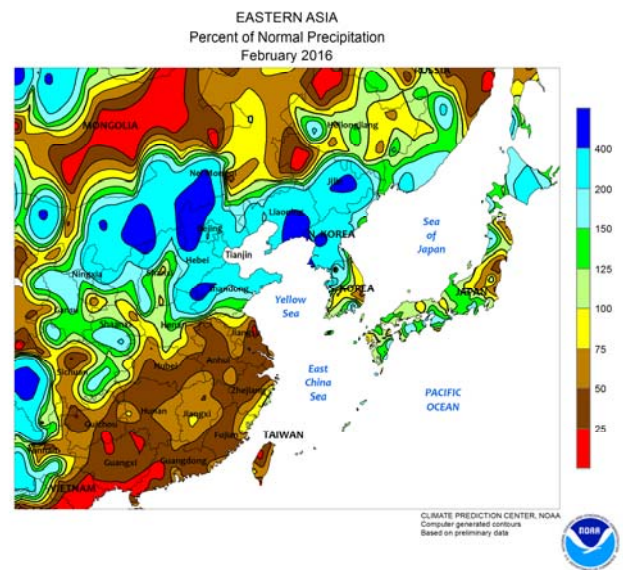
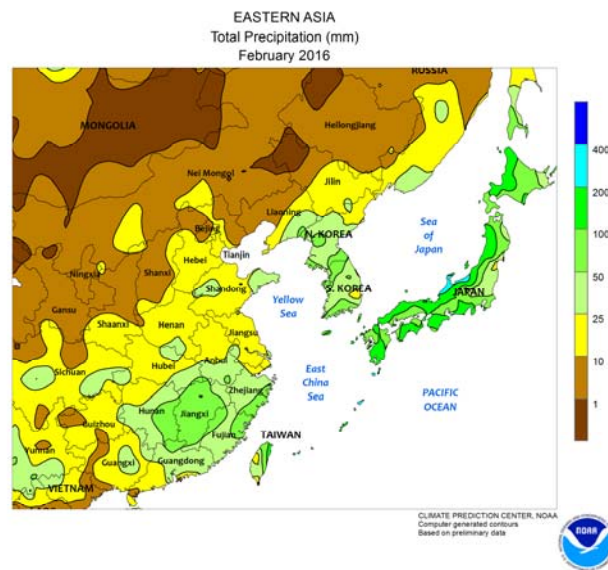
country's severe drought but likely arriving too late to reverse the drought's negative impacts on winter wheat and barley. In contrast, showery conditions (70-150 percent of normal) maintained or improved winter grain prospects from Algeria into Tunisia.



SOUTH ASIA

Rainfall in India during February was limited to eastern and far northern states, with seasonably dry weather prevalent elsewhere. Over 50 mm of rain benefited immature winter (rabi) rice in eastern India as well as other crops planted later in the season. Meanwhile, dry weather aided wheat and rapeseed maturation across Punjab, Haryana, Uttar Pradesh, and

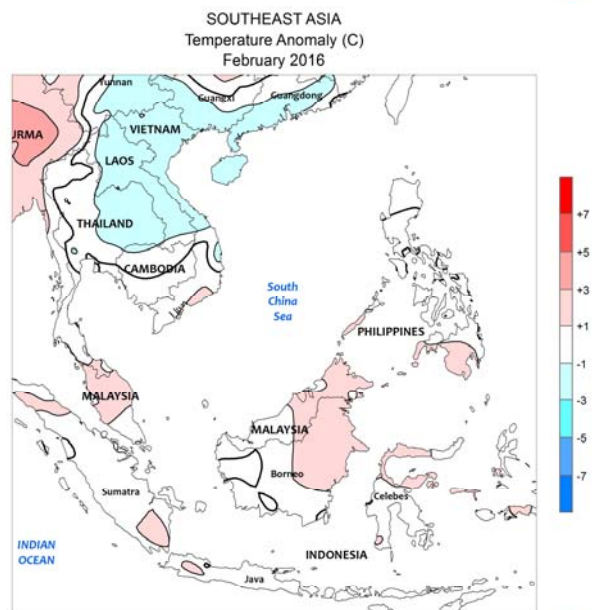
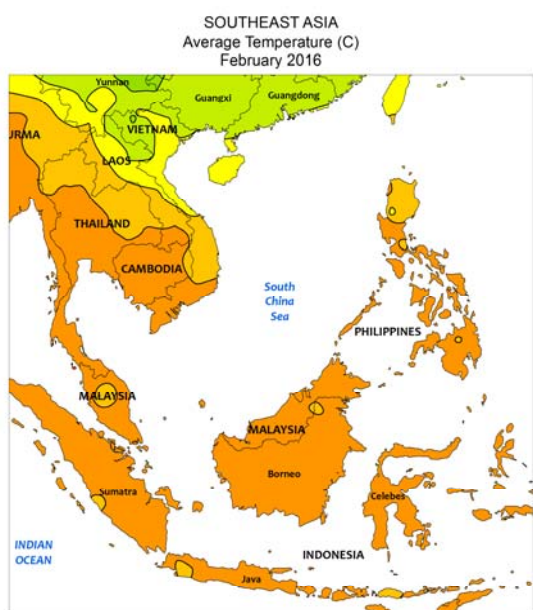
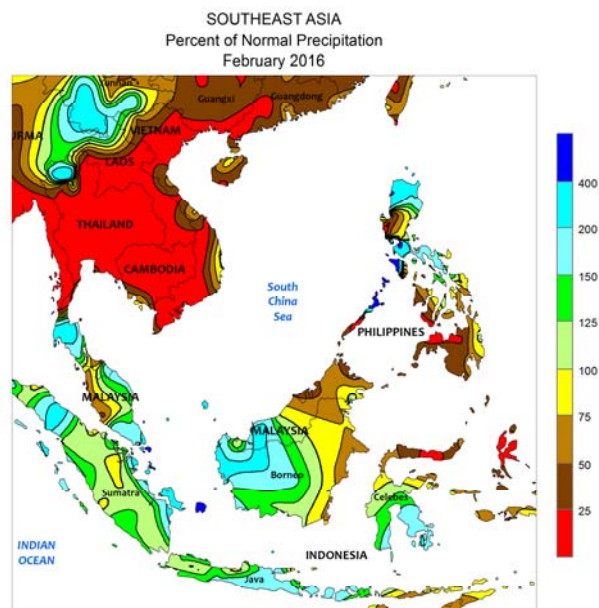
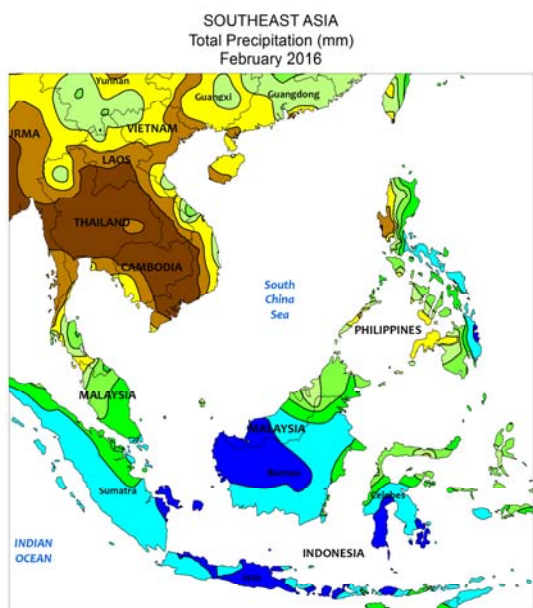
Rajasthan. In addition, unseasonably warm weather promoted maturation and drydown of crops throughout India. Elsewhere in the region, above-normal rainfall during the month slowed maturation of wheat in Pakistan and delayed rice harvesting in Sri Lanka, as intermittent showers (25-50 mm) kept the heavily irrigated rice crop in Bangladesh well watered.



