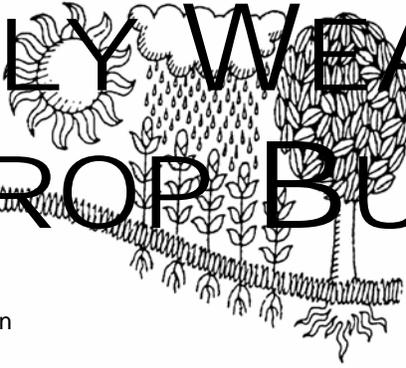
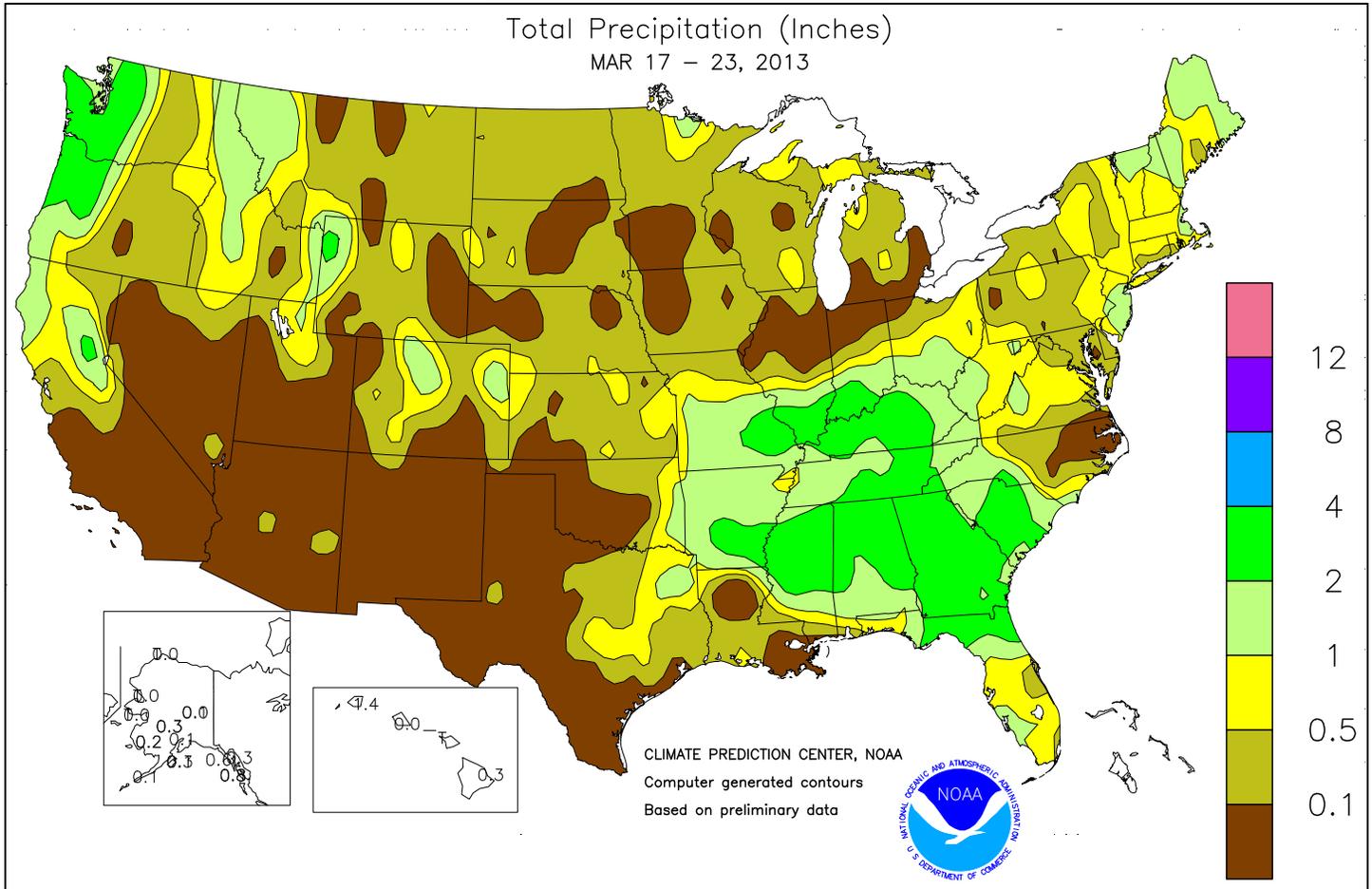


# WEEKLY WEATHER AND CROP BULLETIN



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 17 - 23, 2013

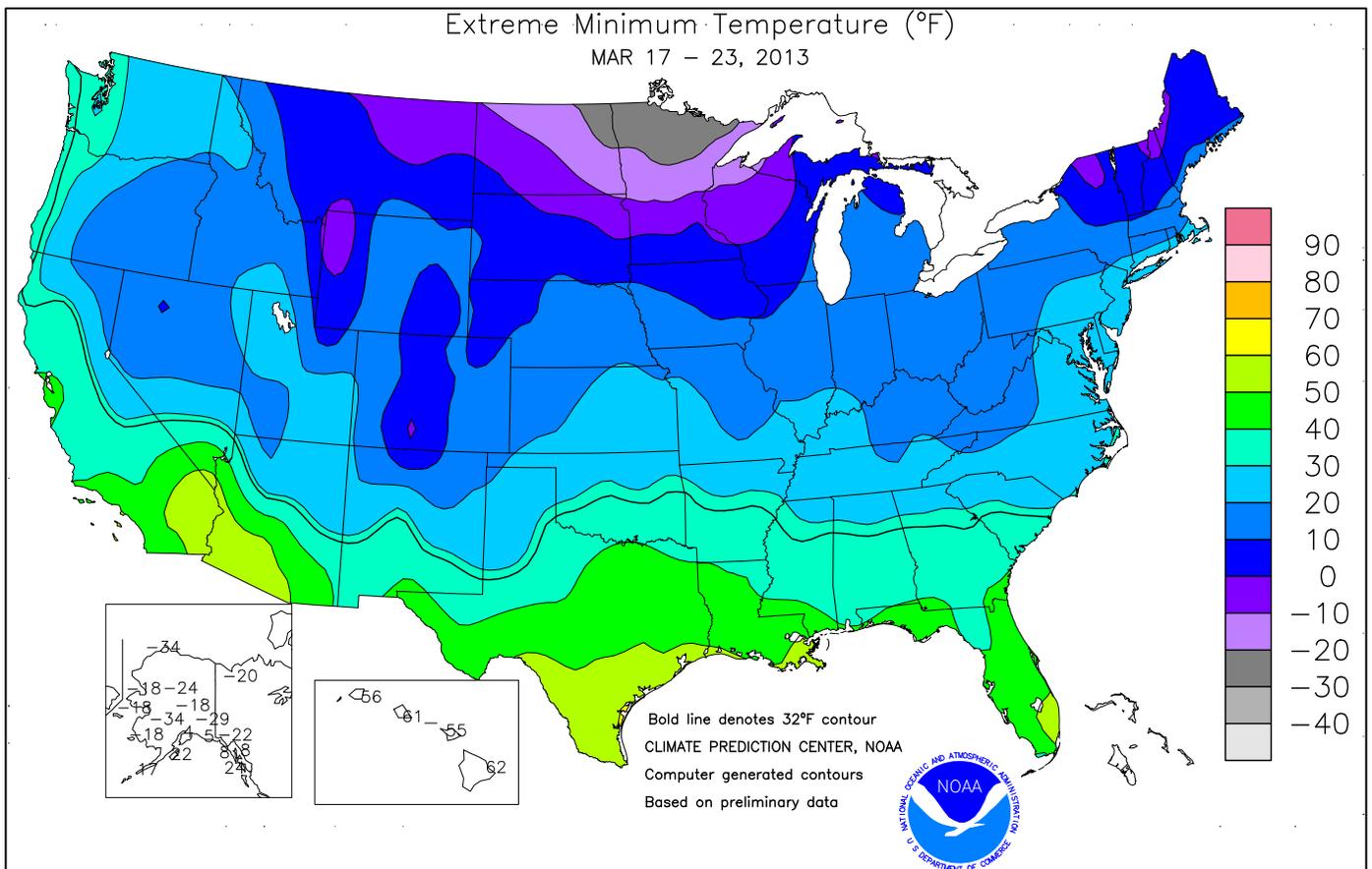
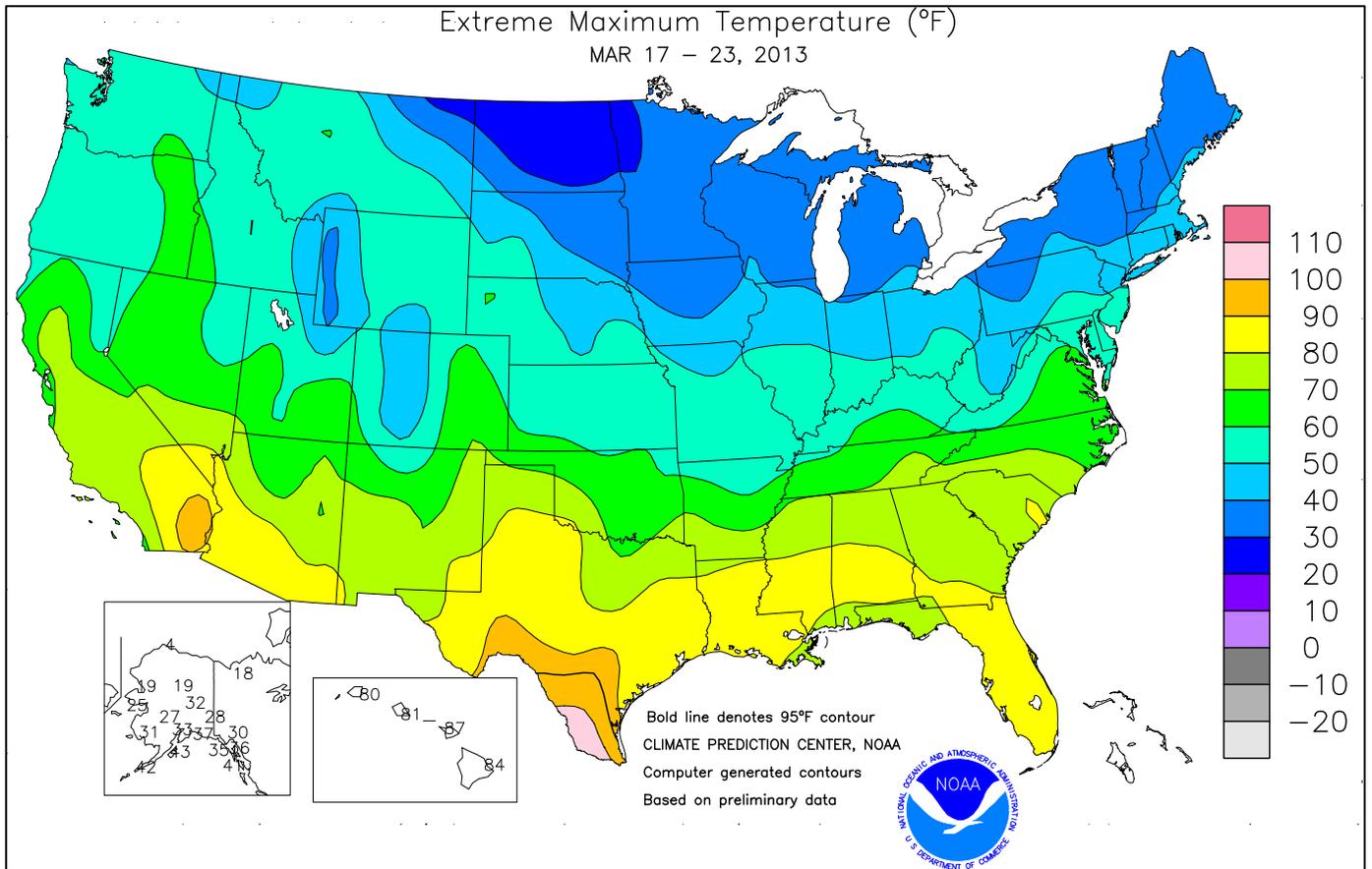
*Highlights provided by USDA/WAOB*

Light precipitation fell in many parts of the country, but significant weekly totals (2 inches or more) were mostly confined to the **Southeast** and the **Pacific Northwest**. Early in the week, heavy rain reached as far north as the **southern Corn Belt**, including the **lower Ohio and middle Mississippi Valleys**. Meanwhile, dry weather prevailed from **southern California to the southern High Plains**. Substantial early- and late-week rainfall in the **Southeast** slowed fieldwork but maintained generally favorable moisture reserves for pastures, winter grains, and

*(Continued on page 3)*

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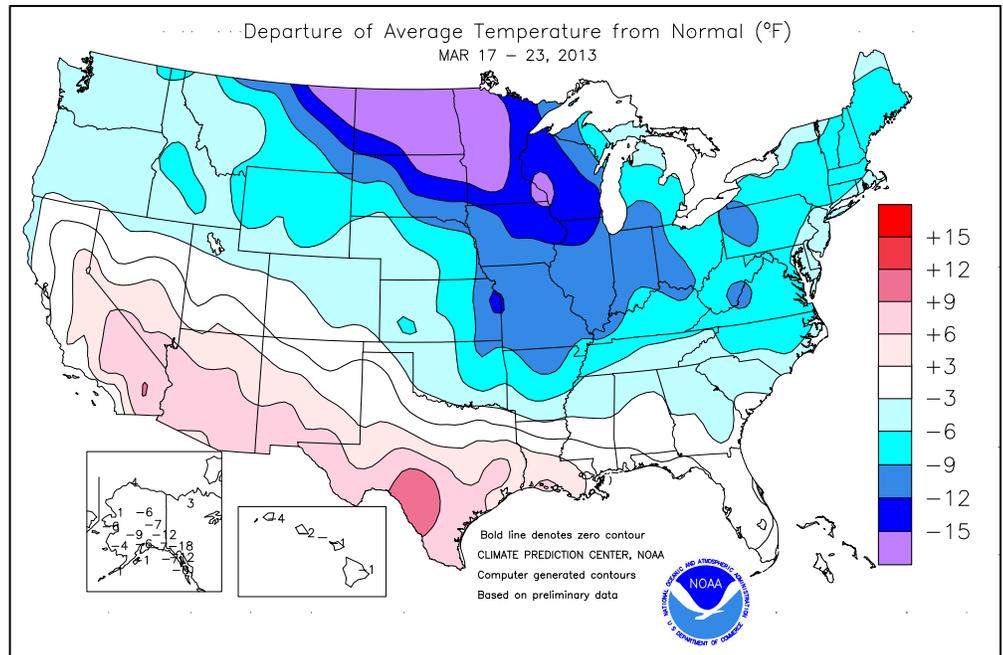
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(Continued from front cover)

emerging summer crops. **Florida's peninsula**, which experienced a dry winter, received light but much-needed rainfall. Farther west, however, precipitation largely bypassed the **southern Plains**, where periods of warm, windy weather increased stress on rangeland, pastures, and winter wheat. In contrast, beneficial precipitation (mostly snow) blanketed the **northern and central Plains**. In particular, a late-week storm produced widespread snow across the **central Plains**. At week's end, the storm arrived across the **southern Corn Belt**. The remainder of the **Midwest** experienced unusually cold weather, accompanied by some light snow. Weekly temperatures averaged more than 15°F below normal in the **far upper Midwest** and adjacent areas of the **northern Plains**. In addition, **upper Midwestern** temperatures frequently plunged below 0°F, with some readings below -20°F reported early in the week in the **Red River Valley**. Elsewhere, warm, dry weather in **southern California** and the **Desert Southwest** contrasted with cold, showery conditions in the **Northwest**. Fieldwork advanced in the warm, dry regions, but water-supply prospects remained mostly dismal from **California to the central and southern Rockies**.

