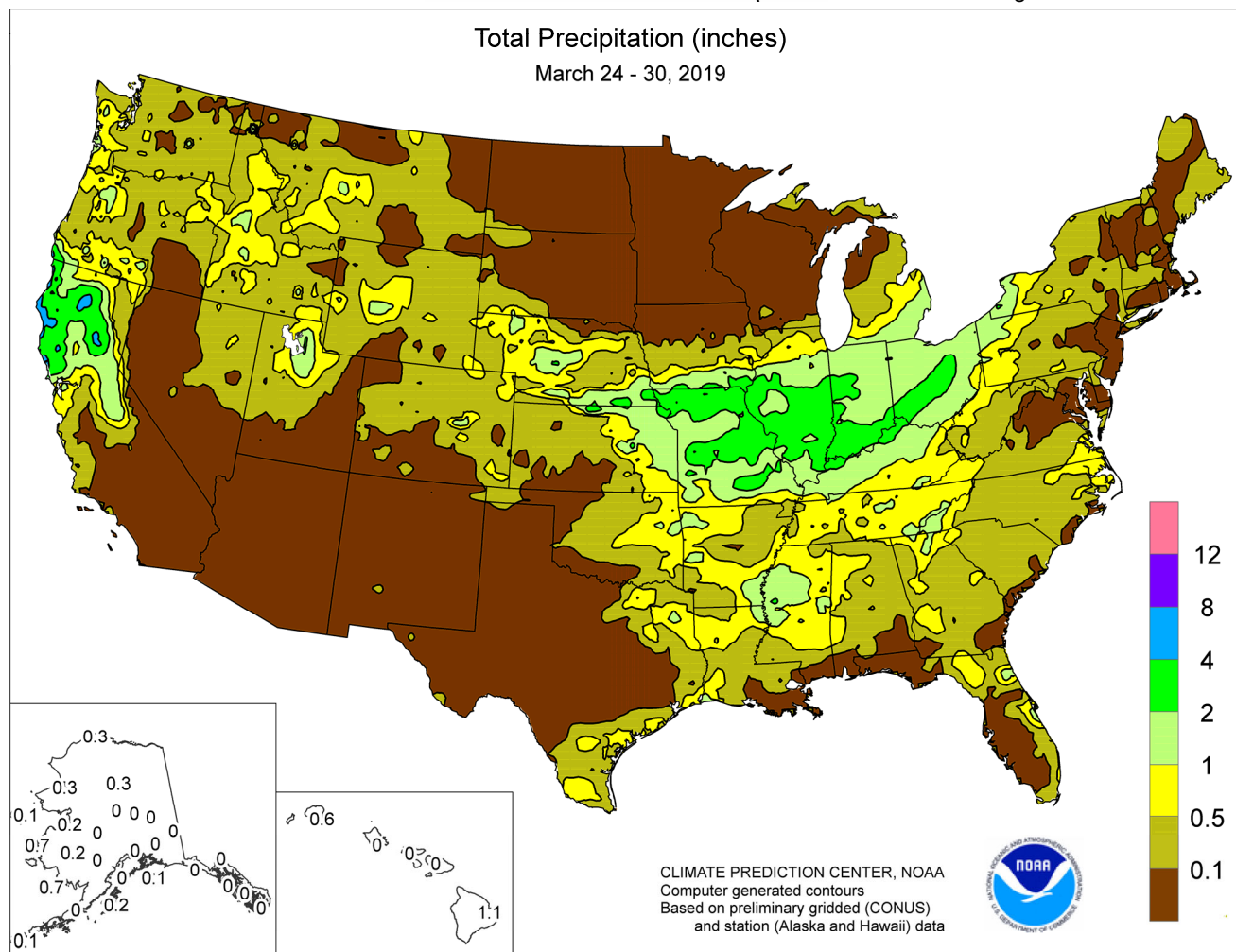


WEEKLY WEATHER AND CROP BULLETIN

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 24 – 30, 2019

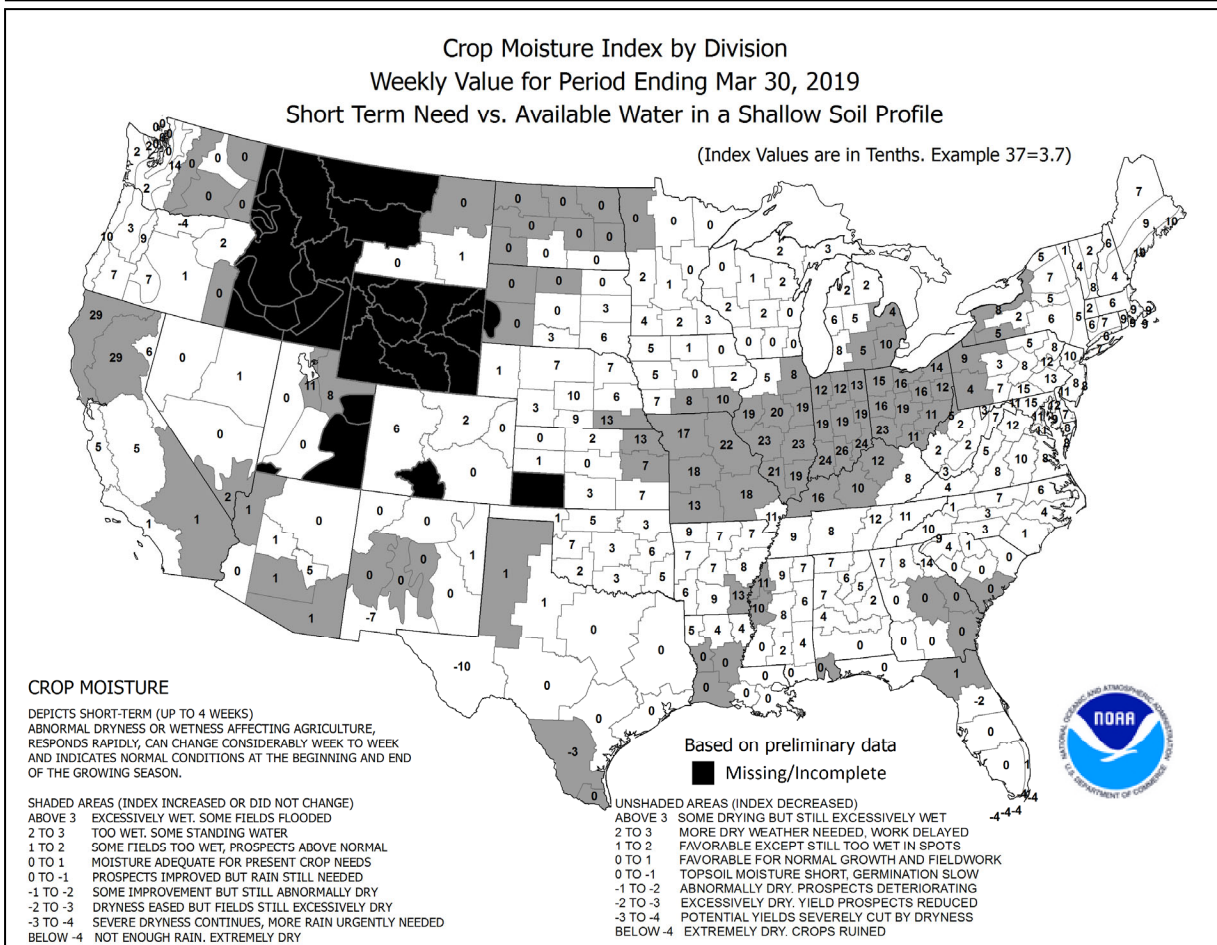
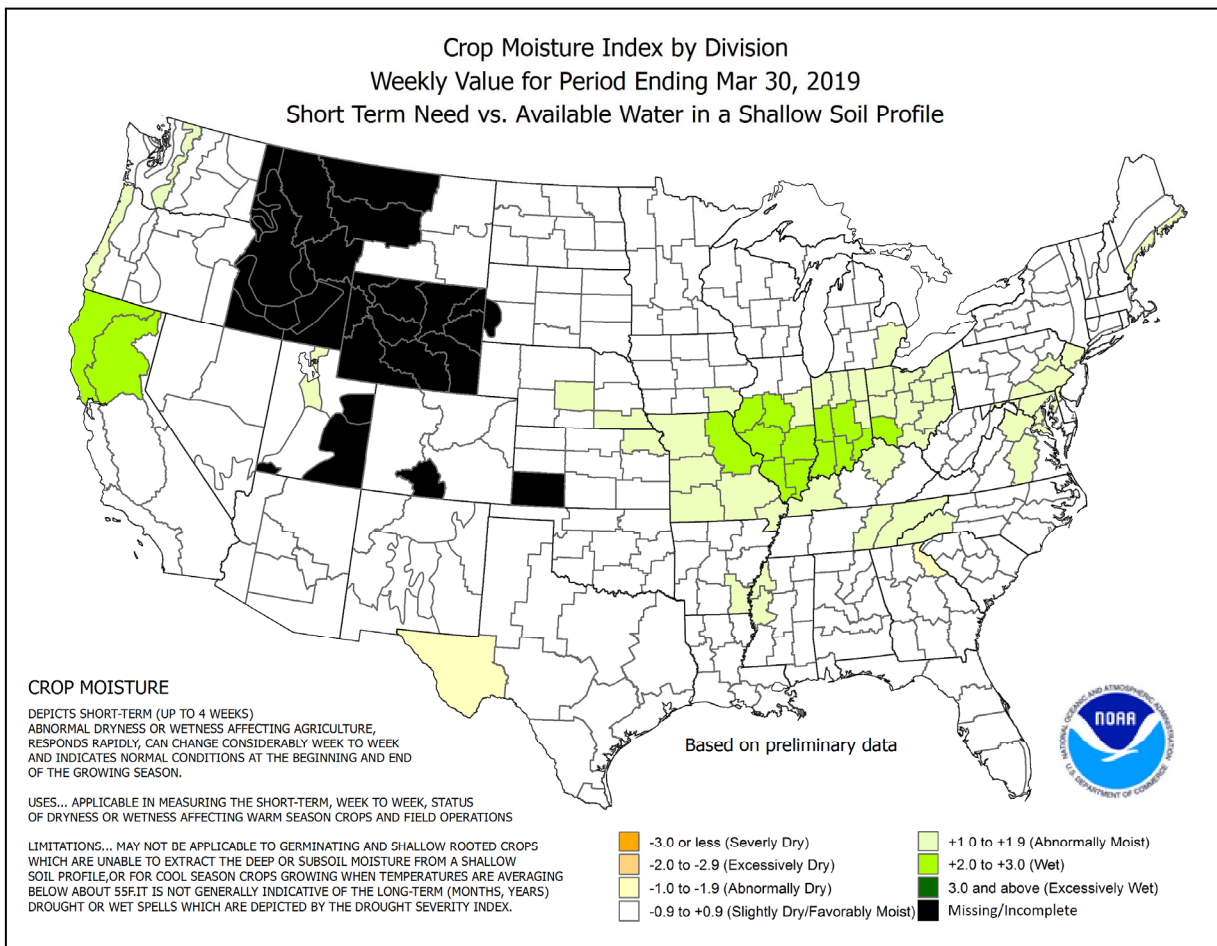
Highlights provided by USDA/WAOB

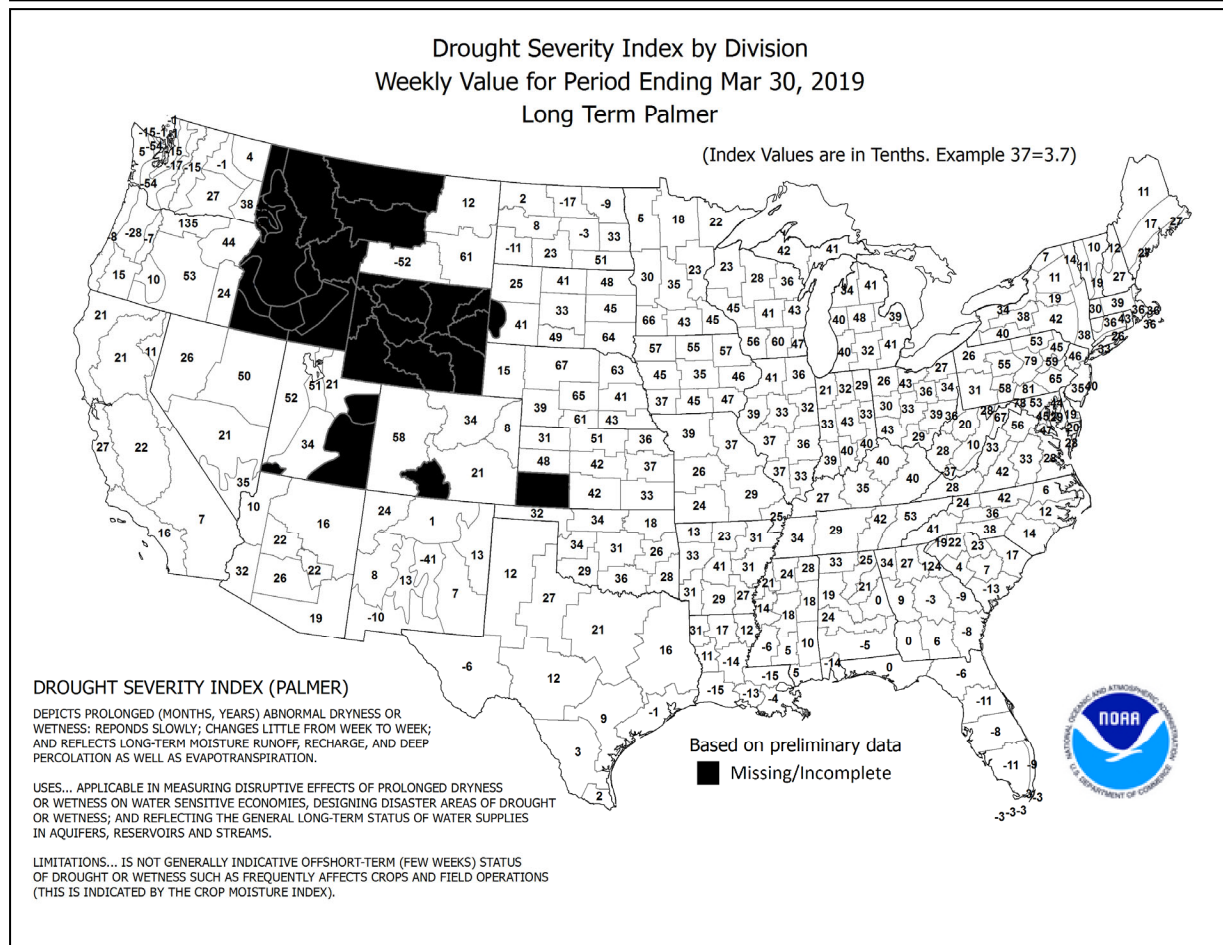
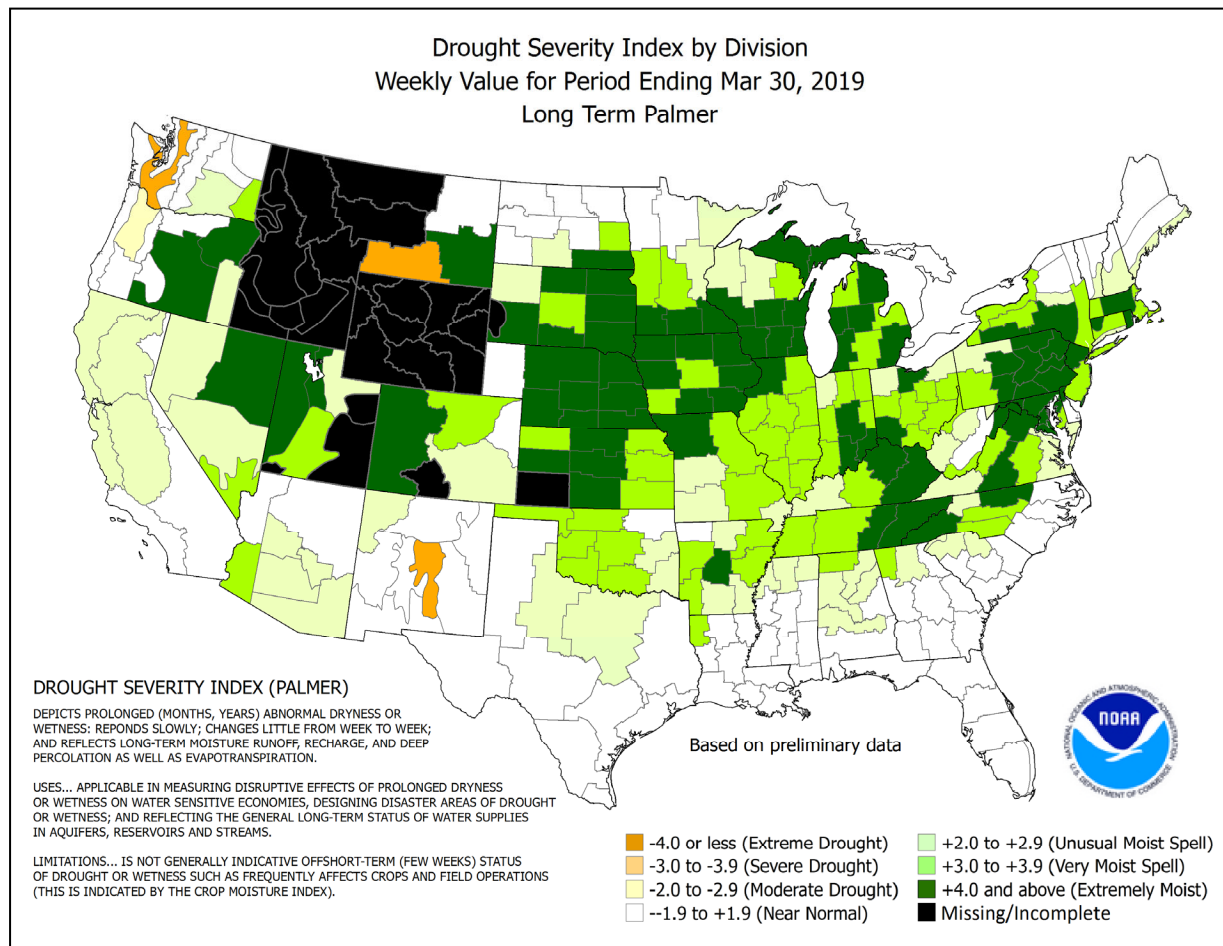
Warmth arrived across the **northern Plains** and **Upper Midwest**, but favorably dry weather allowed runoff from melting snow to enter already swollen creeks and rivers without further complications. Farther south, however, at least an inch of rain soaked many areas from the **east-central Plains** into the **eastern Corn Belt**. Some of the rain, which mainly occurred from March 28-30, fell on areas still recovering from mid-March flooding. Meanwhile, late-week snow blanketed **western Nebraska** and environs, while precipitation changed to snow in parts