EASTERN ASIA

Rainfall prevailed throughout eastern China during February, with some snow intermixed in the northern crop areas. The heaviest showers (25-50 mm or more) occurred in the seasonally wet southeast, with lesser amounts (less than 25 mm) occurring in the Yangtze Valley and on the North China Plain. Despite the periodic showers, rainfall across southern China was

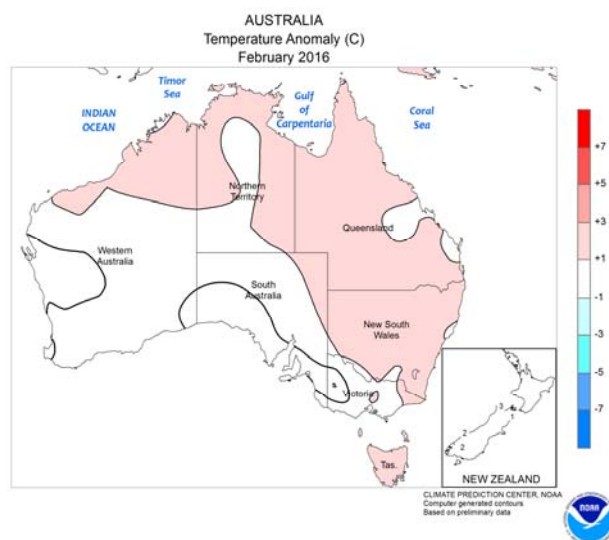
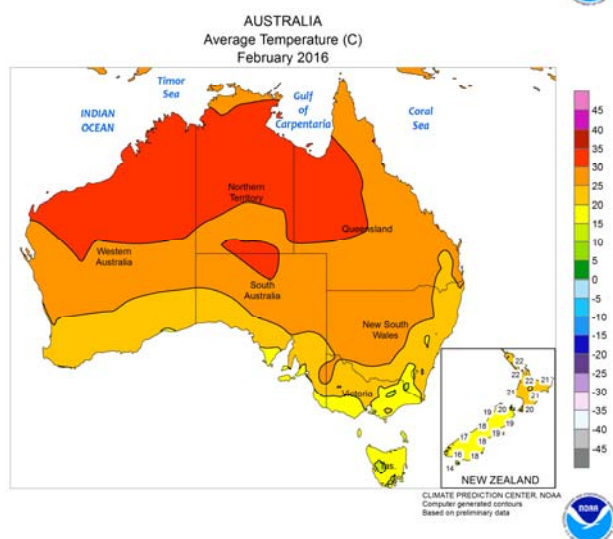
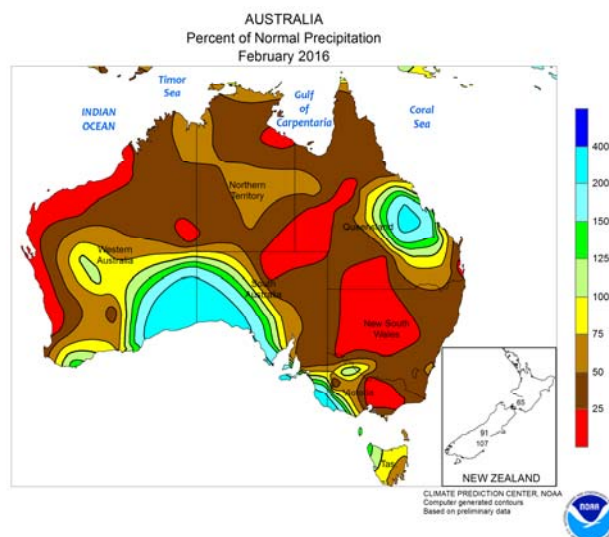
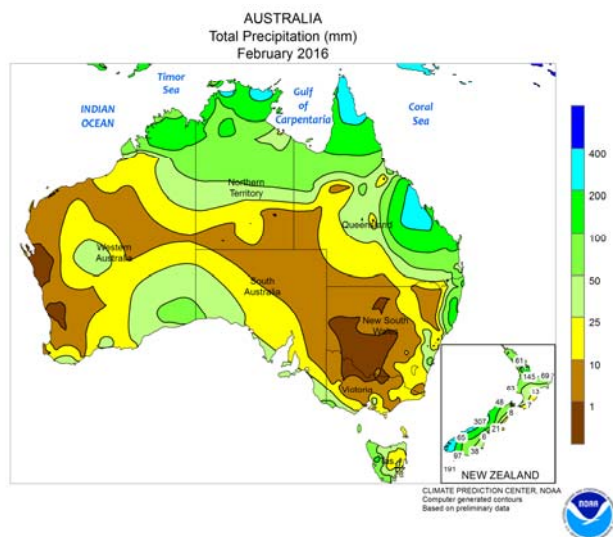
below normal for the month, although longer-term moisture conditions were still favorable due to abundant late-autumn and early-winter rainfall. Meanwhile, temperatures were 2 to 3°C above normal in February, with rapeseed across the Yangtze Valley and wheat in southern sections of the North China Plain breaking dormancy roughly two weeks earlier than usual.