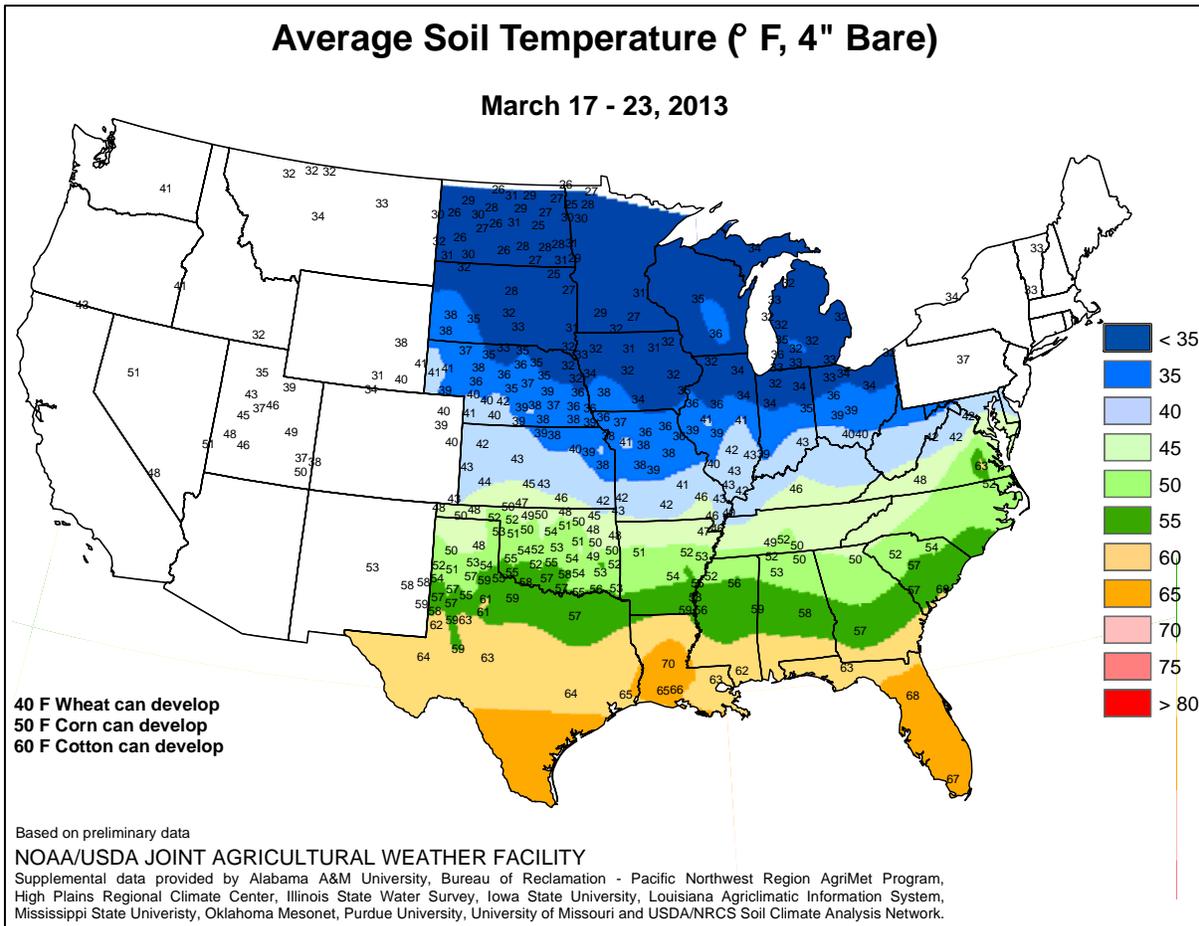
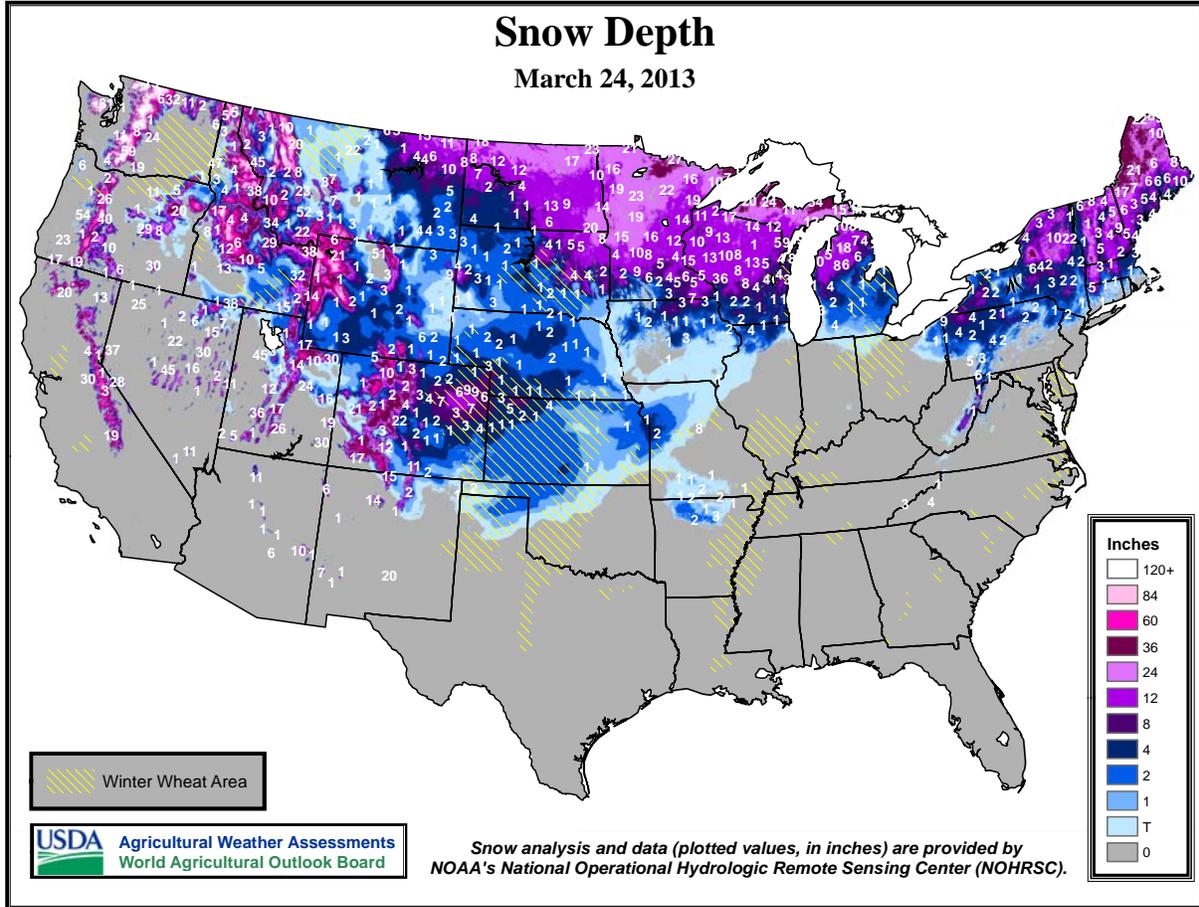
Early in the week, precipitation spread across the **nation's northern tier**. On March 17, daily snowfall records were established in locations such as **Glasgow, MT** (5.3 inches), and **Williston, ND** (4.1 inches). Snow spread into the **Great Lakes region** by March 18, when **Green Bay, WI**, received a daily-record total of 4.8 inches. Heavy snow eventually reached **New England**, where record-setting totals for March 19 included 8.9 inches in **Burlington, VT**, and 7.7 inches in **Bangor, ME**. March 19-20 snowfall totals topped 10 inches in **Concord, NH** (11.2 inches), and **Caribou, ME** (10.4 inches). Meanwhile, high winds raked portions of the **Rockies** and **High Plains**. During the afternoon