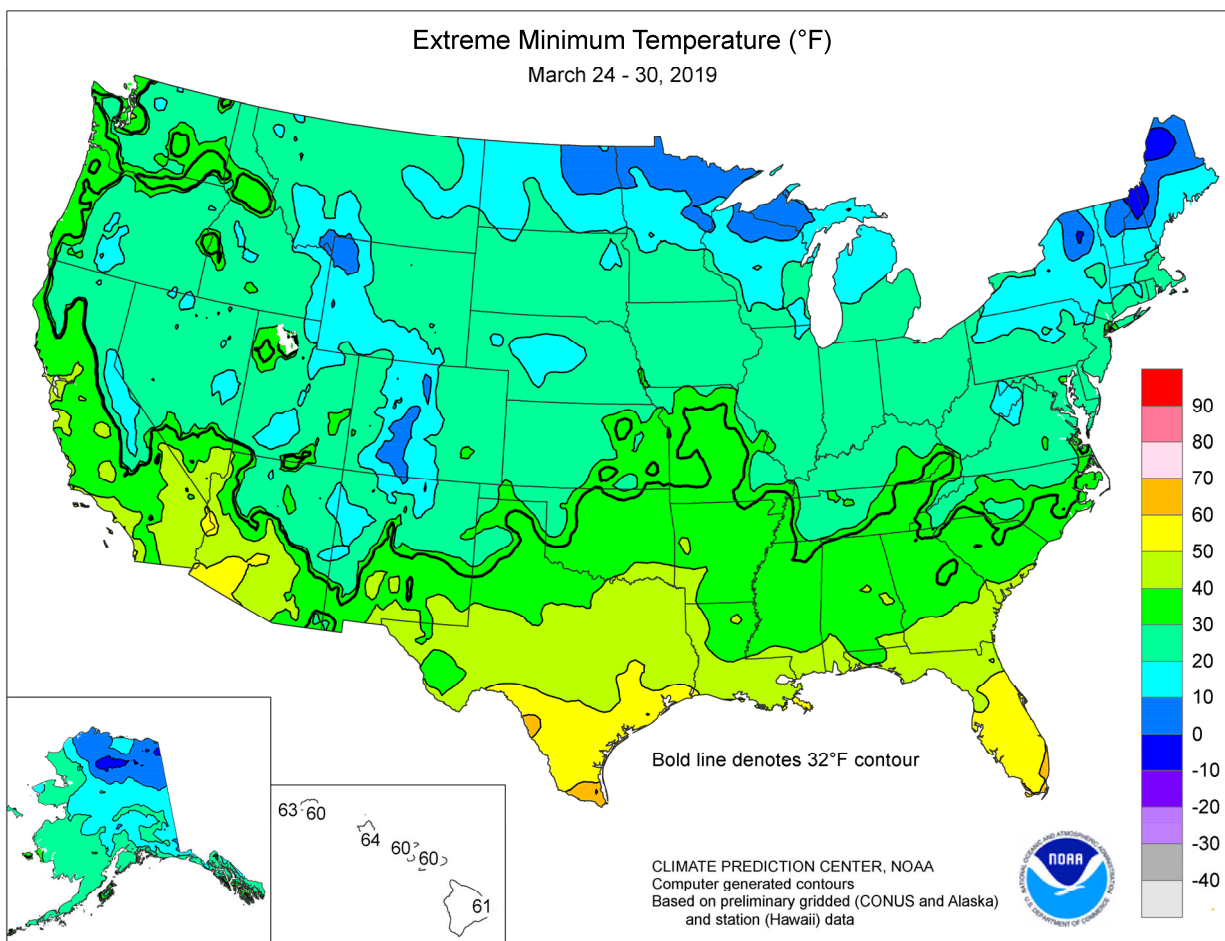
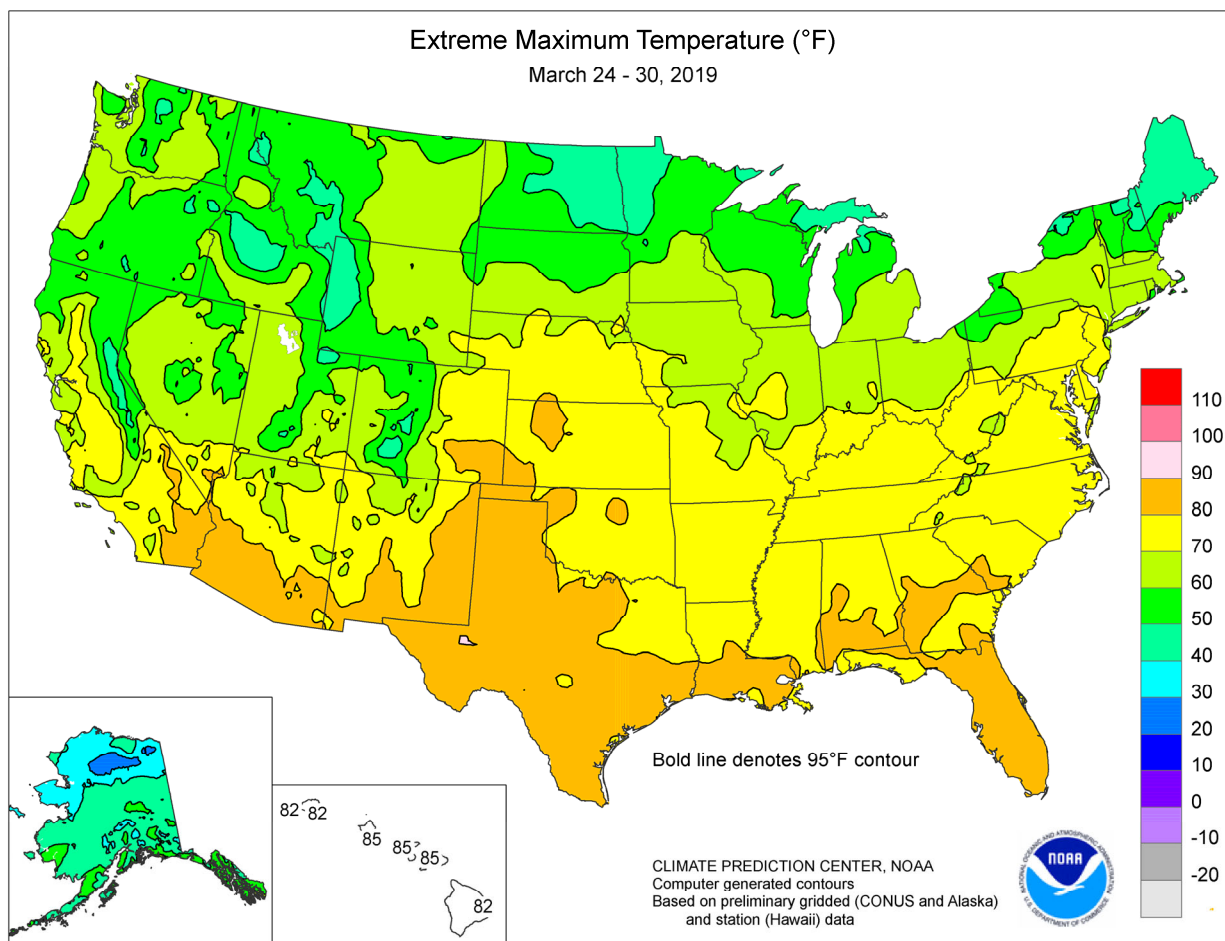
(Continued on page 5)

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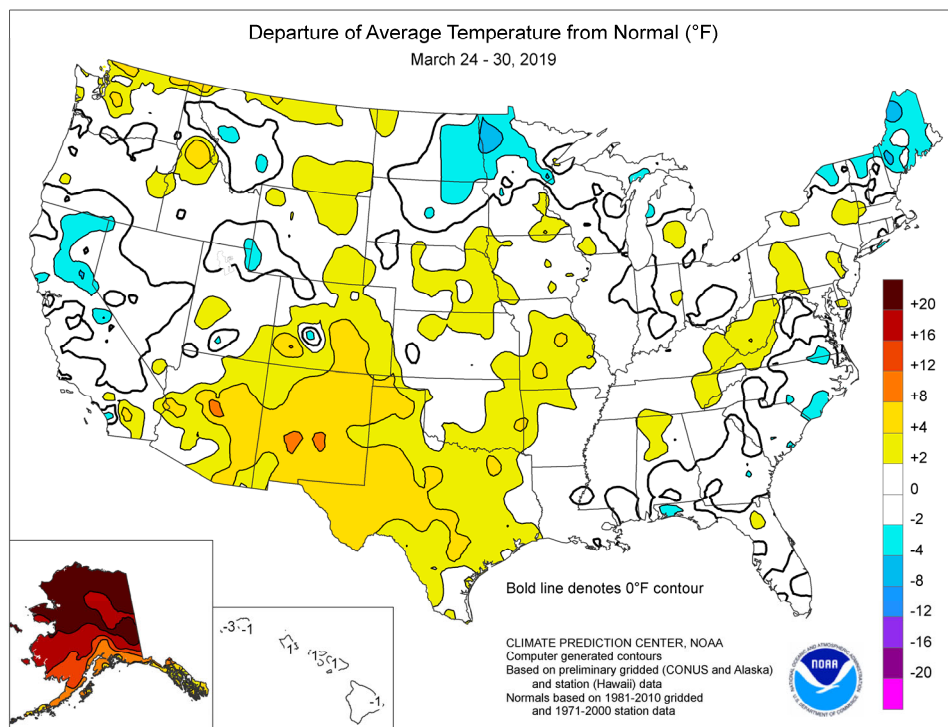


(Continued from front cover)

of the **Corn Belt**. By daybreak on March 31, snow depths included 2 inches in **Cleveland, OH**, and an inch in **Indiana** locations such as **Fort Wayne** and **Indianapolis**. Elsewhere, planting activities continued at a rapid pace across the **South**, despite sporadic showers, while unsettled weather prevailed in **northern California** and the **Northwest**. Weekly precipitation totaled 2 to 4 inches or more in portions of **northern California**. Near- or above-normal temperatures covered much of the country, with pockets of cooler-than-normal conditions mostly limited to **northern California** and **New England**. Weekly temperatures averaged up to 10°F above normal in the **southern Rockies**, and were at least 5°F above normal in a broader area stretching from the **Southwest to the southern High Plains**.

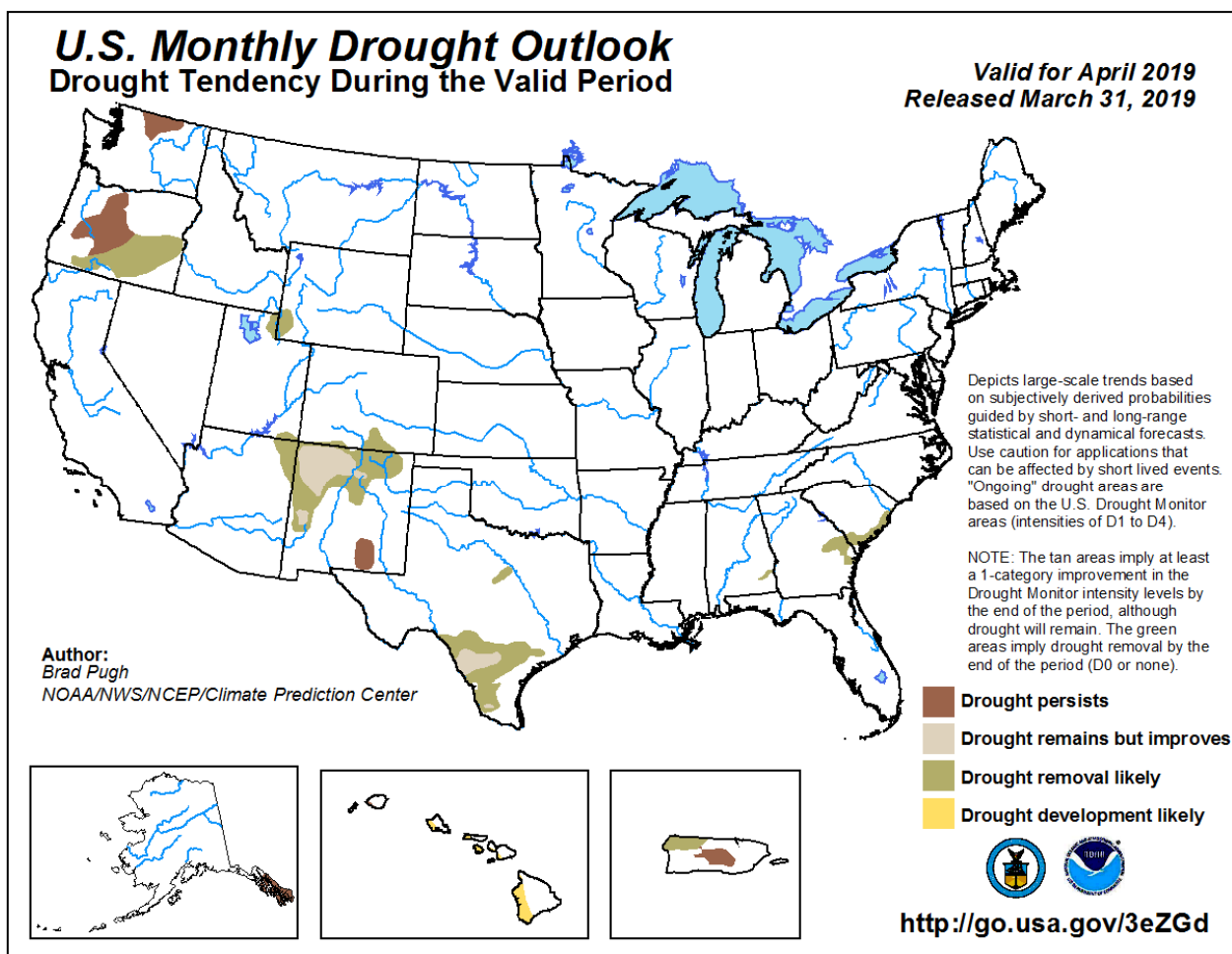
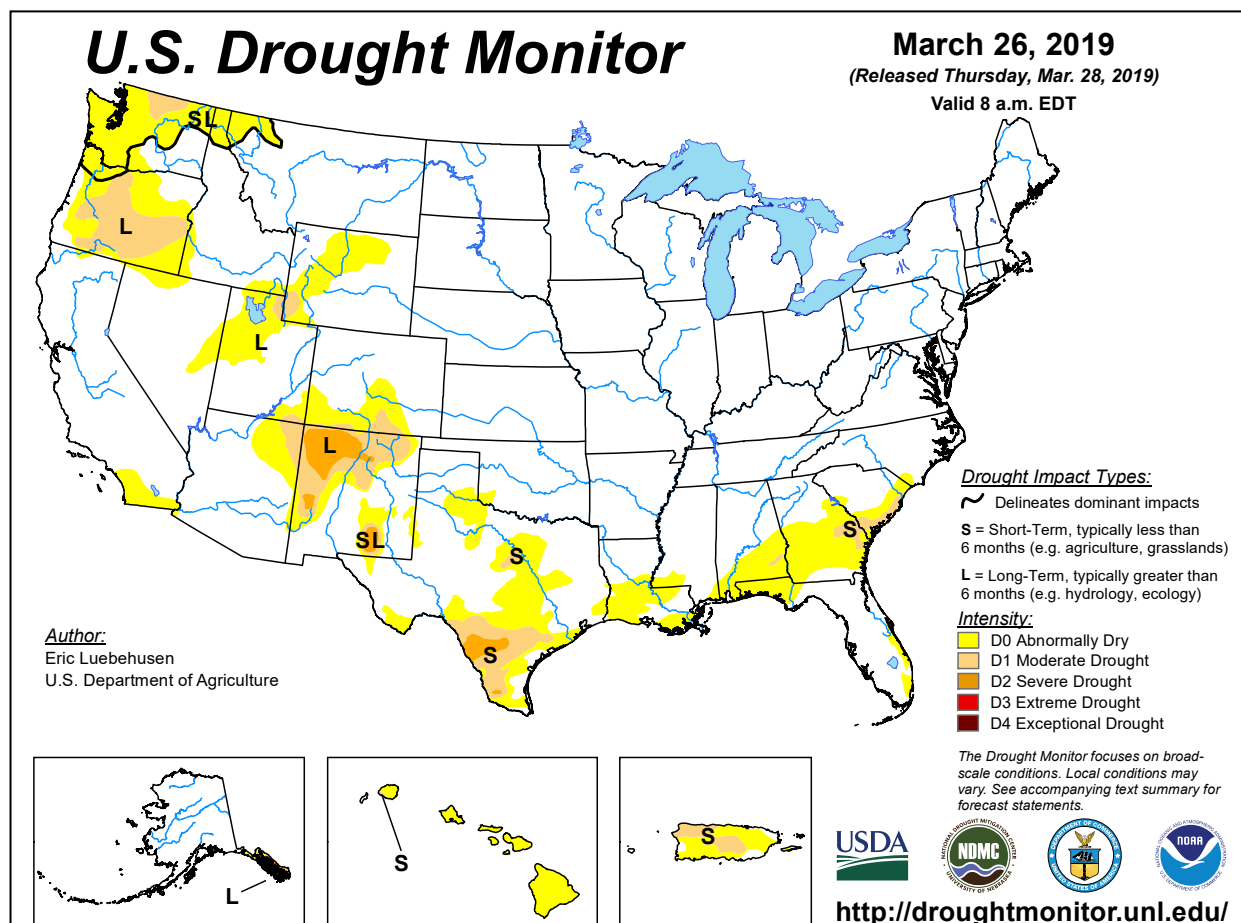
With much of the country experiencing near-normal temperatures, few records were broken. However, lingering cool conditions in the **northern Rockies** capped the coldest March on record in **Montana** locations such as **Bozeman**, with a monthly average temperature of 17.5°F (16.6°F below normal), and **Dillon**, with an average of 22.3°F (12.0°F below normal). Previous records had been 18.0°F (in 1969) in **Bozeman** and 23.0°F (in 1952) in **Dillon**. Meanwhile, a mid-week surge of warmth across the **south-central U.S.** resulted in a few daily-record highs, including 69°F on March 27 in **Alamosa, CO**. A few daily-record highs were set outside the **contiguous U.S.** For example, the international airport in **Guam** posted a daily-record high of 90°F on March—the highest reading in that location since January 2. On March 27, **San Juan, PR**, posted a daily-record high of 91°F. **San Juan** had not attained the 90-degree mark since November 28, 2018.

The average water content of the **Sierra Nevada** snowpack climbed to 45 inches by the end of March, approximately 160 percent of the normal peak value. This year's peak was similar to the final 2016-17 value of 46 inches, according to the California Department of Water Resources, and far above the 2017-18 seasonal peak of 16 inches. During the last week of March, daily precipitation records in the **West** included 0.57 inch (on March 27) in **Stanley, ID**, and 0.65 inch (on March 28) in **Stanford, MT**. **Stanford** also received 6.2 inches of snow on March 28-29. During the same 2-day period,



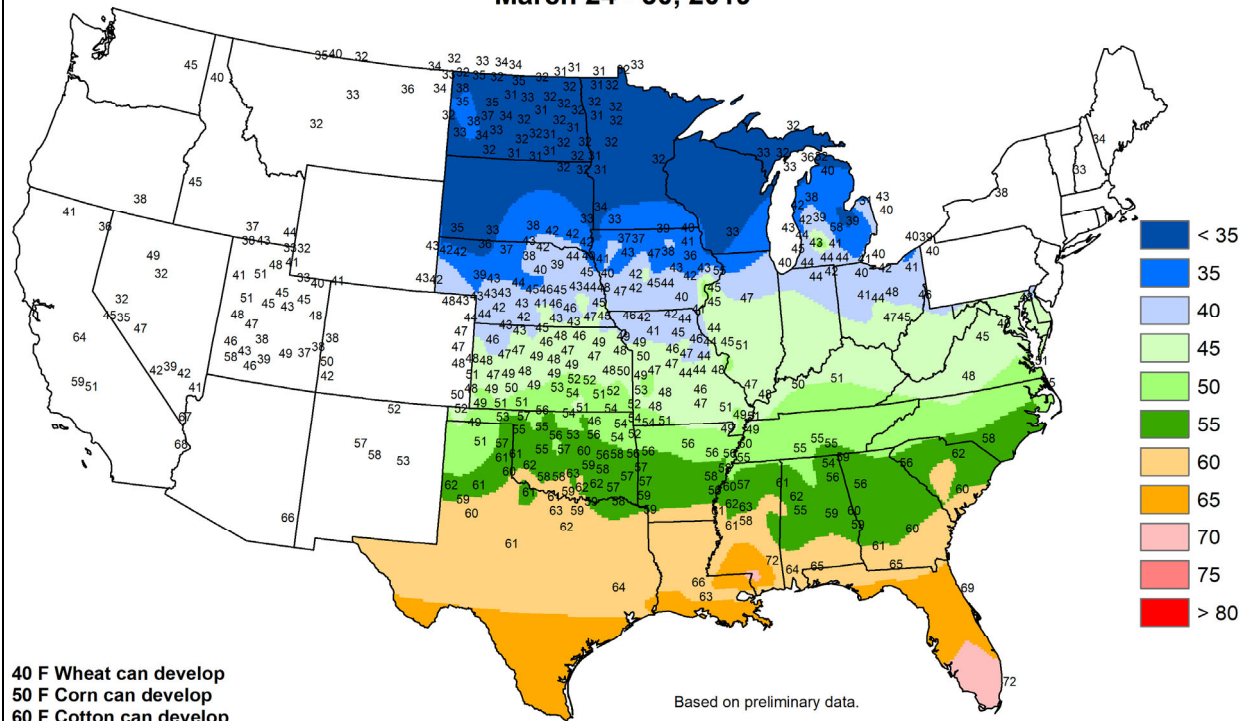
Salt Lake City, UT, reported 4.6 inches of snow and precipitation totaling 1.60 inches. On March 29, **North Platte, NE**, noted impressive precipitation and snowfall totals of 1.03 and 8.1 inches, respectively. Toward week's end, showers and thunderstorms swept across the **southern and eastern Corn Belt**. In **Ohio**, record-setting rainfall totals for March 30 reached 2.00 inches in **Cincinnati** and 1.97 inches in **Columbus**. Elsewhere, significant rain fell in parts of **southern Texas** on March 26 and 31. **Harlingen, TX**, reported daily-record amounts on both days, totaling 1.02 and 1.76 inches, respectively.