SOUTHEAST ASIA

Rainfall was near to above normal across Indonesia and the northern half of the Philippines during February, maintaining or improving soil moisture and water supplies for rice. In Indonesia, rainfall amounts surpassed 350 mm in most of Java, but approached 500 mm in western portions. The improved moisture conditions benefited rice planted late in the season but likely came too late for earlier-planted rice that was ripening. In addition to benefiting rice, consistent showers maintained favorable moisture conditions for oil palm in Sumatra and Kalimantan. In contrast, below-normal rainfall continued for the third consecutive month in

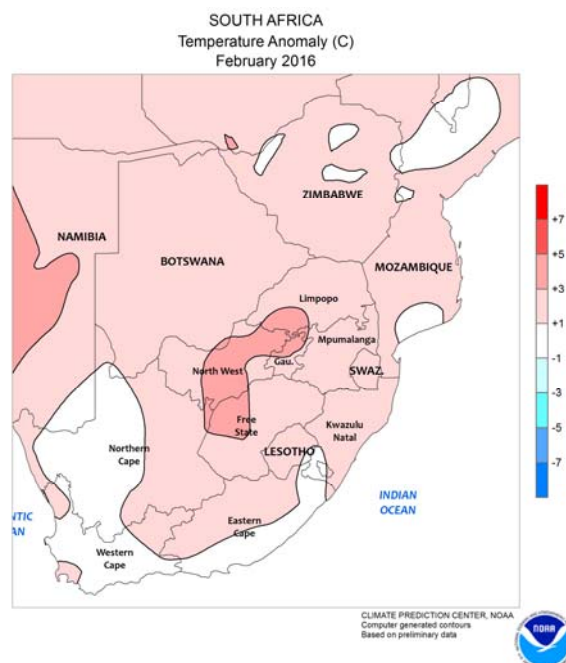
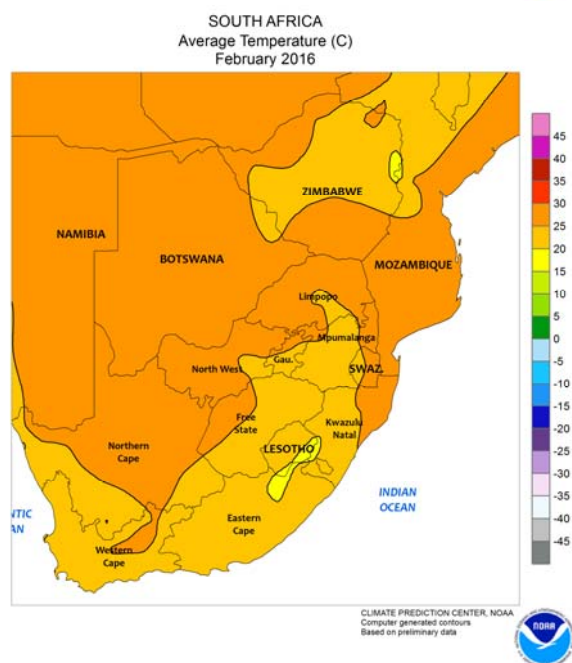
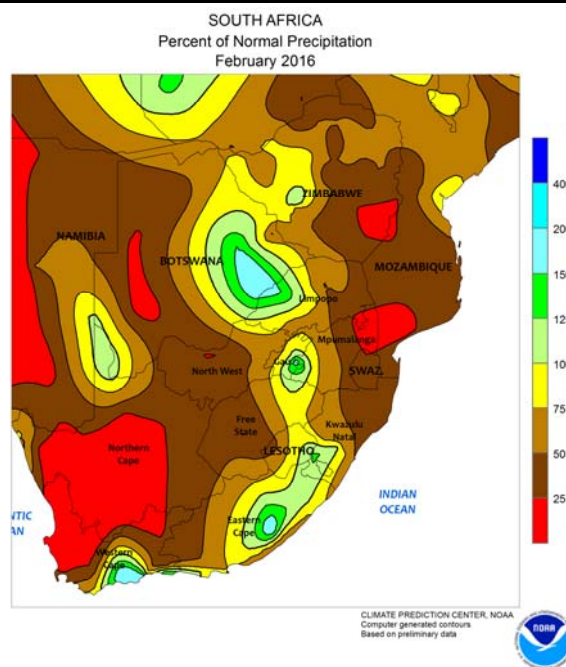
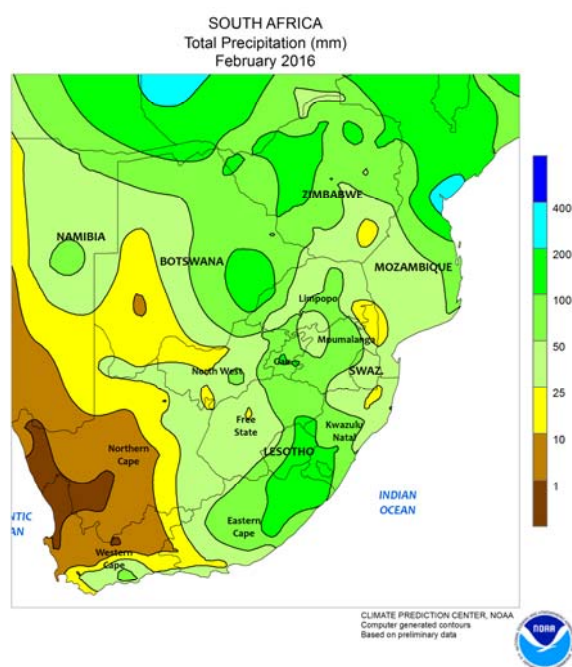
Malaysia, further reducing oil palm prospects. In the Philippines, rainfall was near to above normal in the Visayan Regions and across Luzon but below normal in Mindanao. The periodic showers (over 100 mm for the month) kept rice and corn well watered in Luzon while improving soil moisture for crops in Eastern Visayas. However in Mindanao, consistently below-normal rainfall through the winter has reduced corn prospects. Meanwhile in Indochina, seasonably dry weather prevailed as winter rice matured and irrigation supplies remained limited for spring cultivated varieties.