Alaska's warm pattern persisted, with weekly temperatures averaging at least 20 to 30°F above normal across the northern half of the state. Mostly dry weather accompanied **Alaska's** warmth, with showers generally limited to northern and western locations. **Anchorage** posted daily-record highs (48, 50, 49, and 50°F) on March 25, 27, 29, and 30. Similarly, **Juneau** closed March with seven consecutive daily-record highs (51, 57, 55, 57, 53, 54, and 59°F), starting on the 25th. During the last 14 days of March, rainfall in **southeastern Alaska** totaled just 0.03 inch in **Juneau**, 0.16 inch in **Sitka**, and 0.23 inch in **Ketchikan**. **Alaskan** warmth also resulted in sharp reductions in snow depth. **Kotzebue**, which reported a trio of daily-record highs of 37°F from March 24-26, experienced a decrease in snow depth from 42 to 27 inches during the last 10 days of the month. Farther south, **Hawaii** continued to slip into drought. At the state's major airport observation sites, March rainfall ranged from 0.08 inch (4 percent of normal) in **Honolulu, Oahu**, to 4.67 inches (35 percent) in **Hilo**, on the **Big Island**.



Average Soil Temperature (Deg. F, 4" Bare)

March 24 - 30, 2019



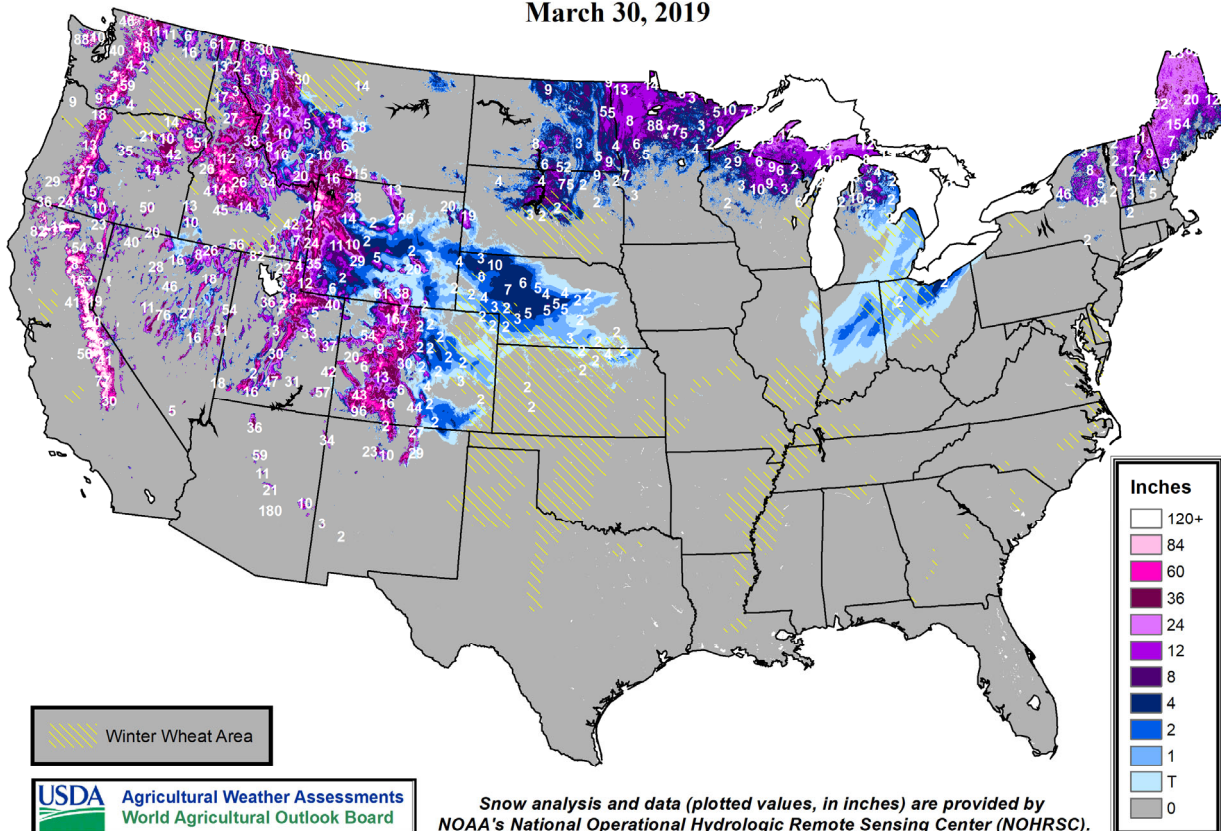
Data provided by the Climate Prediction Center, High Plains Regional Climate Center, Nebraska Mesonet at Univ of Nebraska, CoAgMet at Colorado State Univ, Kansas Mesonet at Kansas State Univ, North Dakota Agricultural Weather Network at North Dakota State Univ, Wyoming State Climate Office at the Univ of Wyoming, Illinois State Water Survey, Iowa State University, Oklahoma Mesonet, Purdue University, University of Missouri, Illinois State Water Survey, Michigan Automated Weather Network, West Texas Mesonet, South Dakota State Univ. Mesonet, Ohio Agricultural Research and Development Center, Univ. of Missouri and USDA/NRCS.



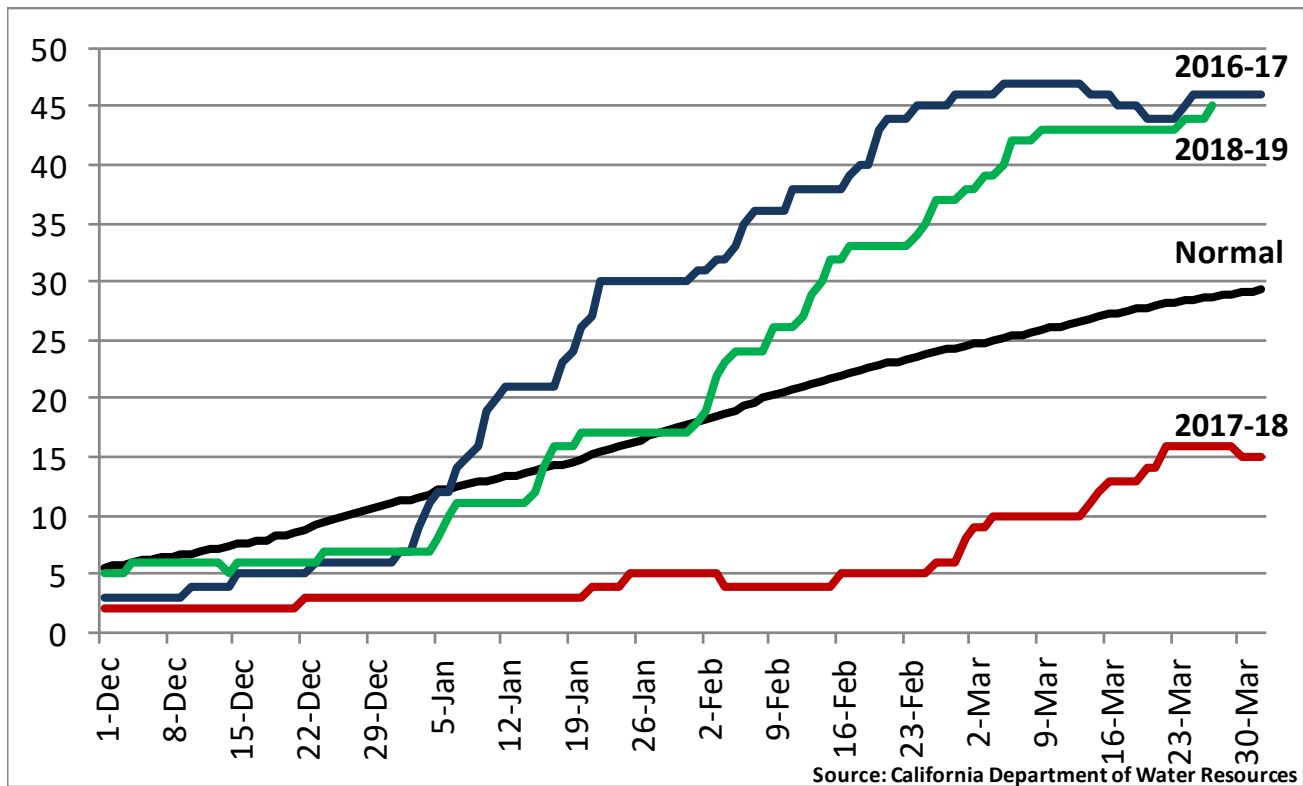
United States
Department of
Agriculture

Snow Depth

March 30, 2019



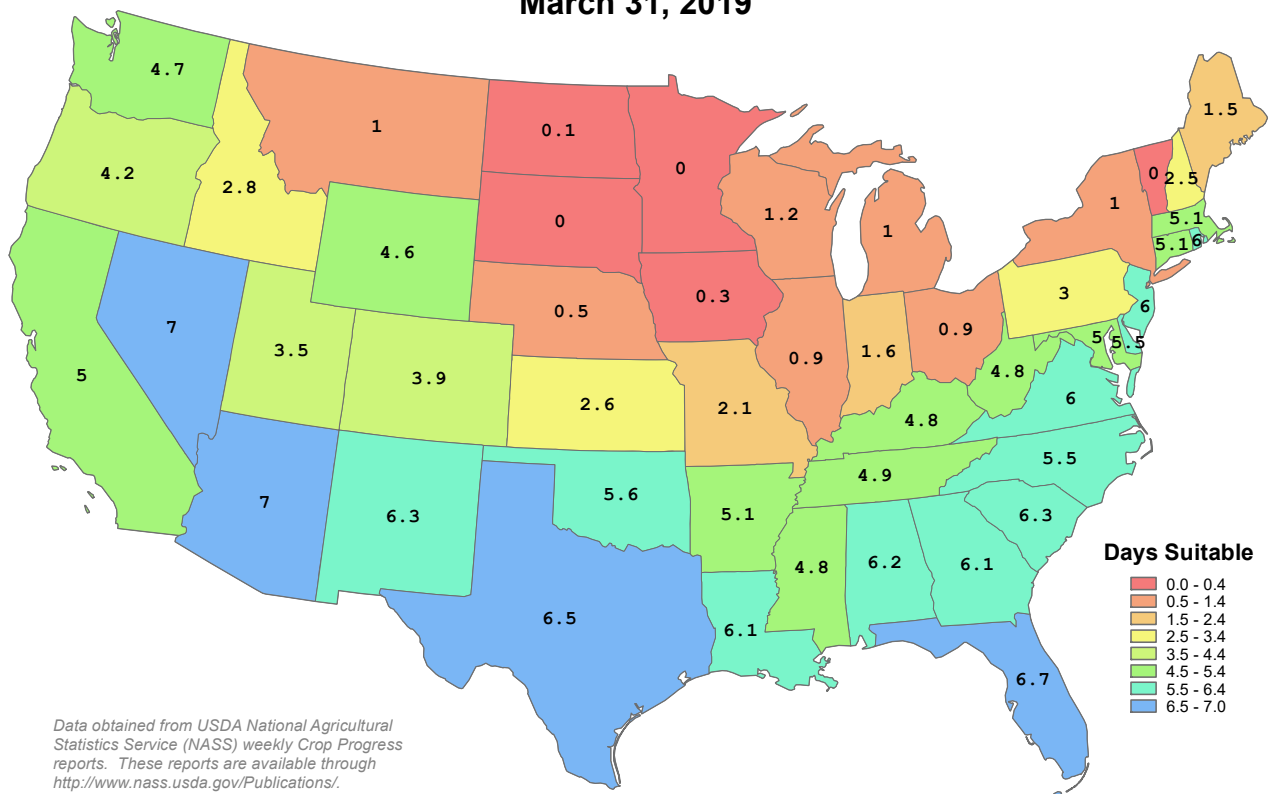
Daily Sierra Nevada Snowpack (Inches) vs. Normal



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

Days Suitable for Fieldwork

Week Ending
March 31, 2019



National Weather Data for Selected Cities

Weather Data for the Week Ending March 30, 2019

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	TEMP. °F		PRECIP.		
																	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
AL	BIRMINGHAM	73	48	78	38	60	3	0.57	-0.81	0.37	2.72	47	15.34	99	74	34	0	0	2	0	
	HUNTSVILLE	72	45	77	36	58	3	0.34	-1.09	0.30	3.85	60	24.72	146	74	45	0	0	2	0	
	MOBILE	77	49	87	44	63	1	0.00	-1.58	0.00	1.62	23	11.11	62	93	48	0	0	0	0	
	MONTGOMERY	75	46	81	37	61	1	0.08	-1.25	0.08	3.78	61	10.78	65	92	36	0	0	1	0	
AK	ANCHORAGE	48	33	50	29	41	12	0.00	-0.11	0.00	0.04	7	1.72	86	79	68	0	4	0	0	
	BARROW	28	15	33	7	22	34	0.29	0.29	0.15	0.68	6800	2.31	963	98	86	0	7	3	0	
	FAIRBANKS	44	28	50	20	36	19	0.00	-0.05	0.00	0.00	0	1.44	125	84	71	0	5	0	0	
	JUNEAU	54	28	57	27	41	6	0.00	-0.69	0.00	2.21	64	11.91	97	94	79	0	7	0	0	
AZ	KODIAK	47	37	52	33	42	8	0.16	-1.00	0.07	7.17	143	15.25	81	91	74	0	0	4	0	
	NOME	31	28	34	25	30	19	0.46	0.35	0.36	1.81	362	5.64	260	100	98	0	7	4	0	
	FLAGSTAFF	58	25	63	21	42	4	0.00	-0.49	0.00	2.59	101	11.49	157	74	19	0	7	0	0	
	PHOENIX	84	57	87	53	70	6	0.00	-0.19	0.00	0.30	29	2.83	108	47	21	0	0	0	0	
AR	PRESCOTT	68	35	72	30	52	7	0.00	-0.33	0.00	1.11	59	7.54	141	62	10	0	3	0	0	
	TUCSON	83	50	87	46	66	5	0.00	-0.12	0.00	0.62	79	3.74	141	49	18	0	0	0	0	
	FORT SMITH	72	48	76	40	60	5	0.44	-0.45	0.36	2.86	76	11.85	136	84	46	0	0	2	0	
	LITTLE ROCK	68	47	76	39	58	2	0.36	-0.83	0.30	3.32	73	14.51	126	88	48	0	0	3	0	
CA	BAKERSFIELD	73	47	80	44	60	2	0.04	-0.23	0.04	2.01	150	4.59	123	75	51	0	0	1	0	
	FRESNO	71	48	78	43	60	3	0.09	-0.33	0.09	1.26	59	6.75	105	80	56	0	0	1	0	
	LOS ANGELES	68	52	73	50	60	1	0.00	-0.41	0.00	2.10	87	12.04	142	85	57	0	0	0	0	
	REDDING	62	44	73	39	53	0	3.37	2.35	2.55	9.34	184	25.13	147	89	69	0	0	5	2	
CO	SACRAMENTO	65	45	70	40	55	0	0.73	0.22	0.48	3.76	135	15.42	152	98	47	0	0	4	0	
	SAN DIEGO	68	55	71	53	62	1	0.00	-0.45	0.00	1.23	56	7.45	114	80	58	0	0	0	0	
	SAN FRANCISCO	63	49	65	44	56	2	0.60	-0.01	0.43	4.50	139	16.26	139	83	66	0	0	4	0	
	STOCKTON	68	45	71	39	56	0	0.20	-0.24	0.10	2.40	108	9.29	126	87	65	0	0	3	0	
CT	ALAMOSA	59	21	69	14	40	5	0.00	-0.11	0.00	1.18	311	2.71	323	72	20	0	7	0	0	
	CO SPRINGS	60	35	76	25	47	7	0.20	-0.07	0.20	1.21	133	2.17	141	83	29	0	3	1	0	
	DENVER INTL	57	32	73	25	45	4	0.27	0.10	0.11	1.39	172	2.86	225	88	42	0	5	3	0	
	GRAND JUNCTION	60	35	70	31	48	3	0.16	-0.06	0.15	2.29	254	3.73	187	69	44	0	1	2	0	
DC	PUEBLO	66	36	82	27	51	7	0.18	-0.07	0.14	1.31	158	2.05	144	82	53	0	1	2	0	
	BRIDGEPORT	52	35	63	28	43	1	0.00	-0.98	0.00	3.09	79	10.68	101	60	39	0	4	0	0	
	HARTFORD	54	31	70	22	43	2	0.15	-0.76	0.15	2.76	76	11.81	113	69	38	0	5	1	0	
	WASHINGTON	64	42	79	35	53	4	0.00	-0.77	0.00	3.95	114	10.77	116	70	29	0	0	0	0	
DE	WILMINGTON	60	36	76	25	48	3	0.11	-0.77	0.09	4.09	108	11.92	119	77	31	0	4	2	0	
	FL	77	57	83	54	67	1	0.04	-0.83	0.03	0.88	24	5.68	60	100	52	0	0	2	0	
	DAYTONA BEACH	76	51	82	43	64	1	0.40	-0.50	0.37	1.95	52	8.15	77	94	41	0	0	2	0	
	JACKSONVILLE	81	70	83	67	75	0	0.00	-0.45	0.00	1.80	106	4.84	89	82	59	0	0	0	0	
GA	KEY WEST	81	65	86	62	73	0	0.65	0.00	0.42	1.91	82	5.44	87	81	52	0	0	3	0	
	MIAMI	80	59	84	57	70	1	0.24	-0.56	0.24	0.64	19	5.90	73	88	43	0	0	1	0	
	PENSACOLA	73	51	78	48	62	-1	0.00	-1.41	0.00	1.49	24	6.60	41	92	54	0	0	0	0	
	TALLAHASSEE	77	47	81	41	62	-1	0.04	-1.35	0.03	3.01	48	7.60	47	95	53	0	0	2	0	
HI	TAMPA	79	61	82	57	70	1	0.00	-0.57	0.00	1.91	70	9.03	118	85	45	0	0	0	0	
	WEST PALM BEACH	80	65	83	60	72	1	0.20	-0.73	0.12	2.89	85	14.20	147	77	54	0	0	5	0	
	ATHENS	70	43	77	33	57	1	0.10	-0.94	0.10	1.99	41	10.94	79	81	37	0	0	1	0	
	ATLANTA	70	49	77	41	60	4	0.38	-0.74	0.34	2.07	40	12.44	83	71	40	0	0	2	0	
ID	AUGUSTA	75	41	81	35	58	0	0.61	-0.38	0.61	2.23	50	7.77	59	93	39	0	0	1	1	
	COLUMBUS	73	46	80	39	60	0	0.30	-0.93	0.19	2.46	44	9.61	65	85	32	0	0	2	0	
	MACON	74	43	80	34	58	0	0.38	-0.65	0.35	1.52	32	9.04	63	96	36	0	0	2	0	
	SAVANNAH	75	48	79	42	61	0	0.06	-0.82	0.06	1.70	50	5.14	50	92	38	0	0	1	0	
IL	HILO	79	63	82	61	71	-1	1.11	-2.40	0.61	4.65	34	17.15	53	81	66	0	0	4	1	
	HONOLULU	83	68	85	64	75	0	0.00	-0.34	0.00	0.09	5	2.59	37	75	63	0	0	0	0	
	KAHULUI	84	65	85	60	75	2	0.01	-0.51	0.01	0.61	28	8.11	98	76	64	0	0	1	0	
	LIHUE	79	65	82	60	72	-1	0.63	-0.15	0.37	1.11	32	4.57	41	85	74	0	0	5	0	
IN	BOISE	58	39	62	34	48	2	1.00	0.70	0.52	1.33	104	6.12	161	83	58	0	0	4	1	
	LEWISTON	55	40	61	35	48	2	0.58	0.33	0.26	0.89	89	4.88	158	87	68	0	0	5	0	
	POCATELLO	52	30	63	25	41	1	0.53	0.24	0.28	1.25	98	4.85	141	88	66	0	5	3	0	
	CHICAGO/O'HARE	52	32	65	23	42	2	0.45	-0.25	0.31	2.09	88	6.96	121	77	42	0	4	4	0	
IA	MOLINE	56	37	68	24	47	5	0.46	-0.30	0.25	2.13	81	8.91	155	70	48	0	3	3	0	
	PEORIA	56	37	71	24	46	3	1.95	1.27	0.70	4.34	166	9.99	173	86	48	0	2	6	2	
	ROCKFORD	53	32	66	22	42	2	0.47	-0.18	0.25	2.09	99	8.39	172	79	42	0	4	3	0	
	SPRINGFIELD	58	37	73	24	47	2	1.94	1.20	0.60	3.51	119	9.54	150	94	53	0	3	6	2	
KS	EVANSVILLE	61	40	72	29	50	1	2.63	1.64	1.38	7.27	179	18.66	185	85	56	0	2	4	2	
	FORT WAYNE	55	33	65	25	44	3	2.08	1.37	1.15	3.95	150	8.49	128	90	52	0	5	4	1	
	INDIANAPOLIS	56	37	70	27	46	1	2.27	1.47	0.99	5.05	156	12.54	154	86	48	0	3	5	1	
	SOUTH BEND	52	29	61	19	41	0	1.03	0.30	0.45	2.18	83	7.17	104	78	50	0	5	5	0	
LA	BURLINGTON	56	39	69	27	47	3	1.77	1.05	1.03	3.32	122	7.93	142	79	44	0	2	3	2	
	CEDAR RAPIDS	53	33	64	23	43	3	0.44	-0.15	0.											