AUSTRALIA

At the beginning of February, widespread showers in southern Queensland and northern New South Wales benefited immature summer crops. In mid-February, a combination of sunny skies and adequate moisture supplies continued to favor cotton and sorghum

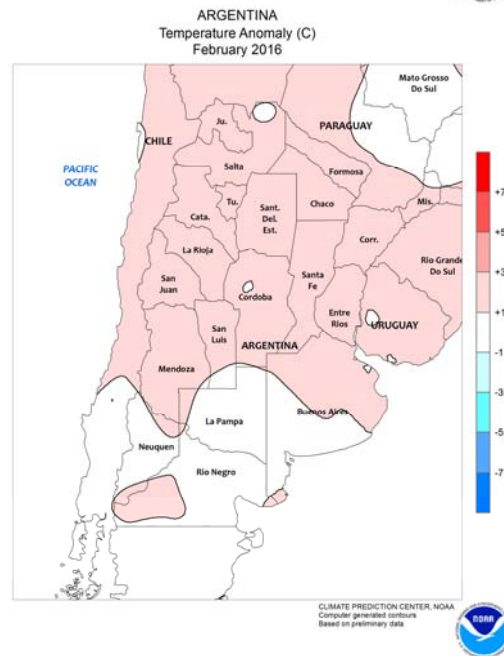
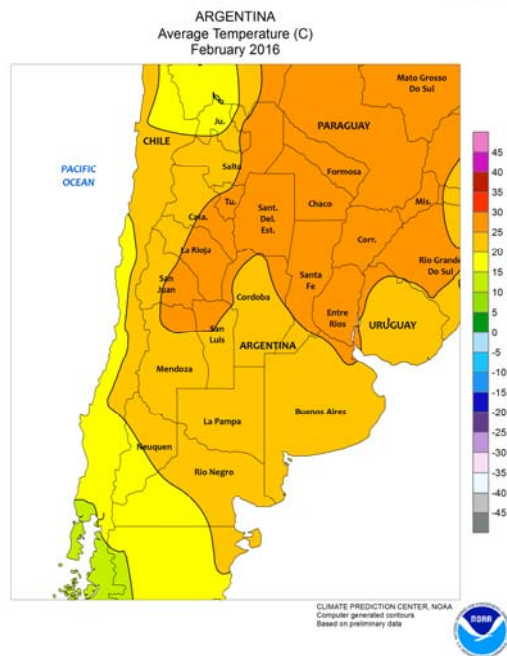
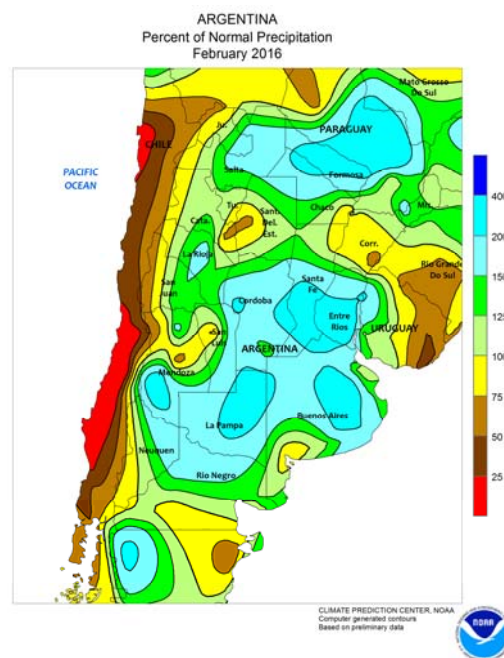
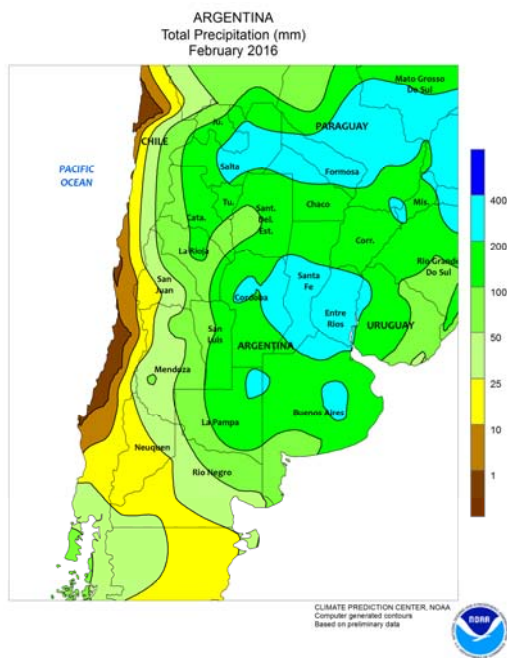
development. Hot, dry weather overspread the region in late February. The heat and dryness promoted drydown of summer crops sown early in the growing season, but increased stress on later-planted crops, which remained immature.