Weather Data for the Week Ending March 30, 2019

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	PRECIP		
																			.01 INCH OR MORE	.50 INCH OR MORE	
KY	WICHITA	63	41	75	33	52	3	0.15	-0.48	0.14	2.56	102	4.70	108	83	62	0	0	2	0	
	JACKSON	67	41	79	29	54	4	0.58	-0.34	0.38	2.36	56	15.49	135	70	27	0	1	2	0	
	LEXINGTON	64	37	73	28	51	3	1.10	0.16	0.78	2.87	68	14.61	135	65	45	0	2	3	1	
	LOUISVILLE	65	41	75	32	53	3	1.65	0.69	1.21	3.56	84	15.96	148	77	34	0	1	4	1	
LA	PADUCAH	65	42	73	28	53	2	1.66	0.69	1.00	6.27	154	21.47	187	74	48	0	1	3	1	
	BATON ROUGE	78	51	82	44	64	2	0.19	-0.99	0.12	1.10	23	8.00	50	92	41	0	0	3	0	
	LAKE CHARLES	76	54	81	47	65	2	0.53	-0.28	0.45	0.70	21	8.62	71	89	54	0	0	2	0	
	NEW ORLEANS	78	56	83	51	67	3	0.00	-1.20	0.00	1.51	30	12.02	74	85	51	0	0	0	0	
ME	SHREVEPORT	73	50	77	41	62	2	0.74	-0.17	0.63	2.37	59	10.01	78	92	49	0	0	3	1	
	CARIBOU	38	15	45	4	26	-3	0.05	-0.53	0.03	1.21	51	9.77	132	73	38	0	7	2	0	
MD	PORTLAND	46	27	55	19	37	1	0.04	-0.95	0.04	2.46	63	11.94	107	75	41	0	6	1	0	
MA	BALTIMORE	62	35	77	28	49	3	0.00	-0.84	0.00	3.69	98	10.88	106	74	31	0	4	0	0	
MI	BOSTON	54	35	67	30	45	4	0.04	-0.84	0.03	2.86	79	10.23	94	64	36	0	3	2	0	
	WORCESTER	50	30	64	25	40	3	0.14	-0.84	0.14	2.80	70	11.36	102	73	32	0	5	1	0	
MN	ALPENA	43	24	52	14	33	2	0.25	-0.26	0.24	1.34	68	6.47	128	77	41	0	6	2	0	
	GRAND RAPIDS	53	30	61	21	41	3	0.33	-0.36	0.25	2.16	93	9.05	154	76	36	0	5	2	0	
	HOUGHTON LAKE	46	22	53	14	34	1	0.24	-0.27	0.24	1.71	92	6.72	142	80	38	0	6	1	0	
	LANSING	52	30	67	22	41	4	0.42	-0.21	0.36	1.96	95	6.84	133	78	46	0	5	2	0	
MS	MUSKEGON	51	29	56	19	40	3	0.31	-0.29	0.17	3.14	147	10.91	184	72	39	0	5	2	0	
	TRAVERSE CITY	45	25	53	17	35	1	0.00	-0.53	0.00	1.29	73	8.25	126	77	37	0	7	0	0	
	DULUTH	44	23	58	11	33	4	0.13	-0.32	0.12	1.21	81	4.29	125	71	46	0	6	2	0	
	INT'L FALLS	40	17	55	5	29	1	0.01	-0.23	0.01	0.81	99	3.75	163	85	40	0	6	1	0	
MO	MINNEAPOLIS	51	30	64	25	40	4	0.00	-0.49	0.00	2.02	122	5.54	159	68	41	0	5	0	0	
	ROCHESTER	48	30	61	23	39	4	0.01	-0.52	0.01	1.41	87	6.31	190	81	54	0	4	1	0	
	ST. CLOUD	46	25	62	20	36	4	0.00	-0.43	0.00	1.70	133	4.06	154	88	41	0	6	0	0	
	JACKSON	74	46	78	37	60	1	0.81	-0.56	0.71	3.89	72	13.53	87	86	41	0	0	2	1	
MT	MERIDIAN	76	46	79	37	61	2	0.77	-0.78	0.45	3.00	45	15.10	84	84	44	0	0	2	0	
	TUPELO	72	44	76	32	58	3	0.52	-0.85	0.28	2.74	45	23.76	150	77	51	0	1	2	0	
	COLUMBIA	61	43	70	33	53	6	2.09	1.33	0.93	4.53	152	11.49	166	87	51	0	0	4	2	
	KANSAS CITY	57	41	73	30	49	2	1.74	1.18	0.87	3.29	146	7.52	160	90	57	0	1	4	2	
NE	SAINT LOUIS	63	43	71	31	53	4	3.12	2.29	1.66	5.80	173	12.29	158	75	57	0	1	5	3	
	SPRINGFIELD	65	44	75	31	54	5	0.85	-0.10	0.40	3.40	97	9.14	116	83	64	0	1	4	0	
	BILLINGS	53	34	68	30	44	5	0.10	-0.18	0.10	0.22	22	3.17	134	84	44	0	2	1	0	
	BUTTE	43	25	51	13	34	1	0.50	0.31	0.31	0.71	96	1.89	109	88	55	0	7	4	0	
NV	CUT BANK	47	26	57	20	36	3	0.23	0.09	0.15	0.29	63	1.02	90	94	50	0	7	2	0	
	GLASGOW	48	31	58	25	39	4	0.16	0.05	0.15	0.17	44	2.17	217	79	63	0	5	2	0	
	GREAT FALLS	47	30	59	25	38	2	0.21	-0.03	0.15	0.56	63	4.12	198	96	55	0	7	2	0	
	HAVRE	50	28	60	23	39	3	0.14	-0.01	0.14	0.23	38	2.13	148	93	64	0	6	1	0	
NH	MISSOULA	48	29	55	23	39	-1	0.35	0.16	0.27	0.52	61	3.17	118	86	69	0	5	3	0	
	GRAND ISLAND	54	38	76	25	46	4	0.28	-0.23	0.22	3.45	188	4.90	160	89	70	0	2	2	0	
	LINCOLN	56	38	76	24	47	4	0.57	0.01	0.39	2.49	126	5.47	165	88	65	0	1	4	0	
	NORFOLK	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	
NJ	NORTH PLATTE	55	33	76	17	44	4	1.11	0.81	1.03	2.68	244	3.44	172	91	51	0	3	2	1	
	OMAHA	55	41	76	30	48	5	0.40	-0.13	0.25	2.68	140	5.83	167	76	61	0	1	2	0	
	SCOTTSBLUFF	55	33	72	27	44	5	0.21	-0.08	0.10	1.66	163	2.32	108	90	75	0	2	3	0	
	VALENTINE	52	32	72	20	42	4	0.07	-0.20	0.04	1.84	190	3.06	175	84	54	0	3	2	0	
NM	ELY	51	25	58	15	38	0	0.08	-0.14	0.05	3.27	337	5.92	241	79	47	0	5	2	0	
	LAS VEGAS	75	53	82	50	64	4	0.00	-0.08	0.00	0.36	64	3.45	188	38	21	0	0	0	0	
	RENO	59	35	65	29	47	3	0.11	-0.03	0.11	1.12	135	7.88	267	65	36	0	3	1	0	
	WINNEMUCCA	58	31	65	21	45	3	0.04	-0.15	0.04	1.34	172	4.02	180	80	44	0	3	1	0	
NY	CONCORD	49	24	56	15	37	0	0.18	-0.53	0.18	1.47	52	8.01	98	79	35	0	7	1	0	
	NEWARK	56	37	71	30	47	2	0.00	-0.96	0.00	4.17	105	11.85	109	54	37	0	4	0	0	
	ALBUQUERQUE	70	43	79	34	57	7	0.00	-0.11	0.00	0.61	113	1.78	121	43	15	0	0	0	0	
	ALBANY	54	30	71	21	42	4	0.24	-0.50	0.24	1.23	43	8.20	109	64	25	0	4	1	0	
NC	BINGHAMTON	48	28	62	19	38	2	0.25	-0.45	0.24	1.40	51	7.63	98	71	42	0	5	2	0	
	BUFFALO	49	29	61	21	39	2	1.09	0.39	1.04	2.33	84	11.32	135	74	37	0	4	2	1	
	ROCHESTER	52	30	67	20	41	4	0.31	-0.30	0.31	1.16	49	6.63	98	65	36	0	4	1	0	
	SYRACUSE	52	30	68	21	41	4	0.01	-0.73	0.01	1.43	51	7.53	100	69	29	0	4	1	0	
ND	ASHEVILLE	65	37	73	30	51	3	0.14	-0.86	0.14	2.46	56	14.65	119	83	37	0	3	1	0	
	CHARLOTTE	69	41	77	28	55	0	0.31	-0.62	0.31	3.02	71	13.55	115	79	31	0	1	1	0	
	GREENSBORO	67	41	76	32	54	2	0.17	-0.67	0.17	3.17	86	13.07	127	75	32	0	1	1	0	
	HATTERAS	64	47	71	41	56	2	0.00	-1.09	0.00	2.72	57	12.73	88	90	50	0	0	0	0	
OH	RALEIGH	67	40	76	30	54	1	0.62	-0.21	0.54	3.20	82	10.89	95	82	37	0	3	2	1	
	WILMINGTON	70	41	79	35	55	-2	0.00	-0.87	0.00	3.09	76	6.92	56	90	35	0	0	0	0	
	BISMARCK	44	26	57	21	35	2	0.00	-0.21	0.00	1.11	154	2.91	173	88	67	0	6	0	0	
	DICKINSON	45	26	53	15	36	3	0.00	-0.22	0.00	0.00	0	2.39	181	93	55	0	7	0	0	
OH	FARGO	38	23	45	19	30	-2	0.00	-0.28	0.00	1.40	136	3.97	167	93	70	0	6	0	0	
	GRAND FORKS	37	20	46	9	29	-1	0.00	-0.22	0.00	0.84	108	3.71	182	88	59	0				

Weather Data for the Week Ending March 30, 2019

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	
OK	TOLEDO	55	31	68	23	43	2	1.79	1.13	1.55	3.53	148	7.90	127	72	45	0	4	3	1	
	YOUNGSTOWN	55	31	61	20	43	3	1.80	1.06	1.19	3.56	126	11.02	153	71	51	0	4	5	2	
	OKLAHOMA CITY	66	45	75	36	55	1	0.37	-0.26	0.37	2.70	99	5.24	94	91	53	0	0	1	0	
OR	TULSA	68	47	77	33	57	3	0.51	-0.30	0.51	3.48	103	8.55	124	81	60	0	0	1	1	
	ASTORIA	57	37	62	33	47	1	1.01	-0.54	0.46	2.48	34	15.06	61	96	76	0	0	4	0	
	BURNS	53	31	59	26	42	3	0.28	0.04	0.21	1.28	108	5.52	159	85	63	0	5	4	0	
PA	EUGENE	60	37	64	33	49	2	0.25	-0.94	0.19	1.09	19	12.32	63	90	79	0	0	4	0	
	MEDFORD	60	39	66	33	50	2	0.25	-0.12	0.12	0.94	53	8.93	141	91	41	0	0	3	0	
	PENDLETON	56	37	64	34	46	-1	0.76	0.49	0.57	1.23	104	6.08	158	87	73	0	0	2	1	
	PORTLAND	61	41	69	35	51	3	0.62	-0.13	0.33	1.54	43	8.43	66	87	61	0	0	3	0	
	SALEM	61	39	68	33	50	3	0.58	-0.24	0.41	1.70	41	11.72	78	90	71	0	0	4	0	
	ALLENTOWN	59	33	77	23	46	4	0.00	-0.80	0.00	4.91	146	12.72	132	61	34	0	4	0	0	
	ERIE	51	31	61	22	41	2	1.72	0.96	1.27	3.27	113	10.05	131	69	54	0	4	3	1	
	MIDDLETOWN	59	35	76	26	47	3	0.20	-0.50	0.18	4.76	152	11.64	131	75	33	0	4	2	0	
	PHILADELPHIA	60	38	75	30	49	3	0.14	-0.73	0.14	3.76	104	11.05	112	63	36	0	2	1	0	
	PITTSBURGH	56	33	67	23	44	1	0.77	0.05	0.28	2.17	73	10.46	130	81	32	0	4	4	0	
	WILKES-BARRE	55	32	72	21	43	2	0.25	-0.40	0.25	2.78	112	9.02	128	71	27	0	5	1	0	
	WILLIAMSPORT	54	33	70	21	43	2	0.13	-0.63	0.13	2.13	71	9.40	111	71	38	0	4	1	0	
RI	PROVIDENCE	53	33	64	26	43	1	0.00	-1.05	0.00	3.28	79	13.70	114	62	45	0	4	0	0	
	CHARLESTON	72	45	80	40	59	-1	0.05	-0.86	0.04	0.68	18	3.04	28	91	36	0	0	2	0	
	COLUMBIA	72	42	80	31	57	-1	0.16	-0.85	0.16	2.65	60	6.60	51	95	36	0	1	1	0	
SD	FLORENCE	71	42	79	35	57	-1	0.24	-0.64	0.24	2.53	66	7.04	64	89	31	0	0	1	0	
	GREENVILLE	68	42	76	34	55	1	0.21	-0.89	0.21	2.78	54	15.03	109	74	36	0	0	1	0	
	ABERDEEN	40	25	52	23	33	-2	0.04	-0.31	0.04	1.14	97	3.58	168	90	72	0	7	1	0	
TN	HURON	46	29	56	23	38	2	0.00	-0.43	0.00	2.09	142	4.17	165	87	60	0	6	0	0	
	RAPID CITY	47	32	66	23	40	3	0.06	-0.20	0.05	0.70	79	2.18	127	88	59	0	2	2	0	
	SIOUX FALLS	52	32	69	23	42	6	0.00	-0.50	0.00	3.64	230	6.16	237	81	55	0	5	0	0	
TX	BRISTOL	65	36	75	29	50	1	0.30	-0.51	0.27	3.30	88	18.06	169	85	34	0	3	2	0	
	CHATTANOOGA	70	43	75	36	57	3	0.66	-0.68	0.35	5.96	100	24.27	150	82	40	0	0	2	0	
	KNOXVILLE	68	42	78	34	55	3	0.41	-0.70	0.30	3.83	77	21.89	161	80	40	0	0	2	0	
WA	MEMPHIS	68	48	75	38	58	2	0.55	-0.74	0.21	4.11	78	17.64	127	83	45	0	0	3	0	
	NASHVILLE	70	43	74	31	56	3	0.65	-0.40	0.44	3.59	77	22.00	178	69	34	0	1	3	0	
	ABILENE	77	52	85	42	65	6	0.00	-0.30	0.00	1.29	99	2.39	70	85	57	0	0	0	0	
	AMARILLO	69	40	84	27	54	4	0.01	-0.27	0.01	2.15	215	2.49	114	89	41	0	1	1	0	
	AUSTIN	79	53	83	43	66	2	0.00	-0.42	0.00	0.52	25	4.39	74	81	56	0	0	0	0	
	BEAUMONT	78	56	86	51	67	3	0.44	-0.44	0.33	0.81	23	10.33	82	87	57	0	0	2	0	
	BROWNSVILLE	82	65	85	63	74	4	0.01	-0.24	0.01	1.80	228	3.70	111	97	65	0	0	1	0	
	CORPUS CHRISTI	82	60	85	57	71	3	0.00	-0.36	0.00	0.23	14	2.64	52	90	57	0	0	0	0	
	DEL RIO	78	61	82	54	70	4	0.00	-0.21	0.00	0.45	52	0.70	29	85	69	0	0	0	0	
	EL PASO	81	53	87	44	67	8	0.00	-0.03	0.00	0.25	119	0.47	45	37	12	0	0	0	0	
	FORT WORTH	74	54	83	46	64	4	0.41	-0.21	0.40	2.04	69	4.91	68	80	46	0	0	2	0	
	GALVESTON	74	61	76	53	68	2	0.53	-0.10	0.43	0.95	37	8.83	95	91	63	0	0	2	0	
WV	HOUSTON	79	55	87	50	67	3	0.03	-0.74	0.03	0.50	16	6.61	67	94	62	0	0	1	0	
	LUBBOCK	75	44	87	33	60	6	0.00	-0.17	0.00	1.13	174	1.19	64	82	50	0	0	0	0	
	MIDLAND	79	52	89	44	66	8	0.00	-0.06	0.00	0.81	213	0.95	64	87	43	0	0	0	0	
	SAN ANGELO	78	52	88	44	65	6	0.00	-0.19	0.00	0.66	71	1.26	43	80	51	0	0	0	0	
	SAN ANTONIO	79	58	86	51	69	5	0.01	-0.40	0.01	0.49	27	2.59	50	85	48	0	0	1	0	
	VICTORIA	81	57	87	51	69	3	0.00	-0.50	0.00	0.07	3	4.86	74	94	54	0	0	0	0	
	WACO	74	53	78	45	63	2	0.00	-0.48	0.00	1.39	58	6.97	104	87	59	0	0	0	0	
	WICHITA FALLS	72	47	80	37	60	4	0.00	-0.51	0.00	2.57	121	4.46	93	92	55	0	0	0	0	
	SALT LAKE CITY	58	38	66	32	48	3	1.20	0.76	0.69	3.06	172	6.08	136	81	37	0	2	3	1	
	BURLINGTON	47	24	62	15	35	1	0.04	-0.53	0.03	2.06	98	7.68	128	68	34	0	6	2	0	
	LYNCHBURG	66	34	77	25	50	1	0.05	-0.79	0.04	3.53	96	11.18	109	70	29	0	3	2	0	
	NORFOLK	66	43	79	34	54	3	0.42	-0.48	0.37	2.38	61	10.88	97	85	38	0	0	2	0	
WI	RICHMOND	67	38	77	28	52	2	0.29	-0.60	0.29	3.86	98	11.47	110	76	31	0	3	1	0	
	ROANOKE	67	38	77	28	52	2	0.09	-0.76	0.09	1.81	49	10.33	104	64	31	0	3	1	0	
	WASH/DULLES	63	34	77	24	48	2	0.00	-0.79	0.00	4.52	134	11.98	130	77	35	0	4	0	0	
	OLYMPIA	60	32	67	29	46	2	0.49	-0.61	0.26	1.39	27	11.43	61	96	70	0	3	3	0	
	QUILLAYUTE	58	34	64	31	46	2	0.34	-1.89	0.22	1.51	14	22.58	61	93	68	0	2	2	0	
	SEATTLE-TACOMA	61	43	66	41	52	5	0.20	-0.58	0.16	1.37	38	9.82	76	78	59	0	0	2	0	
	SPOKANE	52	36	58	32	44	2	0.19	-0.12	0.14	0.67	46	4.82	101	88	51	0	2	3	0	
	YAKIMA	58	34	63	30	46	2	0.32	0.18	0.24	0.62	100	4.45	172	87	62	0	4	2	0	
	BECKLEY	62	38	72	27	50	5	0.04	-0.74	0.04	2.35	68	13.81	143	64	38	0	3	1	0	
	CHARLESTON	66	39	79	26	53	5	0.16	-0.67	0.13	1.51	40	10.64	104	68	28	0	3	2	0	
	ELKINS	63	32	75	19	47	4	0.07	-0.78	0.07	1.91	51	9.63	93	77	42	0	4	1	0	
	HUNTINGTON	66	38	77	28	52	3	0.48	-0.33	0.39	2.08	56	11.26	113	68	28	0	3	2	0	
WY	EAU CLAIRE	47	26	58	14	36	1	0.00	-0.52	0.00	0.73	45	5.53	160	77	35	0	6	0	0	
	GREEN BAY	48	28	56	22	38	3	0.00	-0.54	0.00	1.66	91	6.71	166	79	43	0	5	0	0	
	LA CROSSE	53																			

National Agricultural Summary

March 25 - 31, 2019

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

The last week of March saw precipitation stretch from the Northwest to the lower Great Lakes. Showers and thunderstorms dropped the heaviest rain from the middle Mississippi Valley into the lower Great Lakes, with parts of Missouri, Illinois, Indiana, and Ohio receiving more than an inch. Despite the wet conditions across much of the country, parts of New Mexico and the Northwest remained in

drought. In late March, colder-than-normal weather covered parts of the Atlantic Coast States and California. Temperatures along Minnesota and North Dakota's border with Canada averaged below freezing but were close to normal. New Mexico and western Texas were much warmer than average for this time of year, with temperatures averaging at least 6°F above normal.