SOUTH AFRICA

Drought intensified in western sections of the corn belt during February, worsening prospects for late-planted summer crops in or nearing reproduction. Below-normal rainfall in North West and Free State was accompanied by above-normal temperatures, averaging as much as 3°C above normal. Daytime highs often reached the middle and upper 30s (degrees C), compounding stress on late-planted crops. Meanwhile, rain fell periodically in central and eastern portions of the corn belt (Gauteng eastward) but rainfall — most of which was well below normal —

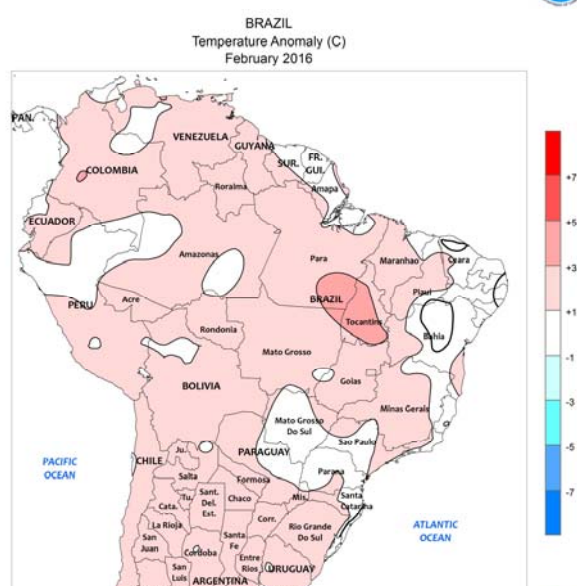
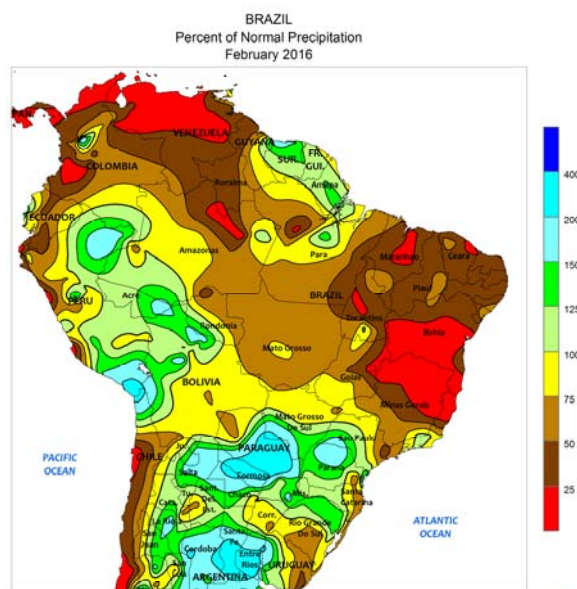
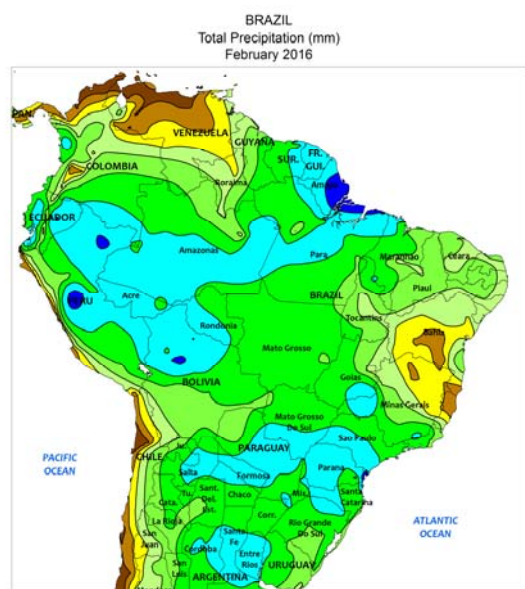
was insufficient to significantly improve yield potential. Similarly, below-normal rainfall (monthly accumulations of 50 to 100 mm) maintained unfavorable prospects for rain-fed sugarcane in KwaZulu-Natal. Periodic showers helped to supplement irrigation in the Cape Provinces, although above-normal temperatures (monthly temperatures averaging 1-3°C above normal, with daytime highs often reaching the middle and upper 30s) maintained high moisture requirements of corn, cotton, and other summer row crops.



ARGENTINA

In February, most agricultural areas recorded near- to above-normal rainfall, maintaining overall favorable conditions for summer grains, oilseeds, and cotton. Some of the heaviest rainfall (monthly accumulations in excess of 200 mm) was concentrated over the lower Parana Valley, reversing an earlier period of dryness but eventually resulting in localized flooding of low-lying fields. A late drying trend fostered maturation of