Cotton: Nationwide, 4 percent of the cotton acreage had been planted by week's end, 2 percentage points behind the previous year but 1 point ahead of the 5-year average. Planting was ahead of normal in Arizona, with 26 percent of the acreage planted compared with the 5-year average of 20 percent. The only other state reporting cotton planted by March 31 was Texas. Seven percent of Texas' acreage was planted, 2 percentage points ahead of the state's 5-year average pace.

Sorghum: Thirteen percent of the nation's sorghum acreage was planted by March 31, five percentage points ahead of the previous year and 4 points ahead of the 5-year average. Only Texas reported planted acres by the end of March. Texas sorghum planting was 43 percent complete, compared with the 5-year average of 31 percent.

Rice: By week's end, producers had seeded 12 percent of the 2019 rice acreage, 3 percentage points behind the previous year but equal to the 5-year average. Rice planting

advanced 24 percentage points in Louisiana during the week, with 49 percent planted overall by March 31. With significant progress limited to Louisiana, 2 percent of the nation's rice acreage was emerged, 3 percentage points behind the previous year and 1 point behind the average.

Winter Wheat: On March 31, fifty-six percent of the 2019 winter wheat acreage was reported in good to excellent condition, compared with 32 percent at the same time last year.

Small Grains: Nationally, oat producers had seeded 25 percent of this year's acreage by March 31, three percentage points ahead of the previous year but equal to the 5 year average. Planting had begun in Ohio and Pennsylvania by week's end and was 1 percent complete in both states. Planting was complete in Texas. Twenty-five percent of the nation's oat acreage was emerged, 4 percentage points ahead of the previous year and 2 points ahead of the 5-year average.

Crop Progress and Condition**Week Ending March 31, 2019**

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

Cotton Percent Planted				
	Prev Year	Prev Week	Mar 31 2019	5-Yr Avg
AL	0	NA	0	0
AZ	23	24	26	20
AR	0	NA	0	0
CA	0	NA	0	4
GA	0	NA	0	0
KS	0	NA	0	0
LA	0	NA	0	0
MS	0	NA	0	0
MO	0	NA	0	0
NC	0	NA	0	0
OK	0	NA	0	0
SC	0	NA	0	0
TN	0	NA	0	0
TX	11	3	7	5
VA	0	NA	0	0
15 Sts	6	NA	4	3
These 15 States planted 99% of last year's cotton acreage.				

Winter Wheat Condition by Percent					
	VP	P	F	G	EX
AR	3	14	36	42	5
CA	0	0	0	20	80
CO	0	5	29	50	16
ID	0	3	50	37	10
IL	4	8	37	45	6
IN	3	10	35	46	6
KS	2	7	36	46	9
MI	9	21	30	29	11
MO	2	10	56	29	3
MT	1	5	32	48	14
NE	1	4	26	63	6
NC	9	13	26	41	11
OH	5	21	46	26	2
OK	1	3	27	57	12
OR	2	6	28	26	38
SD	0	3	59	37	1
TX	4	14	41	33	8
WA	0	1	41	53	5
18 Sts	2	7	35	45	11
Prev Wk	NA	NA	NA	NA	NA
Prev Yr	11	19	38	28	4

Rice Percent Planted				
	Prev Year	Prev Week	Mar 31 2019	5-Yr Avg
AR	6	2	6	5
CA	0	NA	0	0
LA	59	25	49	45
MS	6	3	4	5
MO	0	NA	0	0
TX	59	15	17	29
6 Sts	15	NA	12	12
These 6 States planted 100% of last year's rice acreage.				

Oats Percent Planted				
	Prev Year	Prev Week	Mar 31 2019	5-Yr Avg
IA	2	NA	0	4
MN	0	NA	0	0
NE	9	NA	0	13
ND	0	NA	0	0
OH	0	NA	1	1
PA	0	NA	1	3
SD	0	NA	0	2
TX	100	100	100	100
WI	1	NA	0	1
9 Sts	22	NA	25	25
These 9 States planted 66% of last year's oat acreage.				

Sorghum Percent Planted				
	Prev Year	Prev Week	Mar 31 2019	5-Yr Avg
CO	0	NA	0	0
KS	0	NA	0	0
NE	0	NA	0	0
OK	0	NA	0	0
SD	0	NA	0	0
TX	41	35	43	31
6 Sts	8	NA	13	9
These 6 States planted 97% of last year's sorghum acreage.				

Rice Percent Emerged				
	Prev Year	Prev Week	Mar 31 2019	5-Yr Avg
AR	0	NA	0	0
CA	0	NA	0	0
LA	28	1	14	17
MS	1	NA	0	0
MO	0	NA	0	0
TX	18	NA	0	9
6 Sts	5	NA	2	3
These 6 States planted 100% of last year's rice acreage.				

Oats Percent Emerged				
	Prev Year	Prev Week	Mar 31 2019	5-Yr Avg
IA	0	NA	0	0
MN	0	NA	0	0
NE	0	NA	0	0
ND	0	NA	0	0
OH	0	NA	0	0
PA	0	NA	0	0
SD	0	NA	0	0
TX	100	100	100	100
WI	0	NA	0	0
9 Sts	21	NA	25	23
These 9 States planted 66% of last year's oat acreage.				

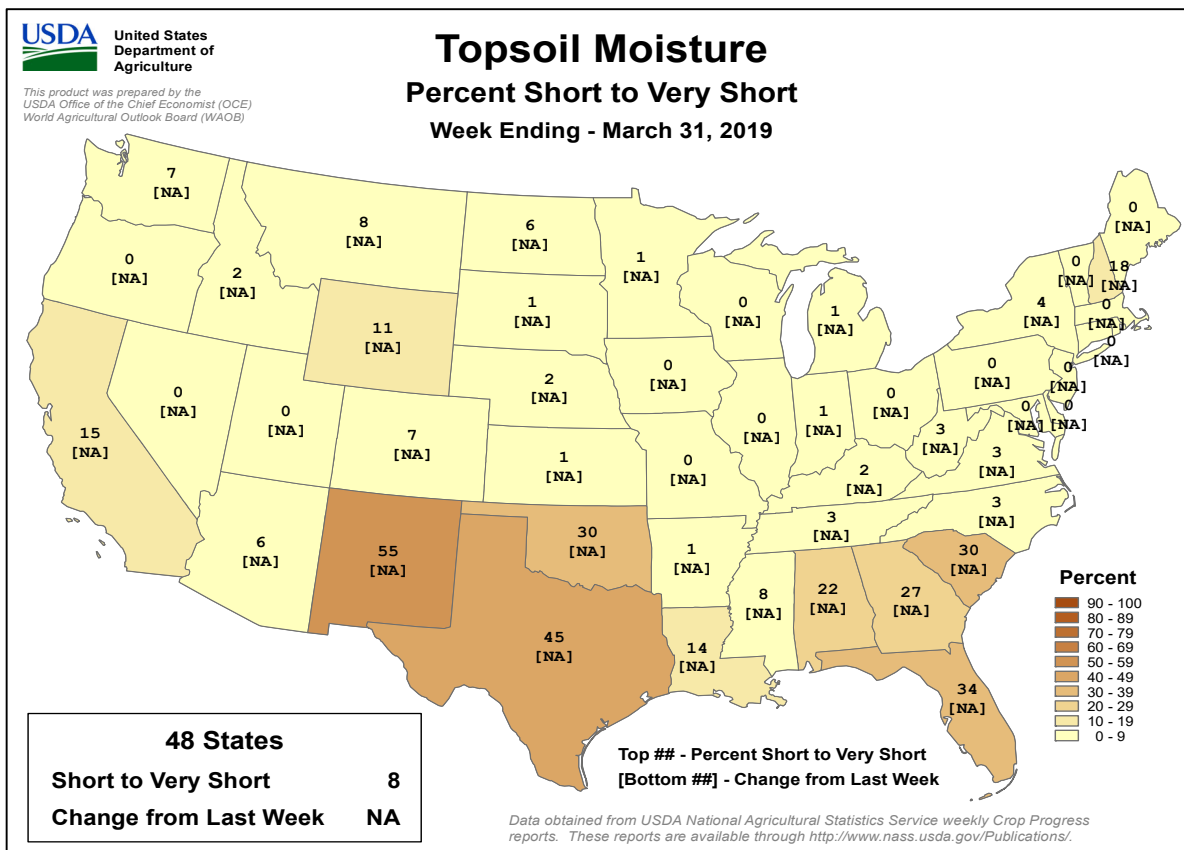
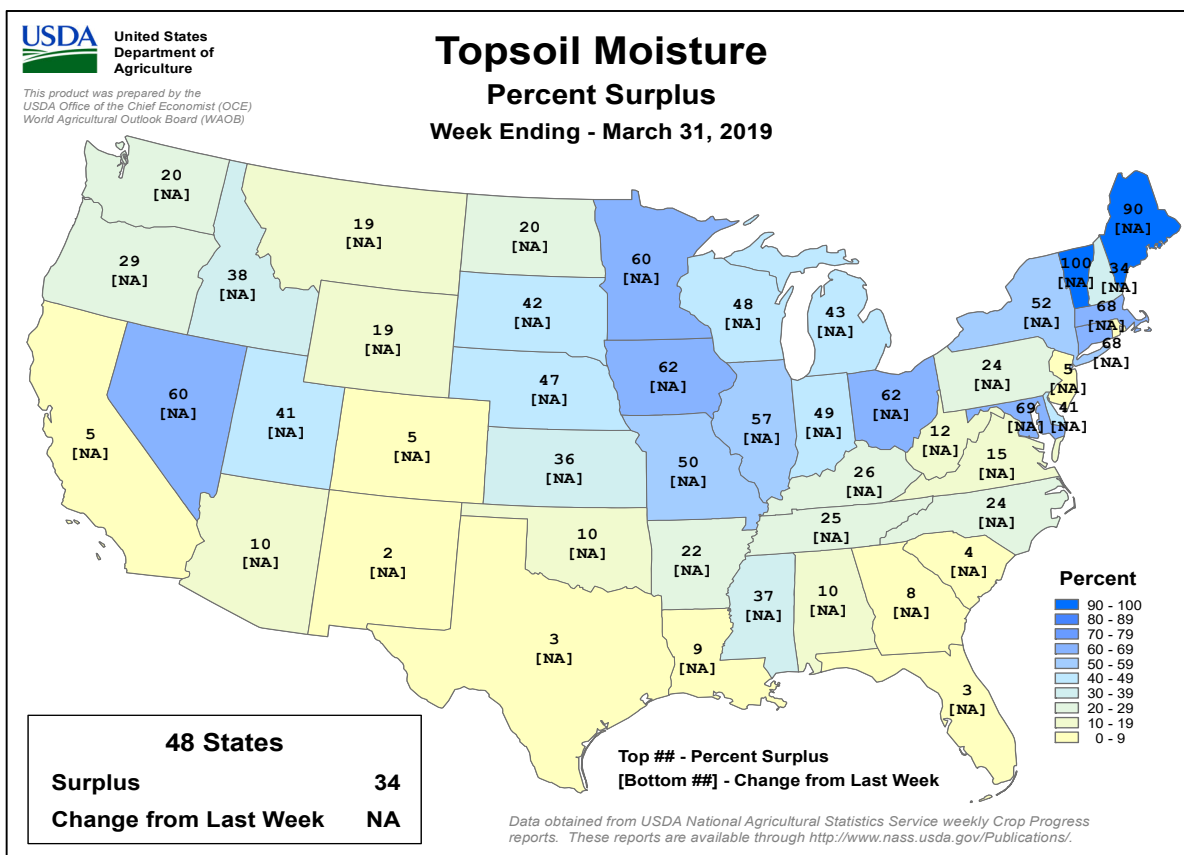
VP - Very Poor; P - Poor;
F - Fair;
G - Good; EX - Excellent

NA - Not Available
* Revised

Crop Progress and Condition

Week Ending March 31, 2019

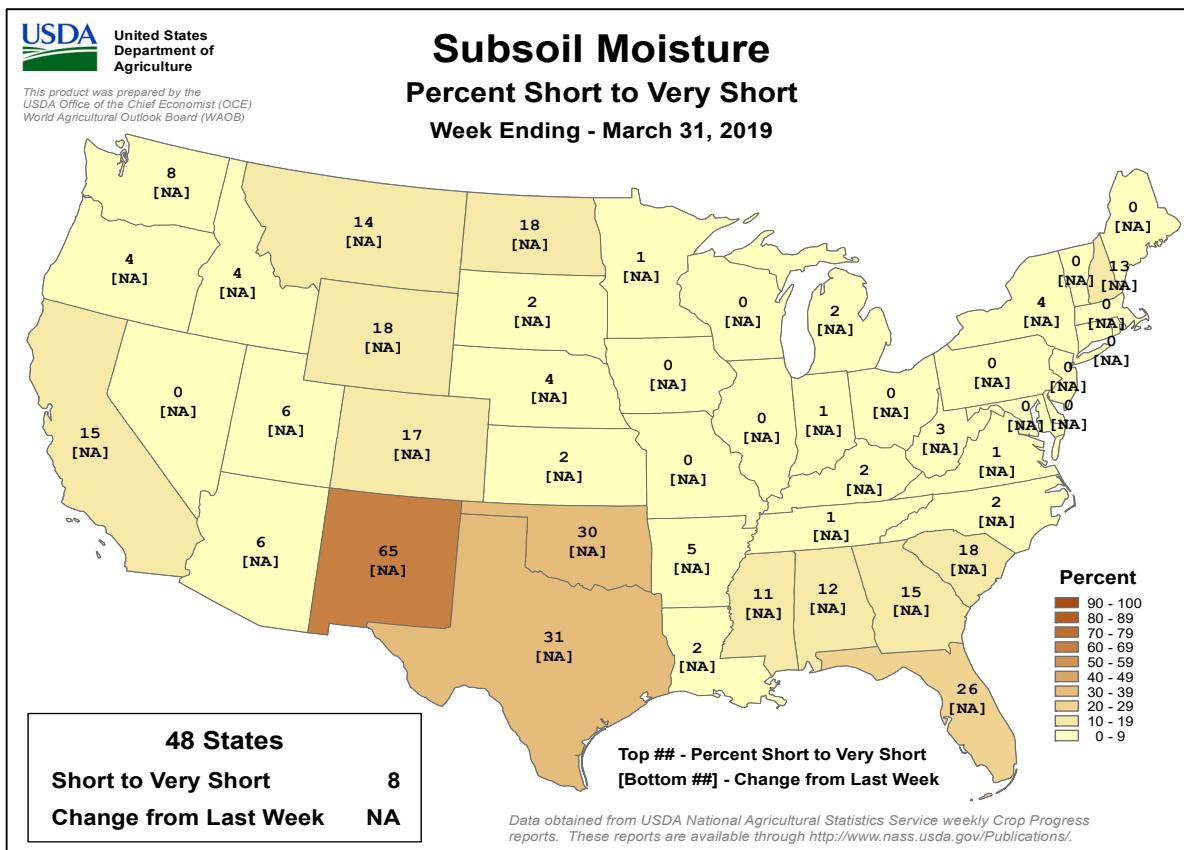
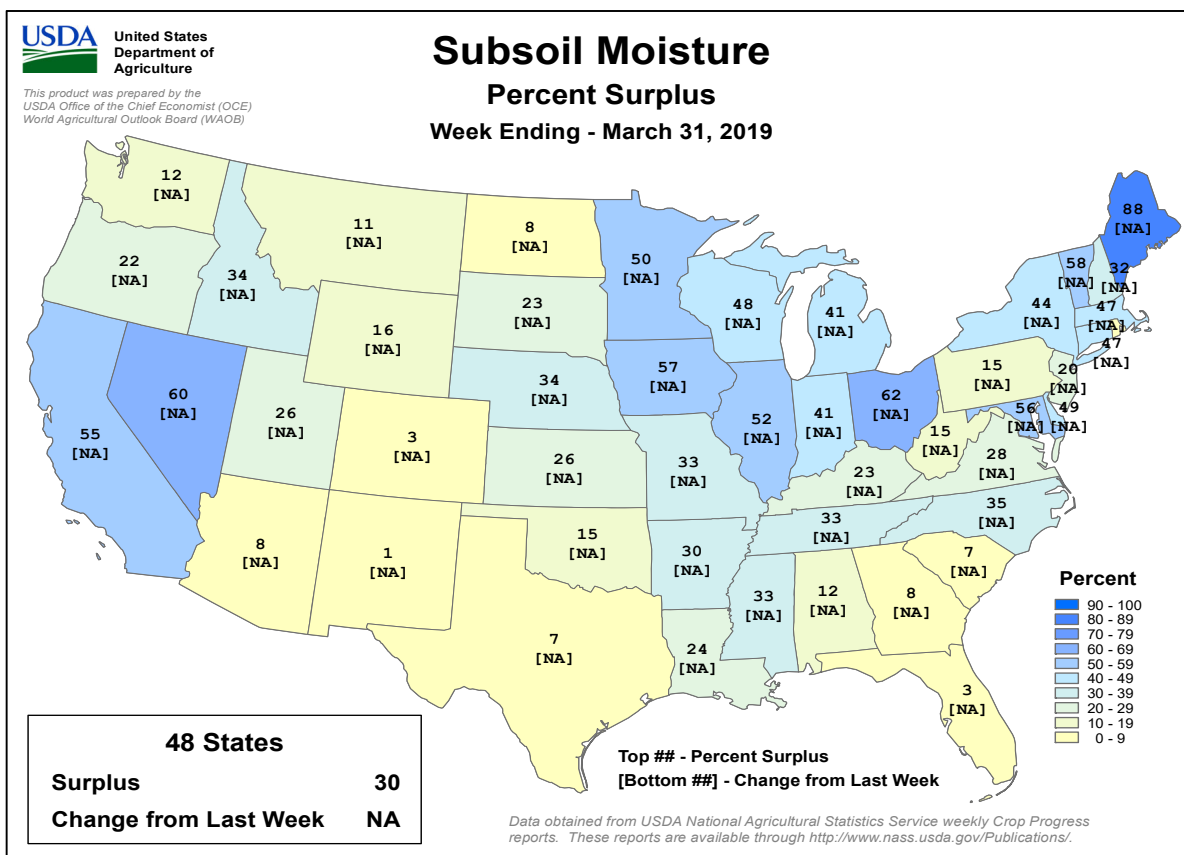
Weekly U.S. Progress and Condition Data provided by USDA/NASS



Crop Progress and Condition

Week Ending March 31, 2019

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



International Weather and Crop Summary

March 24-30, 2019

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

EUROPE: Drought concerns intensified across southern Europe, most notably on the Iberian Peninsula where winter grains are approaching reproduction.

WESTERN FSU: Cooler weather slowed winter wheat development in the south and kept northern crop areas under snow cover.

MIDDLE EAST: Heavy rain and mountain snow continued over central and eastern portions of the region, maintaining abundant to excessive moisture supplies for winter grains.

NORTHWESTERN AFRICA: Despite showers, drought-afflicted winter grains in Morocco have suffered considerable irreversible yield losses.

EAST ASIA: Showers in southeastern China benefited early-crop rice, while warmer-than-normal conditions spurred development of rapeseed and wheat.

SOUTHEAST ASIA: Tropical rainfall began the seasonal northward shift, bringing much-needed drought relief to Malaysia and the Philippines.

AUSTRALIA: Rain slowed summer crop drydown and harvesting but provided welcome drought relief in advance of winter crop sowing.

SOUTH AFRICA: Unseasonable warmth and dryness expanded across the corn belt, hastening maturation of summer crops.

ARGENTINA: Mild, sunny weather spurred late development of corn and soybeans in central Argentina.

BRAZIL: Widespread showers maintained overall favorable conditions for second-crop corn and cotton in Brazil's northern production areas.

March 2019

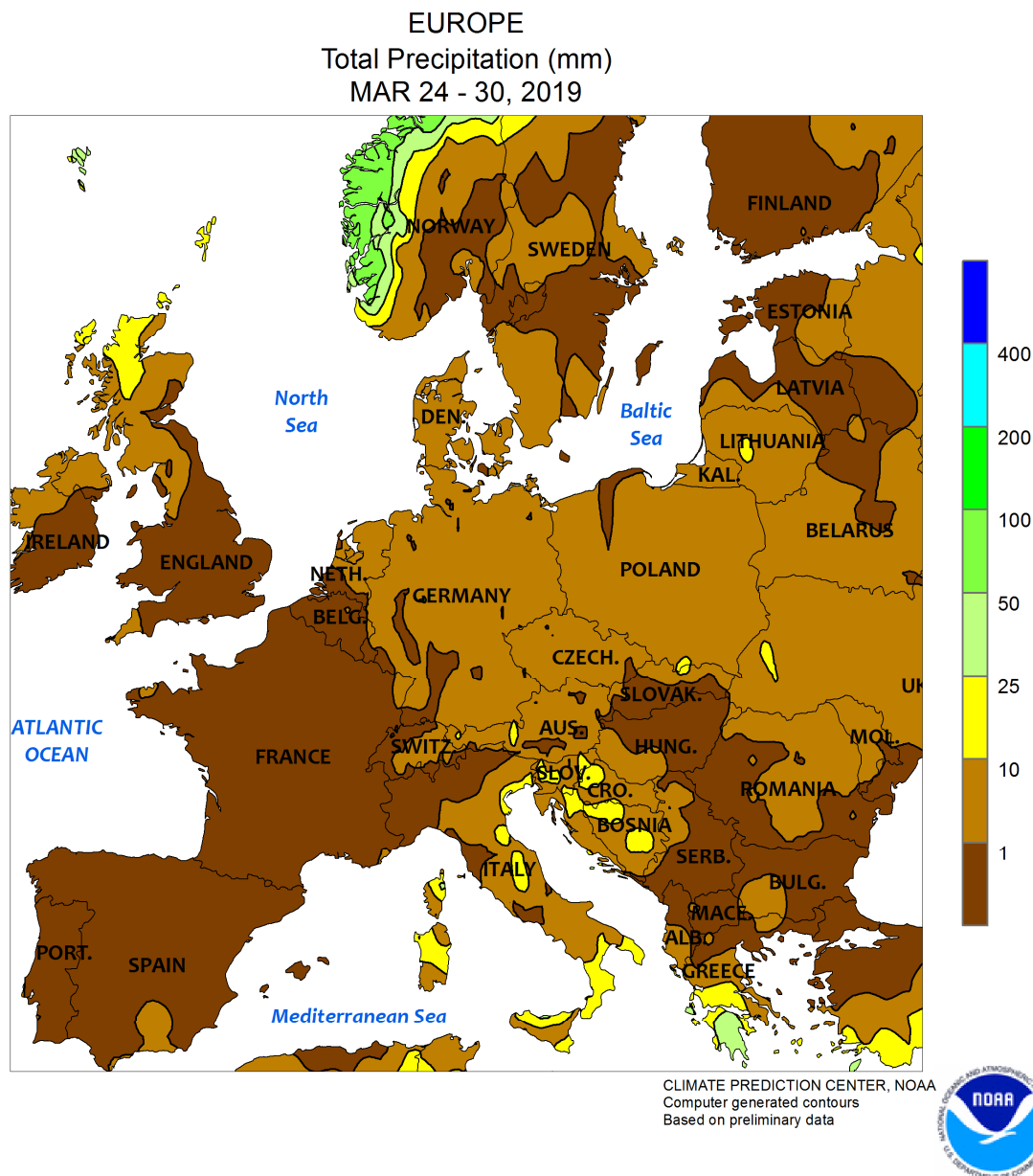
COUNTRY	CITY	TEMPERATURE (C)					PRECIP. (MM)		
		AVG MAX	AVG MIN	HI MAX	LO MIN	DEP AVG	DEP NRM	TOT	DEP NRM
ALGERI	ALGER	20	7	30	1	14	0.5	37	-23
	BATNA	17	2	25	-3	10	0.5	61	0
ARGENT	IGUAZU	29	19	35	14	24	-0.2	280	150
	FORMOSA	30	20	38	15	25	-0.4	215	62
	CERES	28	17	36	11	22	-0.4	172	32
	CORDOBA	24	14	32	8	19	-1.4	124	2
	RIO CUARTO	24	14	32	5	19	-1.5	247	133
	ROSARIO	26	15	32	6	20	-0.9	95	-37
	BUENOS AIRES	25	15	34	7	20	-0.5	148	54
	SANTA ROSA	26	11	33	3	19	-1	34	-52
	TRES ARROYOS	24	12	31	4	18	-0.2	40	-41
AUSTRA	DARWIN	33	25	35	22	29	1	112	-262
	BRISBANE	28	22	32	14	25	1.2	178	55
	PERTH	31	17	41	10	24	1.2	4	-10
	CEDUNA	26	15	44	6	20	0.4	0	-14
	ADELAIDE	25	16	39	10	20	0.4	8	-14
	MELBOURNE	26	14	39	7	20	1.9	9	-22
	WAGGA	29	15	38	7	22	1.6	67	26
	CANBERRA	26	12	34	3	19	1.5	76	26
AUSTRI	VIENNA	14	3	20	-5	8	2.9	56	17
	INNSBRUCK	13	1	20	-3	7	2.1	58	-1
BAHAMA	NASSAU	28	20	32	14	24	1.5	25	-24
BARBAD	BRIDGETOWN	29	24	29	22	27	0.5	53	17
BELARU	MINSK	7	0	16	-11	3	3.5	40	-4
BERMUD	ST GEORGES	20	17	24	13	18	-0.2	229	123
BOLIVI	LA PAZ	16	3	18	-1	9	0.5	40	-69
BRAZIL	FORTALEZA	30	24	31	23	27	-0.6	192	-118
	RECIFE	30	25	33	24	28	-1.3	172	-26
	CAMPO GRANDE	30	22	33	18	26	0.2	311	163
	FRANCA	27	19	31	17	23	0.6	253	46
	RIO DE JANEIRO	31	24	36	21	27	0.7	198	63
	LONDRINA	31	20	34	17	26	2	173	25
	SANTA MARIA	28	17	36	11	23	-0.4	138	-1
	TORRES	28	20	32	14	24	-2.2	228	120
BULGAR	SOFIA	15	2	24	-3	9	3.6	9	-26
BURKIN	OUAGADOUGOU	38	27	42	22	32	1.1	22	17
CANADA	LETHBRIDGE	4	-11	16	-39	-3	*****	4	*****
	REGINA	0	-13	16	-34	-6	*****	1	*****
	WINNIPEG	-1	-10	9	-26	-6	*****	2	*****
	TORONTO	3	-5	13	-15	-1	-0.8	64	8
	MONTREAL	1	-7	10	-19	-3	-0.7	71	2
	PRINCE ALBERT	0	-13	10	-31	-7	0.5	2	-14
	CALGARY	4	-9	17	-31	-3	-0.7	7	-10
	VANCOUVER	11	1	17	-4	6	-0.7	34	-80
CANARY	LAS PALMAS	21	16	24	13	19	-0.1	18	2
CHILE	SANTIAGO	29	11	32	8	20	2	3	-2
CHINA	HARBIN	7	-6	17	-14	0	3.3	13	4
	HAMI	16	-1	24	-7	7	2.8	0	-1
	BEIJING	16	3	25	-3	10	3.6	3	-6
	TIENTSIN	16	4	26	-1	10	3.8	5	-2
	LHASA	13	-1	20	-8	6	0.9	6	3
	KUNMING	22	7	26	4	15	1.3	5	-14
	CHENGCHOW	19	6	26	0	13	4.6	3	-26
	YEHCHANG	18	8	30	3	13	2.3	83	23
	HANKOW	18	8	26	2	13	2.6	58	-31
	CHUNGKING	18	12	30	8	15	1.8	60	22
	CHIHKIANG	17	9	32	4	13	2.6	121	43
	WU HU	17	8	26	2	12	2.9	60	-34
	SHANGHAI	16	7	27	1	12	2.7	47	-39
	NANCHANG	17	11	31	5	14	2.9	252	77
	TAIPEI	23	18	32	12	20	1.5	173	-23
	CANTON	23	17	29	12	20	2.2	193	107
	NANNING	21	16	30	10	19	0.9	145	88
COLOMB	BOGOTA	20	11	23	8	16	1.9	176	117
COTE D	ABIDJAN	***	***	34	26	***	*****	*****	*****
CUBA	CAMAGUEY	30	20	33	18	25	1	326	285
CYPRUS	LARNACA	20	9	24	4	15	1.3	40	-3
CZECHR	PRAGUE	11	3	19	0	7	3.3	27	-2
DENMAR	COPENHAGEN	9	3	15	-4	6	2.9	88	52
EGYPT	CAIRO	23	14	29	10	18	0.6	7	1

Based on Preliminary Reports

March 2019

COUNTRY	CITY	TEMPERATURE (C)					PRECIP. (MM)			COUNTRY	CITY	TEMPERATURE (C)					PRECIP. (MM)		
		AVG MAX	AVG MIN	HI MAX	LO MIN	DEP AVG	NRM	TOT	DEP NRM			AVG MAX	AVG MIN	HI MAX	LO MIN	DEP AVG	NRM	TOT	DEP NRM
ESTONI	TALLINN	4	-2	12	-17	1	2.1	61	26	MOZAMB	MAPUTO	33	23	39	21	28	2.2	110	12
ETHIOP	ADDIS ABABA	26	14	29	12	20	2.1	54	-14	N KORE	PYONGYANG	11	0	18	-3	6	2.1	25	-5
F GUIA	CAYENNE	31	23	32	22	27	1.1	36	-307	NEW CA	NOUMEA	30	24	33	23	27	1.6	21	-128
FIJI	NAUSORI	31	23	33	22	27	0.7	429	40	NIGER	NIAMEY	39	25	43	19	32	1.3	0	-3
FINLAN	HELSINKI	3	-4	13	-16	-1	1.4	63	28	NORWAY	OSLO	4	-3	13	-15	1	1.9	48	-9
FRANCE	PARIS/ORLY	14	6	21	0	10	1.7	42	0	NZEALA	AUCKLAND	25	16	28	12	20	*****	60	*****
	STRASBOURG	15	4	22	-2	9	2.9	42	6		WELLINGTON	21	14	24	9	18	*****	77	*****
	BOURGES	15	5	21	-1	10	2.4	40	-13	P RICO	SAN JUAN	30	23	33	21	26	1.1	28	-26
	BORDEAUX	17	7	23	2	12	2.5	29	-42	PAKIST	KARACHI	32	19	40	13	25	0.8	3	-8
	TOULOUSE	17	5	22	0	11	2.1	7	-46	PERU	LIMA	28	21	31	19	24	1.3	0	0
GABON	MARSEILLE	18	6	24	1	12	1.7	1	-43	PHILIP	MANILA	33	25	34	23	29	0.3	3	-15
	LIBREVILLE	31	***	32	24	***	*****	89	-316	PNEWGU	PORT MORESBY	30	25	33	21	27	0.7	355	167
GERMAN	HAMBURG	10	5	18	-1	7	2.9	91	28	POLAND	WARSAW	10	3	17	-5	6	3.8	28	-2
	BERLIN	11	5	19	-1	8	2.9	63	21		LODZ	10	2	18	-5	6	2.9	32	-5
	DUSSELDORF	12	5	21	-3	9	1.8	73	6		KATOWICE	11	2	20	-5	6	2.7	38	-6
	LEIPZIG	12	4	18	-1	8	3.3	34	-2	PORTUG	LISBON	20	11	25	8	15	1.5	45	-36
	DRESDEN	11	4	19	0	8	3.2	48	7	ROMANI	BUCHAREST	17	1	25	-4	9	3.8	34	-5
GREECE	STUTT GART	12	3	19	-3	8	2.3	50	6	RUSSIA	ST.PETERSBURG	3	-2	10	-18	0	1.4	59	26
	NURNBERG	12	2	20	-3	7	2.4	52	8		KAZAN	2	-4	9	-15	-1	3.7	77	53
	AUGSBURG	12	1	18	-6	6	1.9	45	4		MOSCOW	4	-2	15	-12	1	2.3	45	12
	THESSALONIKA	18	7	23	1	12	2.7	12	-27		YEKATERINBURG	3	-4	10	-12	-1	3.2	30	14
	LARISSA	19	4	24	-2	11	2.0	24	-14		OMSK	1	-8	5	-18	-4	4.7	20	6
GUADEL	RAIZET	30	21	31	18	25	0.4	38	-29		BARNAUL	3	-7	12	-18	-2	5.6	9	-7
	HONG KONG INT	24	20	29	15	22	3.0	172	96		KHABAROVSK	3	-9	12	-15	-3	3.9	3	-15
HUNGAR	BUDAPEST	15	5	22	-2	10	3.5	7	-20		VLADIVOSTOK	5	-2	15	-6	2	3.6	9	-14
ICELAN	REYKJAVIK	4	-1	8	-6	2	1.3	79	-4		VOLGOGRAD	7	-1	16	-7	3	4.0	40	17
INDIA	AMRITSAR	25	11	32	7	18	-1.0	13	-27		ASTRAKHAN	10	1	18	-6	6	3.9	10	-5
	NEW DELHI	29	14	39	7	21	-1.1	13	-2	S AFRI	ORENBURG	2	-4	8	-16	-1	5.0	29	9
	AHMEDABAD	35	19	42	14	27	-0.4	0	*****		JOHANNESBURG	26	15	29	11	21	2.5	59	-42
	INDORE	34	17	40	12	25	0.0	0	-1		DURBAN	28	21	30	18	24	0.2	63	-63
	CALCUTTA	33	22	36	16	28	0.2	84	42		CAPE TOWN	25	16	32	12	20	1.0	127	107
INDONE	VERAVAL	32	21	40	17	26	1.0	0	*****	S KORE	SEOUL	12	3	18	-2	8	1.8	27	-24
	BOMBAY	33	20	40	16	26	-0.5	0	*****	SAMOA	PAGO PAGO	31	26	32	24	28	0.5	294	11
	POONA	37	16	41	12	26	0.8	0	-1	SENEGA	DAKAR	25	19	30	18	22	1.3	0	0
	BEGAMPET	37	23	41	18	30	1.4	0	-14	SPAIN	VALLADOLID	17	4	23	-1	10	1.7	13	-11
	VISHAKHAPATNAM	33	26	34	25	29	1.5	13	3		MADRID	19	4	25	0	12	1.1	13	-4
IRELAN	MADRAS	35	25	39	23	30	1.4	0	-5		SEVILLE	23	9	28	5	16	0.5	6	-21
	MANGALORE	33	24	36	20	29	-0.2	0	-5	SWITZE	ZURICH	12	4	19	-1	8	2.6	69	1
	SERANG	32	24	35	22	28	0.9	200	14		GENEVA	13	3	20	-2	8	2.5	47	-18
	DUBLIN	11	4	17	-2	8	0.8	92	38	SYRIA	DAMASCUS	18	5	24	0	12	0.8	20	-1
	MILAN	18	4	25	0	11	2.2	14	-50	TAHITI	PAPEETE	32	25	33	24	29	1.1	189	12
ITALY	VERONA	***	***	22	4	***	*****	*****	*****	TANZAN	DAR ES SALAAM	33	25	35	22	29	1.8	121	-11
	VENICE	15	5	21	2	10	1.8	24	-25	THAILA	PHITSANULOK	37	24	39	19	30	0.2	6	-23
	GENOA	16	11	22	7	13	1.6	11	-74		BANGKOK	35	27	39	26	31	1.7	0	-31
	ROME	17	7	23	-1	12	1.1	22	-39	TOGO	TABLIGBO	35	25	37	22	30	1.3	160	53
	NAPLES	17	8	22	4	13	1.4	23	-55	TRINID	PORT OF SPAIN	32	23	33	21	27	0.8	45	14
JAMAIC	KINGSTON	31	23	32	22	27	0.4	28	4	TUNISI	TUNIS	20	10	25	7	15	1.6	38	-3
	SAPPORO	6	-1	14	-5	3	2.6	43	-38	TURKEY	ISTANBUL	15	7	22	0	11	3.2	24	-32
	NAGOYA	15	6	22	1	11	2.5	83	-32		ANKARA	13	-2	20	-7	6	1.7	34	-6
	TOKYO	15	7	24	1	11	2.1	122	7	TURKME	ASHKHABAD	17	8	27	1	12	2.7	49	7
	YOKOHAMA	15	8	22	2	11	2.3	105	-43	UKINGD	ABERDEEN	10	3	16	-2	7	1.6	48	-13
KAZAKH	KYOTO	15	6	21	1	10	1.4	67	-55		LONDON	13	6	19	2	10	1.8	53	11
	OSAKA	15	7	20	3	11	1.9	77	-22	UKRAIN	KIEV	10	2	20	-6	6	4.2	29	-6
	KUSTANAY	2	-7	8	-16	-2	6.0	19	4		LVOV	10	0	19	-8	5	3.2	28	-10
	TSELINOGRAD	2	-5	11	-16	-2	6.5	23	-7		KIROVOGRAD	10	0	20	-8	5	3.7	11	-23
	KARAGANDA	2	-7	13	-17	-3	4.6	15	-2		ODESSA	11	3	20	-5	7	4.0	12	-17
KENYA	NAIROBI	29	16	33	13	23	2.0	7	-58		KHARKOV	8	0	18	-6	4	3.8	16	-13
	BENGHAZI	20	10	26	5	15	-0.2	25	2	UZBEKI	TASHKENT	18	9	27	3	13	5.0	51	-13
	KAUNAS	7	1	15	-5	4	3.4	42	4	YUGOSL	BELGRADE	17	7	25	1	12	4.2	11	-36
	LUXEMBOURG	11	4	19	-2	8	2.6	92	26	ZAMBIA	LUSAKA	28	***	33	12	***	*****	15	-128
	KUALA LUMPUR	35	25	37	22	30	2.9	162	-73	ZIMBAB	KADOMA	***	***	34	12	***	*****	*****	*****
MARSHA	MAJUJO	29	27	30	24	28	0.4	172	-32										
MARTIN	LAMENTIN	30	23	32	21	26	1.4	41	-37										
MAURIT	NOUAKHOTT	32	15	38	11	23	-0.8	3	3										
MEXICO	GUADALAJARA	30	12	33	9	21	2.1	0	-6										
	TLAXCALA	26	9	29	6	18	1.6	4	-1										
	ORIZABA	24	14	31	11	19	1.2	41	8										
MOROCC	CASABLANCA	20	12	24	8	16	1.4	18	-22										
	MARRAKECH	27	11	32	7	19	2.5	37	-3										