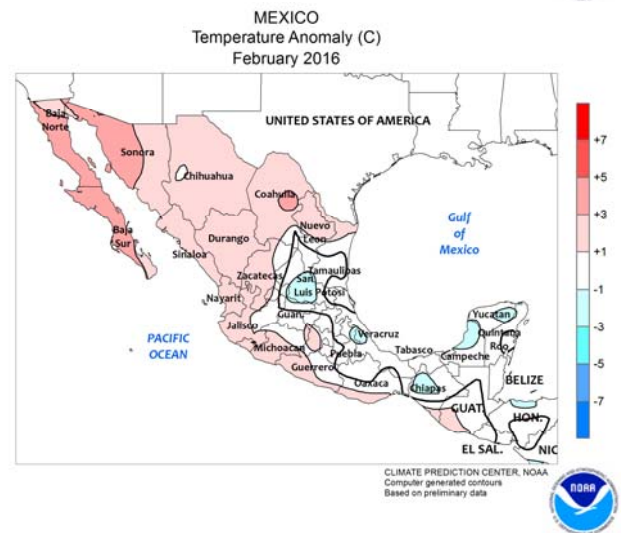
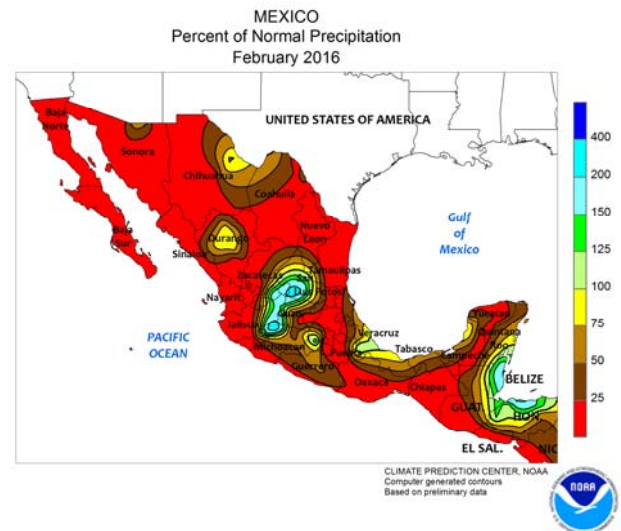
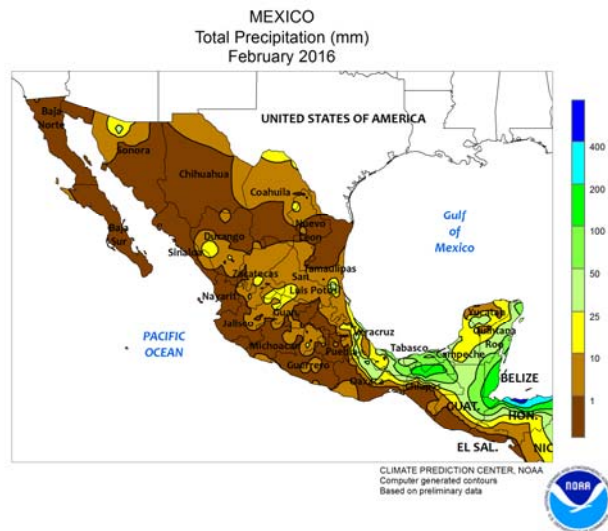
sunflowers in southern growing areas, though additional moisture would have been welcome for immature soybeans and corn. Monthly temperatures averaged 1°C or more above normal throughout the region, with pockets of warmer weather (monthly average temperatures 3°C or more above normal) in parts of the north where daytime highs frequently reached the middle and upper 30s degrees C.



BRAZIL

During February, a developing drying trend — accompanied by above-normal temperatures — sped summer crop development in key production areas of Brazil's northeastern interior. Monthly temperatures averaged 3°C or more above normal in and around Tocantins, with daytime highs commonly reaching 35°C. Warmer- and drier-than-normal conditions also dominated large parts of the Center-West Region (Mato Grosso and neighboring locations in Goias and Mato Grosso do Sul),

favoring drydown and harvesting of soybeans. The drier conditions also reduced topsoil moisture for germinating second-crop corn; however, monthly rainfall totals exceeded 100 mm over much of the region, due to periods of beneficial rain during the first half of February. In contrast to the dryness in central and northeastern Brazil, conditions remained overall favorable for summer crops in southern farming areas, as monthly rainfall topped 200 mm from northern Rio Grande do Sul to western Minas Gerais.

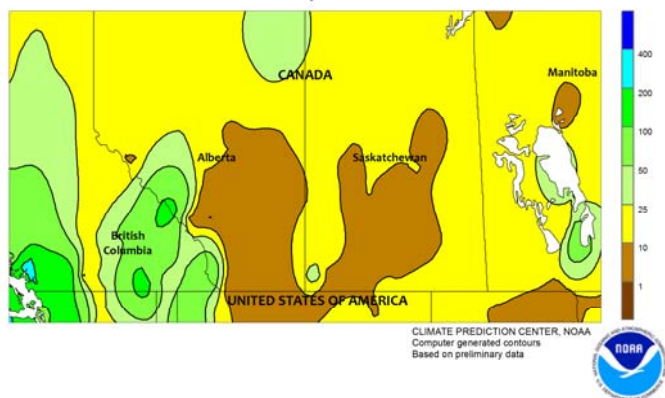


MEXICO

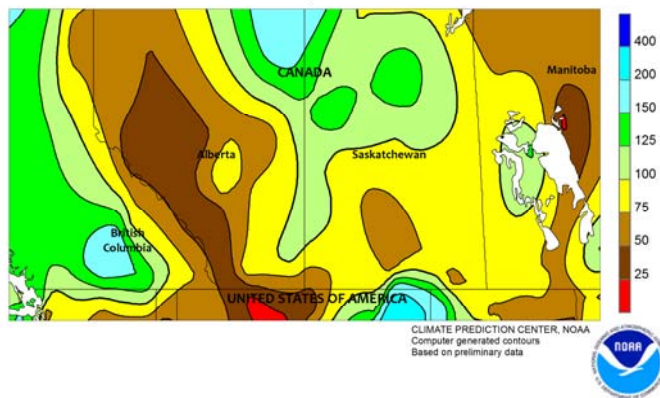
During February, mostly dry, warmer-than-normal weather dominated northern and central Mexico, fostering rapid development of wheat, corn, and other irrigated winter-grown crops. Aside from a few isolated showers (monthly accumulations totaling more than 10 mm), little to no rain was recorded from the U.S. border southward to and along the Pacific Coast. Seasonal rain (10-50 mm, locally higher) fell from southern Veracruz and northern Oaxaca to Belize,

with the heaviest rainfall (50 to more than 100 mm) concentrated over northern Chiapas and Tabasco. According to the Government of Mexico, reservoir levels were at 70.8 percent of capacity nationally as of February 28, compared with 71.9 percent last year and 55.9 percent in 2014. In the northwest, levels were higher than the previous years (69.0 percent of capacity versus 65.3 percent last year and 46.5 percent in 2014).

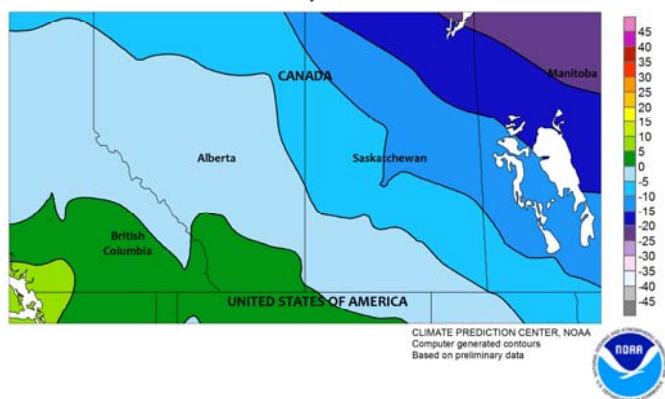
CANADIAN PRAIRIES
Total Precipitation (mm)
February 2016



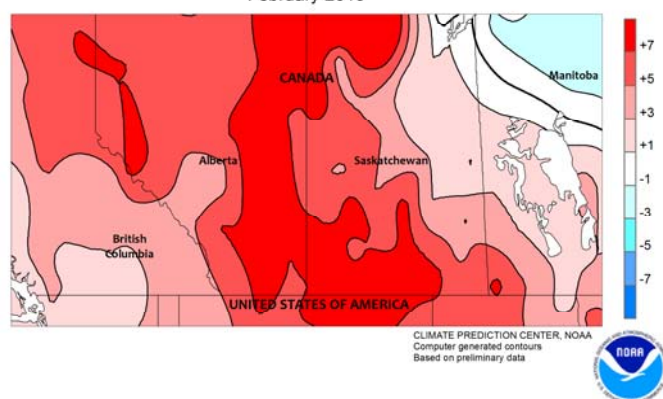
CANADIAN PRAIRIES
Percent of Normal Precipitation
February 2016



CANADIAN PRAIRIES
Average Temperature (C)
February 2016



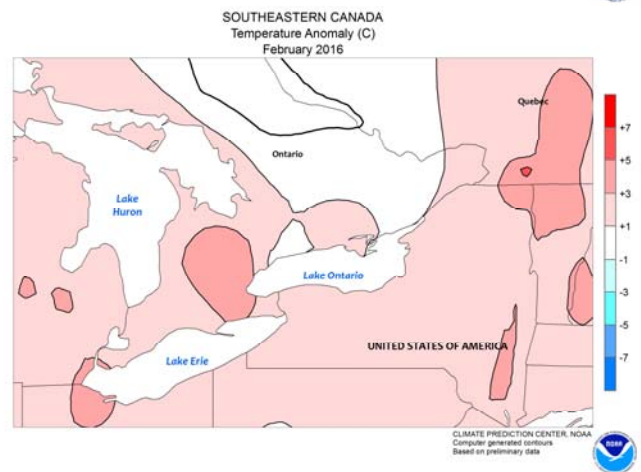
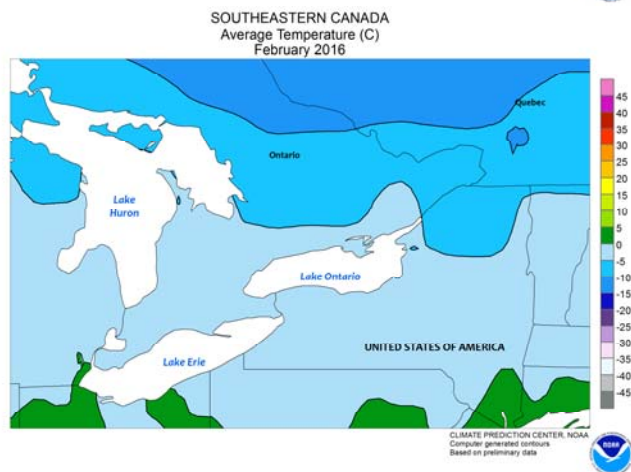
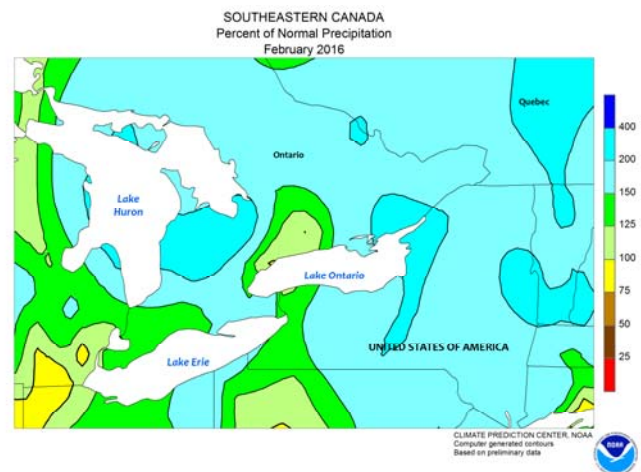
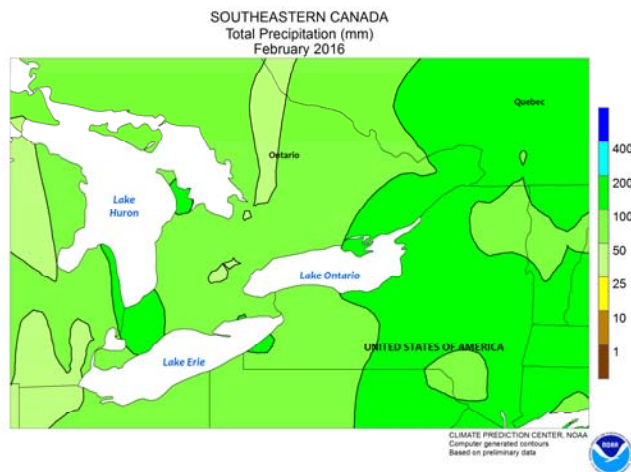
CANADIAN PRAIRIES
Temperature Anomaly (C)
February 2016