Based on Preliminary Reports

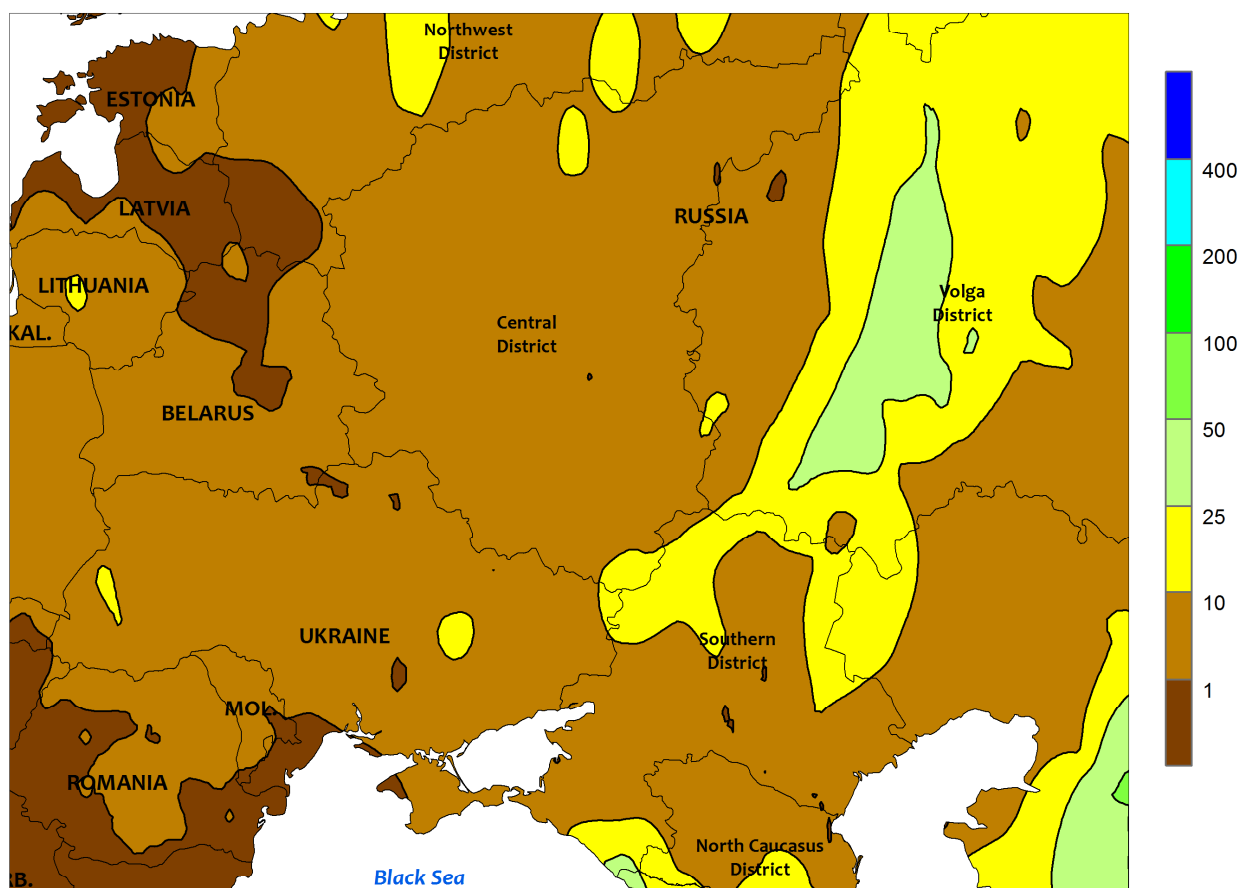


EUROPE

Dry, mild weather prevailed across much of Europe, with favorable conditions in the north contrasting with intensifying dryness and drought in southern portions of the continent. Lingering light rain and snow (1-10 mm liquid equivalent) early in the period across northeastern Europe kept soils sufficiently moist for winter wheat and rapeseed green up. Overall in northern Europe, mostly sunny, warm weather (1-3°C above normal, up to 6°C above normal in Scandinavia) promoted early winter crop development. Soil moisture supplies are favorable from England and northern France into Poland and the Baltic States due to near- to above-normal winter precipitation. Conversely, varying

degrees of dryness and drought continued to impact vegetative winter crops from the Iberian Peninsula into southeastern Europe. Drought was most acute in Spain, northern Italy, and Hungary, where 90-day precipitation has totaled a meager 50 percent of normal or less. Shorter-term dryness has also developed across the remainder of southern Europe, with 30-day rainfall averaging 10 to 50 percent of normal from southern France into Greece and the Balkans. While it is still early in the growing season and the impacts of dryness and drought are limited, winter grains in Spain will approach reproduction by mid-April and rain will be needed soon to prevent yield losses.

WESTERN FSU
Total Precipitation (mm)
MAR 24 - 30, 2019



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

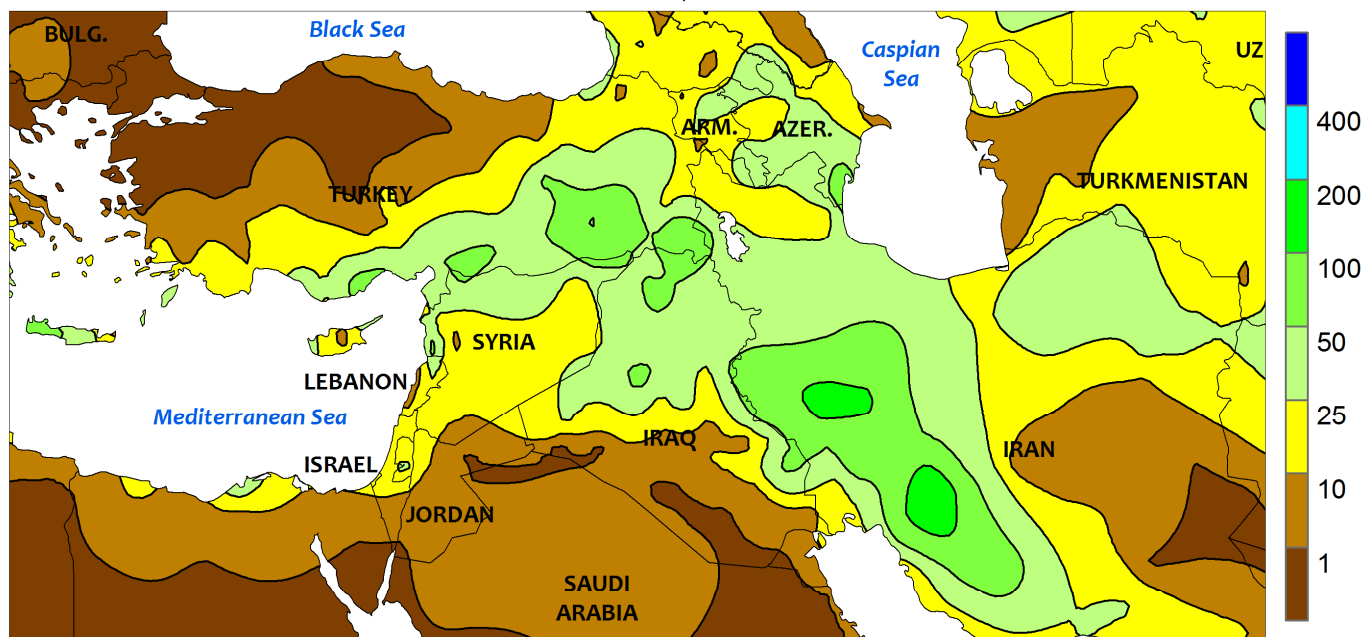


WESTERN FSU

Somewhat cooler weather slowed winter wheat development in the south and kept northern crop areas covered in snow. Temperatures across the primary winter wheat belt adjacent to the Black Sea Coast averaged within 1°C of normal, slowing crop green up

and growth. Farther north, 7-day average temperatures remained below 5°C from northern Ukraine into west-central Russia, keeping northern winter wheat dormant and maintaining a moderate to deep snowpack (10-30 cm) across the Volga District and environs.

MIDDLE EAST
Total Precipitation (mm)
MAR 24 - 30, 2019



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

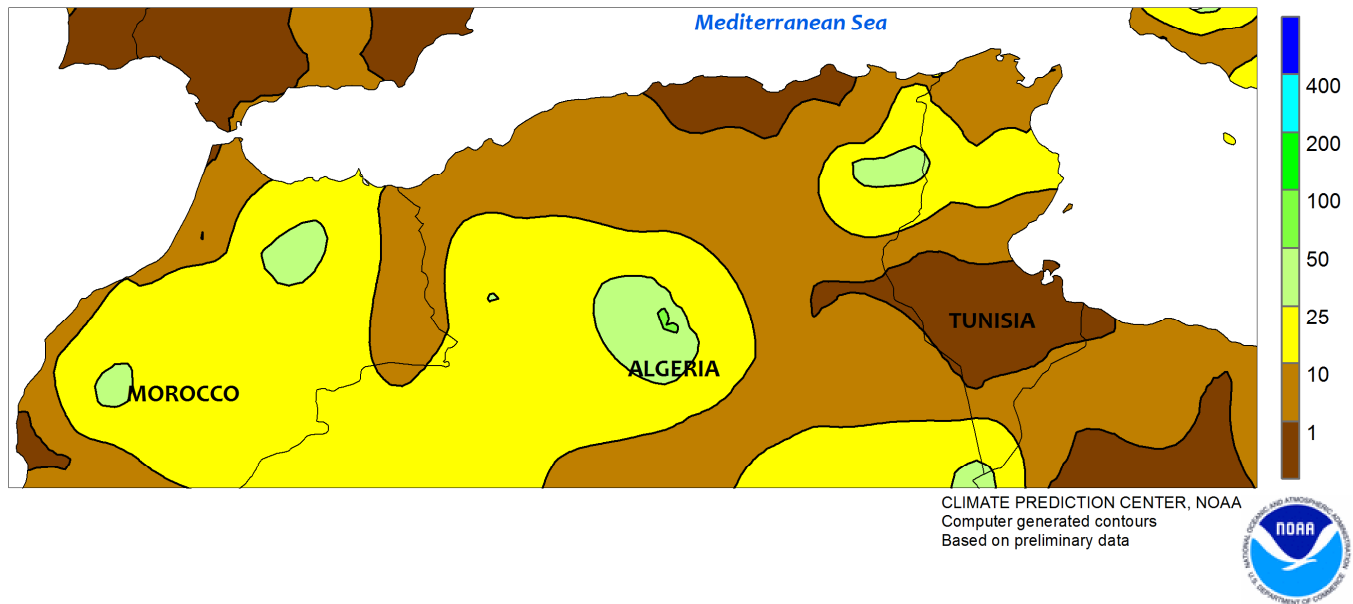


MIDDLE EAST

Another in a series of slow-moving storms produced heavy to excessive precipitation in central and eastern portions of the region, with dry weather confined to northwestern growing areas. A powerful, moisture-laden storm system drifted east from the Mediterranean Sea, producing 25 to 200 mm of rain and mountain snow (liquid equivalent) from southern Turkey and the eastern Mediterranean Coast into Iraq and Iran. The storm added to already-impressive seasonal totals, with precipitation since September 1 shattering previous standards from southeastern Turkey into northern Syria and western Iran. This week's heavy rain—on top of already saturated soils—

caused flooding, damage to infrastructure, and loss of livestock. Furthermore, the heavy rainfall will necessitate replanting of crops in submerged low-lying fields. While the heavy precipitation since the onset of the winter grain growing season has been beneficial in croplands not susceptible to flooding, producers are in desperate need of drier weather after this week's torrential rainfall. However, yet another slow-moving storm was producing bands of moderate to heavy rain after the end of the period; to illustrate, a weather station in west-central Iran (Khorramabad) reported over 100 mm in 24 hours on March 31.

NORTHWESTERN AFRICA
Total Precipitation (mm)
MAR 24 - 30, 2019

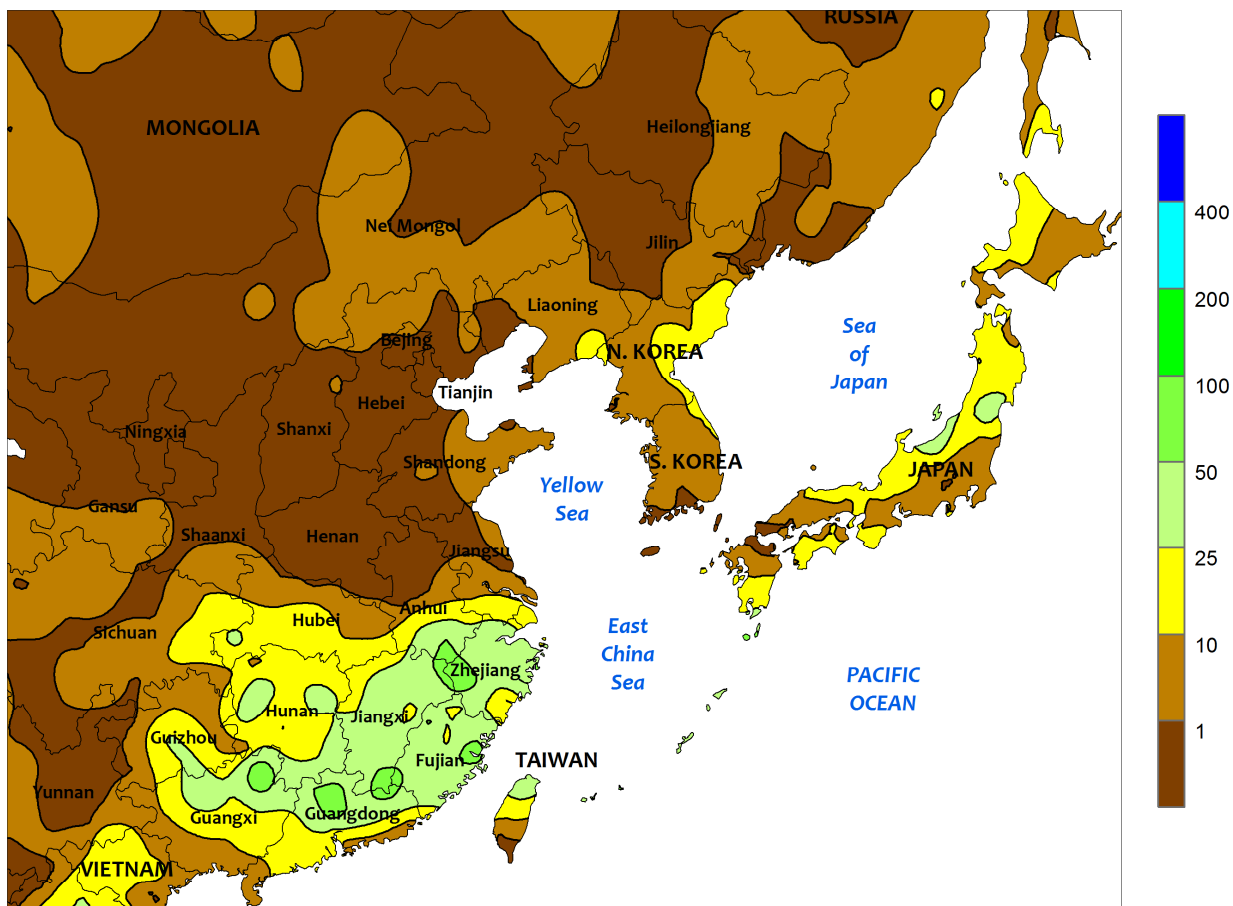


NORTHWESTERN AFRICA

Despite much-needed rain in western growing areas, drought-afflicted winter grains were largely beyond the point of recovery. During the past week, the first significant rainfall in northern Morocco since February 1 brought welcomed drought relief, particularly to more inland locales where precipitation was heaviest (10-30 mm). However, winter wheat in Morocco reached the filling stage of development (based on growing degree day data) in late March up to a week ahead of average, so significant recovery of drought-reduced winter grain yields was not likely. To illustrate, the Moroccan croplands' average

satellite-derived vegetation health index at the end of March was the second lowest of the past 10 years and on par with the drought of 2016. Meanwhile, favorable conditions continued in the east. Despite inland showers in Algeria and Tunisia (in some cases, unusually heavy rains in desert locales), generally sunny skies and near-normal temperatures facilitated wheat and barley development following heavy rain during the third week of March. Wheat and barley yield prospects over the eastern half of the region remained good to excellent as crops approach the reproductive stages of development.

EASTERN ASIA
Total Precipitation (mm)
MAR 24 - 30, 2019



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

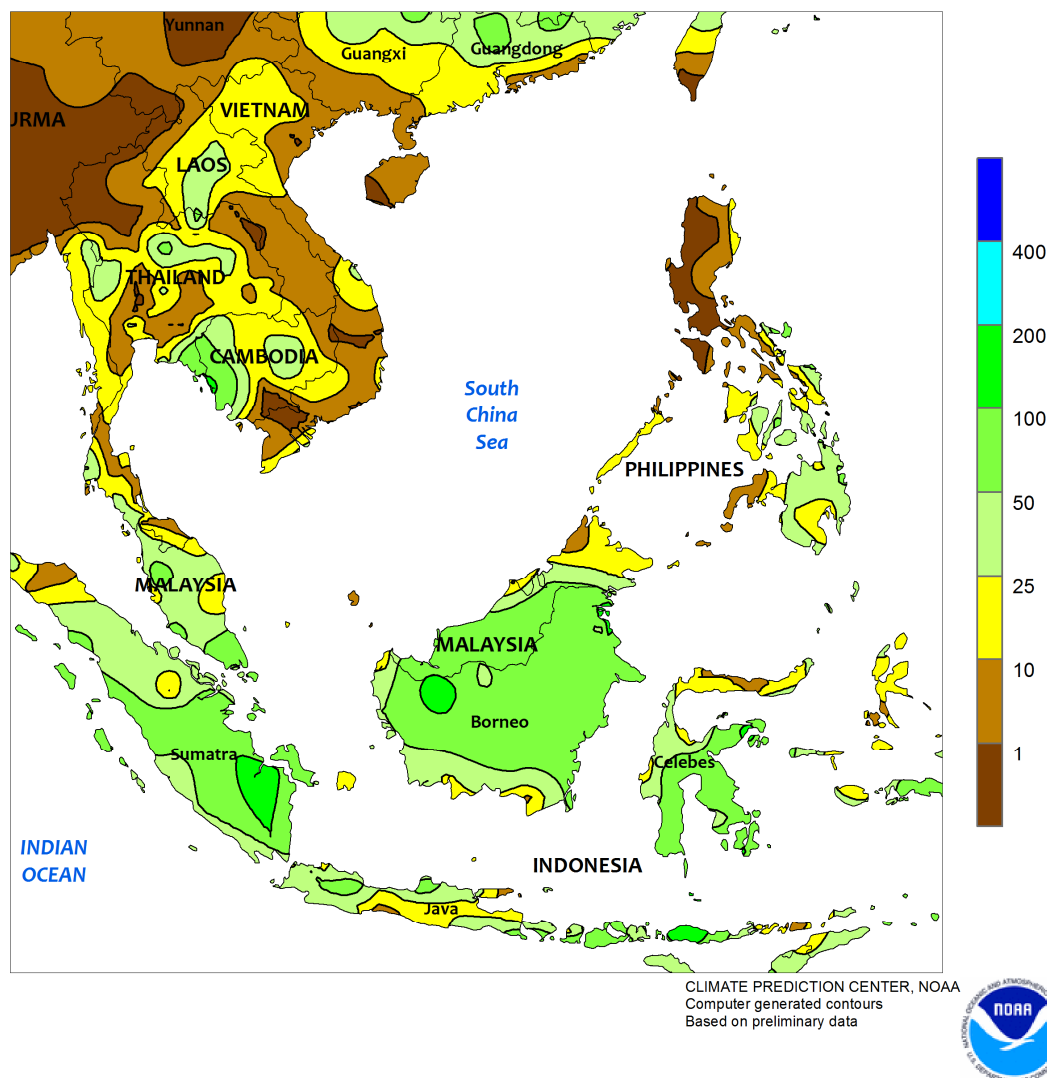


EASTERN ASIA

Seasonably wet weather (25-100 mm) continued across southeastern China, aiding establishment and development of early-crop rice and other spring-sown crops. Meanwhile, lesser rainfall totals (below 25 mm) in portions of the Yangtze Valley maintained favorable moisture conditions for reproductive rapeseed. In contrast, mostly dry weather

continued for reproductive wheat on the North China Plain. Although wheat is irrigated, spring rainfall would be welcome during the reproductive period. Additionally, unseasonable warmth (3-5°C above normal) throughout eastern China spurred development and increased moisture needs for crops north of the Yangtze River.