CANADIAN PRAIRIES

During February, warmer-than-normal weather provided generally favorable conditions for overwintering wheat and pastures. While the relative warmth (monthly temperatures averaging 5°C or more above average) kept southern sections of Alberta and Saskatchewan free from a protective layer of snow cover for much of the month, temperatures were generally not low enough to cause harm to grains. For example, the coldest weather recorded in the southwestern Prairies occurred during the first few days of the month, with the lowest temperatures generally capped at -15°C;

however, while daytime highs often exceeded 10°C, average temperatures stayed well below the threshold for breaking dormancy (5°C or higher for a period of several weeks). Lower temperatures (nighttime lows dropping below -20°C) were recorded in northern Saskatchewan and Manitoba but snow cover was sufficient to protect overwintering grains. Most of the Prairies recorded seasonably light precipitation, though a few locations — particularly in Manitoba's Interlake Region — recorded more than 25 mm (liquid equivalent).



SOUTHEASTERN CANADA

Several outbreaks of bitter cold weather (nighttime lows falling below -17°C) enveloped the region in early and mid-February. Based on estimates provided by the U.S. National Operational Hydrologic Remote Sensing Center, snow cover appeared to be patchy and light in sections of southwestern Ontario during the first event (February 10-15), raising concern for potential localized damage to

overwintering wheat. This was due to earlier periods of warmth, including one particularly warm day (February 3) when daytime highs in excess of 10°C were recorded. A general pattern of mild, wet weather prevailed during the latter half of February; favoring overwintering crops but resulting in a large snow-free section of southwestern Ontario at month's end.

U.S. Crop Production Highlights

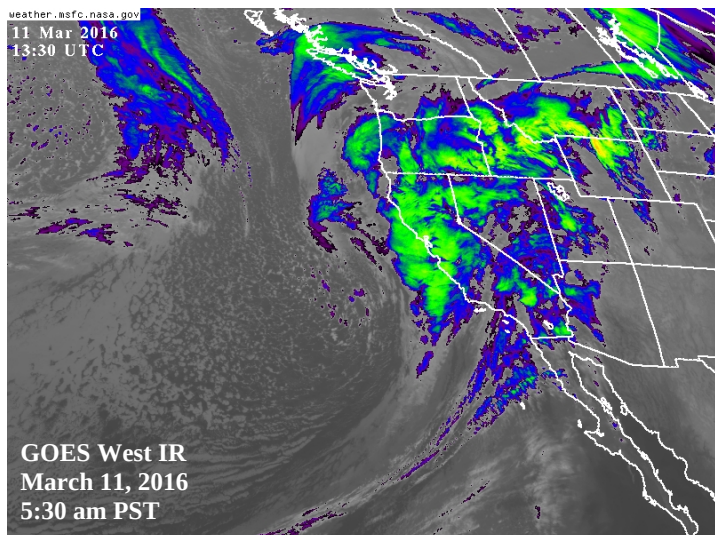
The following information was released by USDA's Agricultural Statistics Board on March 9, 2016. Forecasts refer to March 1.

The U.S. **all orange** forecast for the 2015-2016 season is 5.36 million tons, up 2% from the previous forecast but down 16% from the 2014-2015 final utilization.

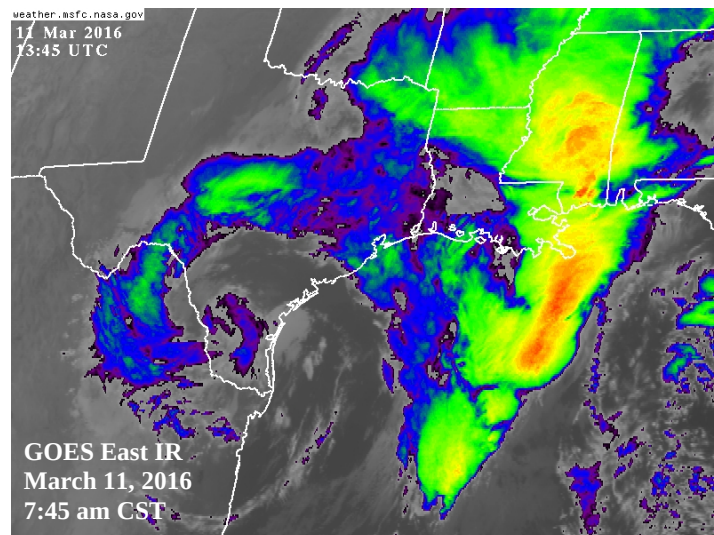
The Florida all orange forecast, at 71.0 million boxes (3.20 million tons), is up 3% from last month's forecast but down 27% from last season. Early, midseason, and Navel varieties in Florida are forecast at 36.0 million boxes (1.62 million tons), unchanged from last month but down 24% from last season. The Florida Valencia orange forecast, at 35.0 million boxes (1.58 million tons), is up 6% from last month but down 29% from last season.

The California Valencia forecast is 10.5 million boxes (420,000 tons), up 5% from the previous forecast and up 11% from last season. This results in a California all orange forecast of 52.5 million boxes (2.10 million tons), up 1% from the previous forecast. Objective survey measurement taken during January and February indicated that fruit set per tree was higher than the previous year and the most since 2010, but that the measured average fruit size was slightly below the previous year.

The forecast for Texas (1.41 million boxes, or 60,000 tons), is carried forward from the previous forecast.



Early-March storms brought much-needed rain and high-elevation snow to California. As a result, the water content of the Sierra Nevada snowpack increased from 20 to 25 inches. The storms also boosted soil moisture and increased reservoir storage.



Starting on March 8, historic rainfall totals were observed from easternmost Texas to the Mississippi Delta. Five-day totals ranged from 10 to 22 inches in locations such as Monroe, LA (21.08 inches), Greenville, MS (12.87 inches), and Longview, TX (10.08 inches).

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