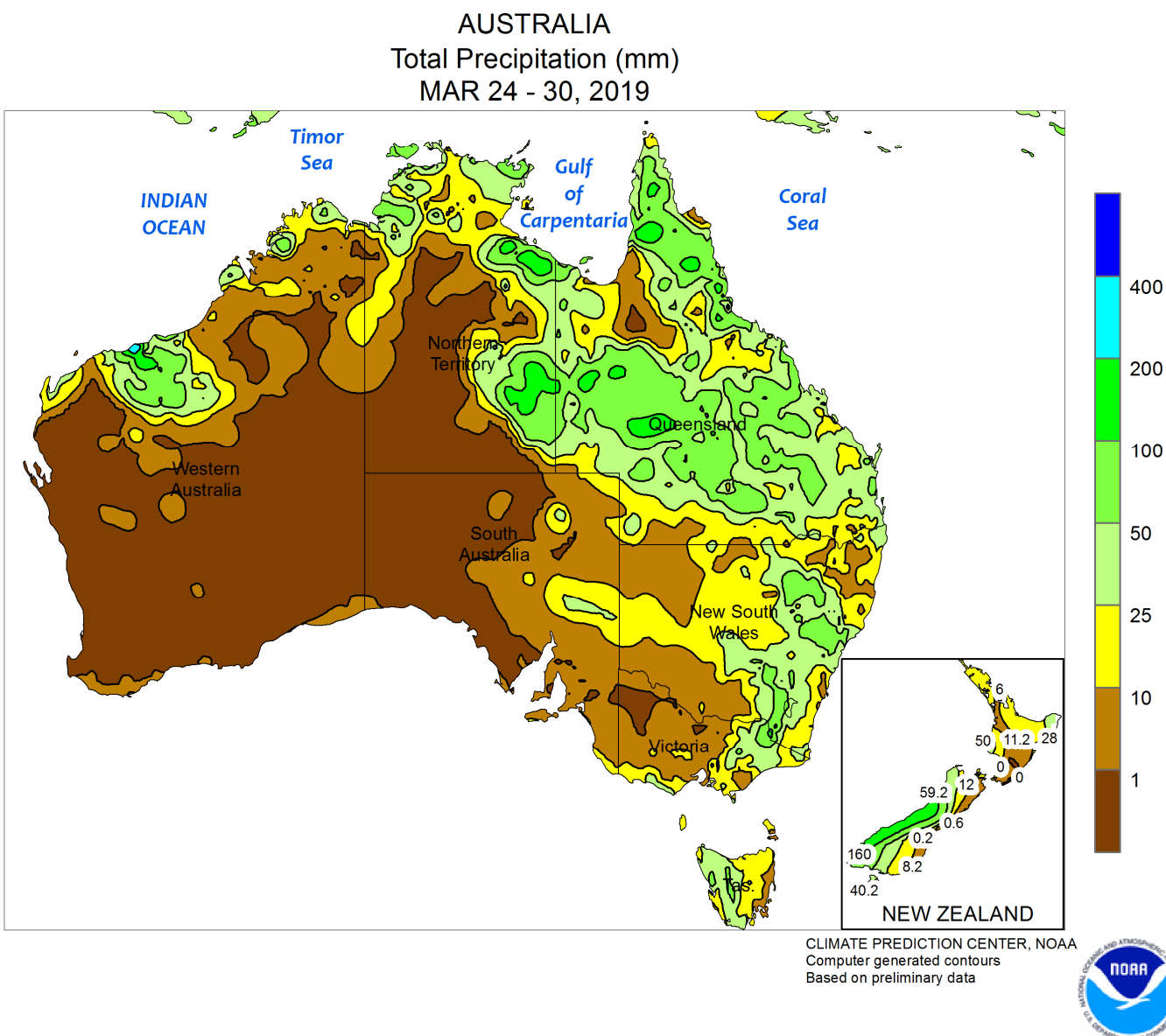
SOUTHEAST ASIA
Total Precipitation (mm)
MAR 24 - 30, 2019



SOUTHEAST ASIA

Tropical showers began the seasonal northward shift, bringing much-needed rainfall to portions of Malaysia and the Philippines. Rainfall totals surpassed 25 mm in Malaysia, easing long-term dryness and boosting soil moisture for oil palm. Rainfall totals over the last 90 days have been 50 percent below average in key oil palm areas, and consistent spring rainfall will be needed in Malaysia to prevent yield

declines. Similarly, increasing showers (25-50 mm) in the southern and eastern Philippines brought some relief to lingering winter drought but more moisture would be welcome in advance of the main summer planting period. Elsewhere, wetter-than-normal weather continued in Indonesia, benefiting oil palm and boosting irrigation reserves in Java for the upcoming dry season.

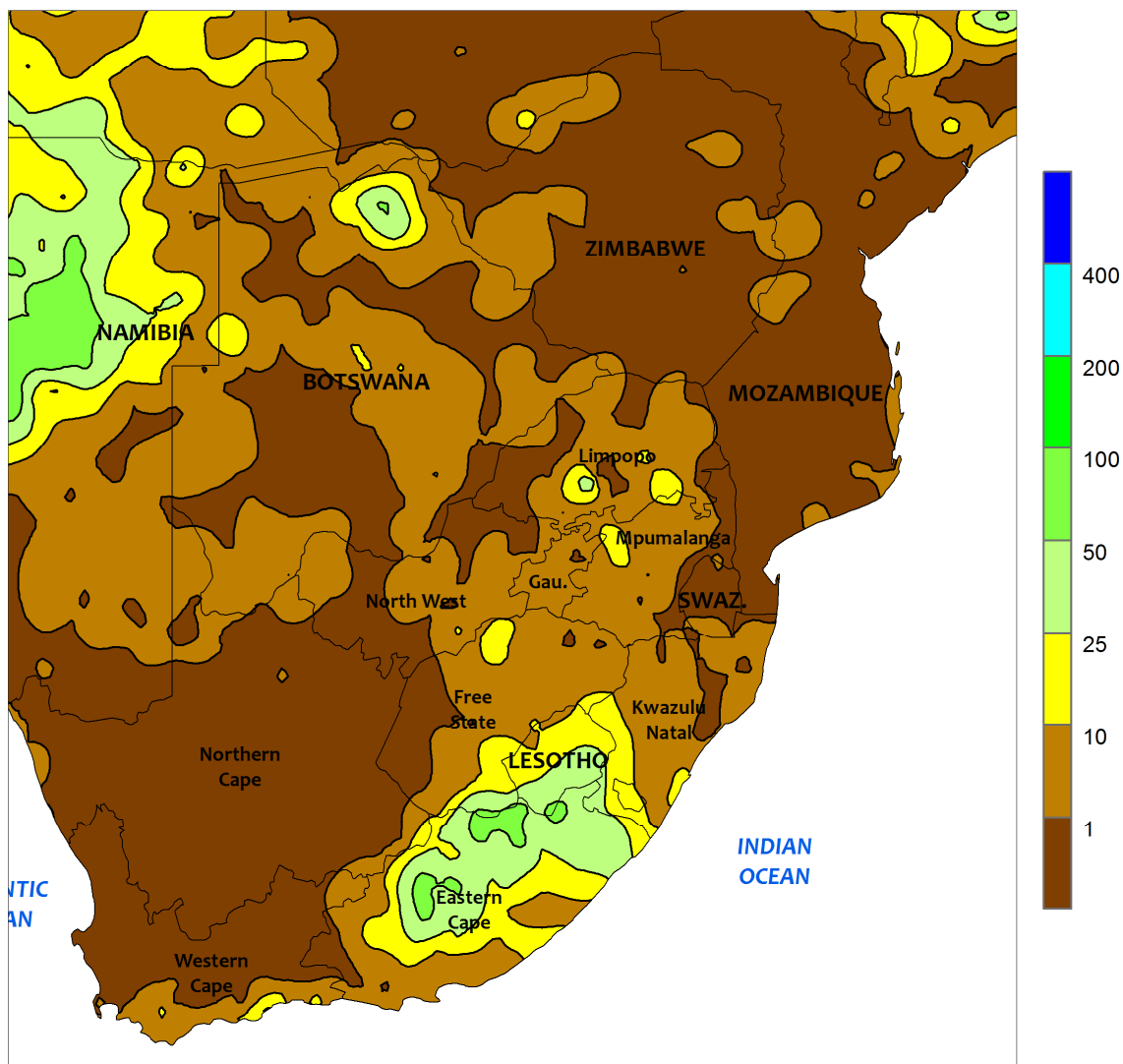


AUSTRALIA

Widespread showers (15-50 mm, locally more) in southern Queensland and New South Wales likely slowed summer crop drydown and harvesting. The rainfall may have decreased the quality of unharvested cotton and other summer crops as well. The showers were overall beneficial nonetheless, bringing additional drought relief to eastern Australia in advance of winter crop sowing. Winter crop planting typically begins in

mid-April and then gains momentum through May and June. Although the recent rain has helped moisten the topsoil, significant follow-up rain is needed to help refill the entire soil moisture profile, depleted by severe drought in many parts of the east. Unseasonably warm weather (temperatures averaging 1-3°C above normal) persisted in eastern Australia, maintaining greater-than-normal evaporation rates.

SOUTH AFRICA
Total Precipitation (mm)
MAR 24 - 30, 2019



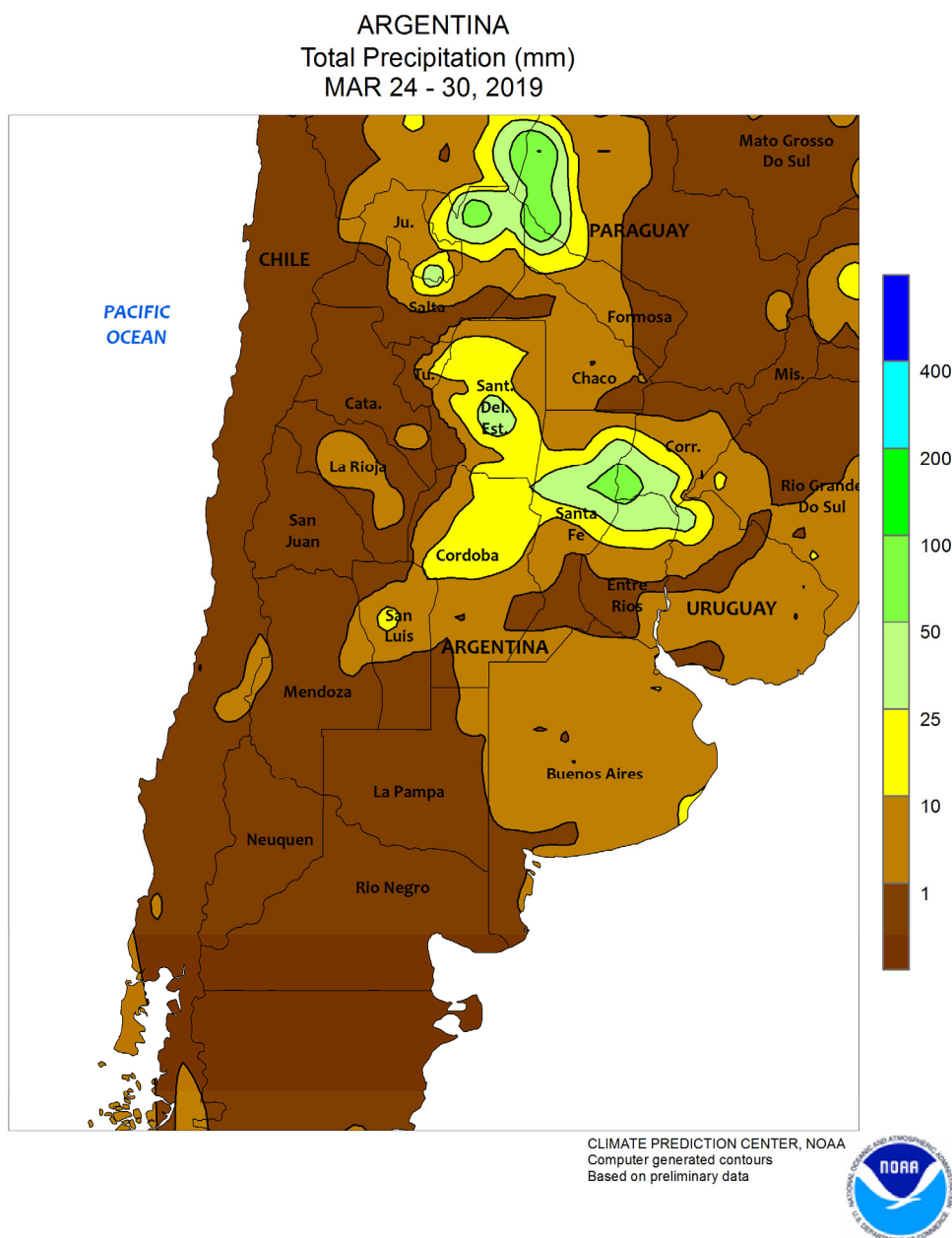
CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data



SOUTH AFRICA

Unseasonable warmth and dryness spurred rapid maturation of late-planted summer crops across the corn belt. The dry weather (rainfall totaling 0-3 mm, with few isolated showers totaling more than 5 mm) covered a large area spanning the main eastern commercial farming areas (northern KwaZulu-Natal and Free State northward through Limpopo); weekly temperatures averaged 2 to 4°C above normal in the aforementioned areas, with daytime highs reaching the upper

30s (degrees C) in western and northern sections of the region. The dryness also encompassed most sugarcane areas from eastern Mpumalanga southward through central KwaZulu-Natal but rain (5-25 mm) fell in rain-fed southern production areas as showers swept across the southern coast. Elsewhere, warm (daytime highs reaching the upper 30s), dry weather dominated interior farming areas of Northern Cape, hastening maturation of corn, cotton, and other irrigated crops.



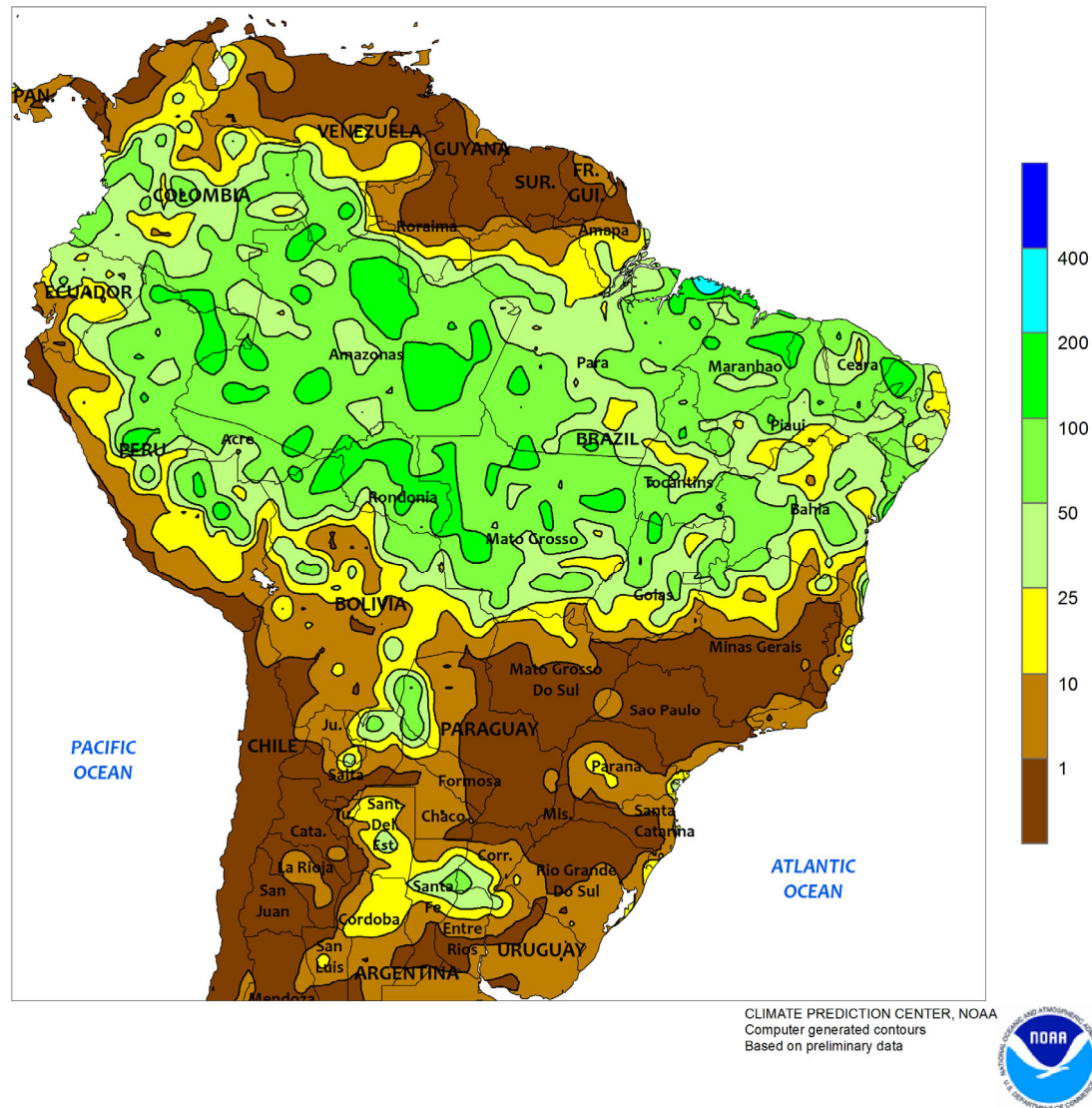
ARGENTINA

Dry albeit generally mild weather dominated much of Argentina as the majority of summer crops advanced toward maturation. Virtually no rain (0-3 mm) fell from La Pampa and western Buenos Aires northeastward through Corrientes, an area of dryness that reached westward into eastern cotton areas of Chaco and Formosa. Elsewhere, moderate showers (greater than 10 mm) were confined to southeastern Buenos Aires and sections of the northwest extending northward from Cordoba. Weekly temperatures averaged 1 to 2 degrees C

below normal, with nighttime lows briefly dropping below 5°C in traditionally cooler southern farming areas of La Pampa and Buenos Aires. Warmer weather returned by week's end, however, with daytime highs reaching the lower and middle 30s degrees C. According to the government of Argentina, sunflowers were 76 percent harvested as of March 28, with harvest reaching 53 percent complete in Buenos Aires; similarly, corn was 16 percent harvested as fieldwork intensified in southern production areas.

BRAZIL

Total Precipitation (mm)
MAR 24 - 30, 2019



BRAZIL

Widespread, locally heavy showers maintained overall favorable conditions for immature row crops throughout central Brazil even as drier weather dominated key southern farming areas. Rainfall totaled 25 to 100 mm across a broad area stretching from Mato Grosso eastward through Bahia, including northern farming areas of Goiás and Minas Gerais; similar amounts were recorded in the northeastern interior (Tocantins, western Bahia, and southwestern farming areas of Maranhão and Piauí). In contrast, dry weather dominated much of the region from Mato Grosso do Sul and central Minas Gerais southward.

The drier southern conditions were accompanied by generally warmer weather (daytime highs reaching the lower 30s degrees C on several days), which combined to aid summer crop maturation and germination of secondary crops. According to the government of Parana, soybeans and first-crop corn were 77 and 80 percent harvested, respectively, as of March 25; second-crop corn planting was nearing completion at 97 percent. In Rio Grande do Sul, government reporting depicts soybean harvesting at 32 percent complete as of March 28, compared with 36 percent last year and 32 percent on average.

U.S. Prospective Planting Highlights

The following information was released by USDA's Agricultural Statistics Board on March 29, 2019.

Corn planted area for all purposes in 2019 is estimated at 92.8 million acres (figure 1), up 4 percent—or 3.66 million acres—from last year. Compared with last year, planted acreage is expected to be up or unchanged in 34 of the 48 estimating states.

Soybean planted area for 2019 is estimated at 84.6 million acres, down 5 percent from last year. Compared with last year, planted acreage intentions are down or unchanged in 26 of the 29 estimating states.

All wheat planted area for 2019 is estimated at 45.8 million acres, down 4 percent from 2018. This represents the lowest all wheat planted area since records began in 1919.

The 2019 winter wheat planted area, at 31.5 million acres, is down 3 percent from last year but up 1 percent from the previous estimate. Of this total, about 22.4 million acres are Hard Red Winter, 5.55 million acres are Soft Red Winter, and 3.55 million acres are White Winter.

Area planted to other spring wheat for 2019 is estimated at 12.8 million acres, down 3 percent from 2018. Of this total, about 12.4 million acres are Hard Red Spring wheat.

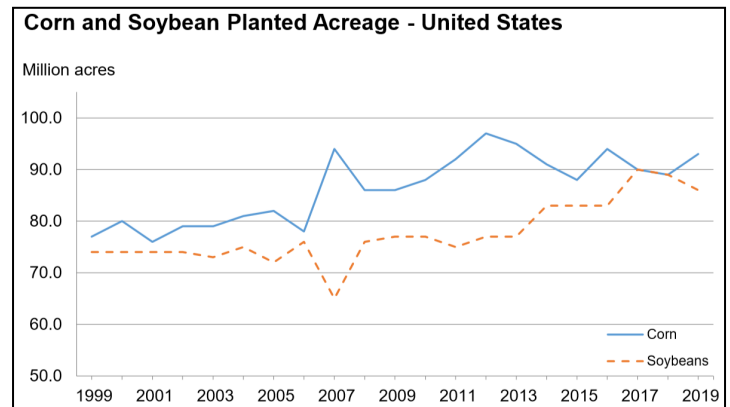


Figure 1.

Durum planted area for 2019 is estimated at 1.42 million acres, down 31 percent from the previous year.

All cotton planted area for 2019 is estimated at 13.8 million acres, 2 percent below last year. Upland area is estimated at 13.5 million acres, down 2 percent from 2018. American Pima area is estimated at 255,000 acres, up 2 percent from 2018.

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