of March 17, gusts were clocked to 71 mph in **Rawlins, WY**; 67 mph in **Alamogordo, NM**; 66 mph in **Chadron, NE**; and 63 mph in **Meeker, CO**. Farther east, heavy showers in the **Southeast** resulted in daily-record rainfall totals for March 18 in **Kentucky** locations such as **Lexington** (1.71 inches) and **London** (1.66 inches). March 18 also featured several tornadoes in the **Southeast**, along with dozens of reports of large hail and damaging thunderstorm winds. By March 19, rain arrived across **Florida's peninsula**, where **Key West** (1.28 inches) not only netted a daily-record amount, but also posted its first calendar-day total in excess of an inch since October 2, 2012. During the preceding 138 days, from November 1 – March 18, **Key West's** rainfall had totaled just 2.52 inches (27 percent of normal). By mid-week, showery, windy weather returned to the **Northwest**. Daily-record precipitation totals for March 20 reached 0.53 inch in **Stanley, ID**, and 0.40 inch in **Spokane, WA**. On the same date, wind gusts reached 110 mph on **Mammoth Mountain, CA**, and 68 mph in **Lincoln City, OR**. By March 21, a late-season snow affected the **Mid-South**, where daily-record snowfall totals included 4.0 inches in **Jonesboro, AR**, and 3.0 inches in **Springfield, MO**. In **Mississippi**, **Greenwood** noted consecutive daily-record rainfall amounts on March 22-23, totaling 3.03 inches. At week's end, an impressive late-season snow storm arrived on the **central Plains**. In **Denver, CO**, snowfall for March 22-23 totaled

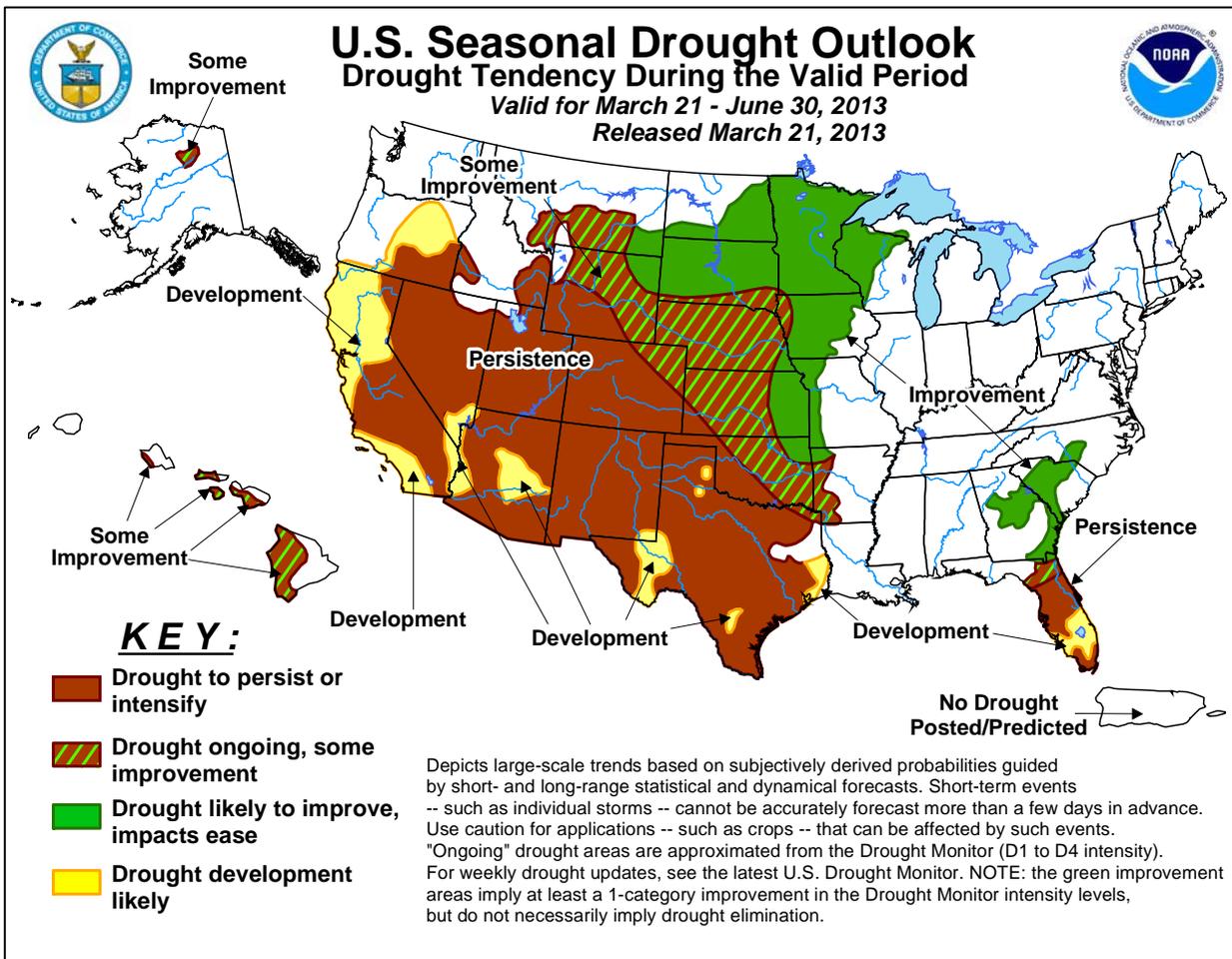
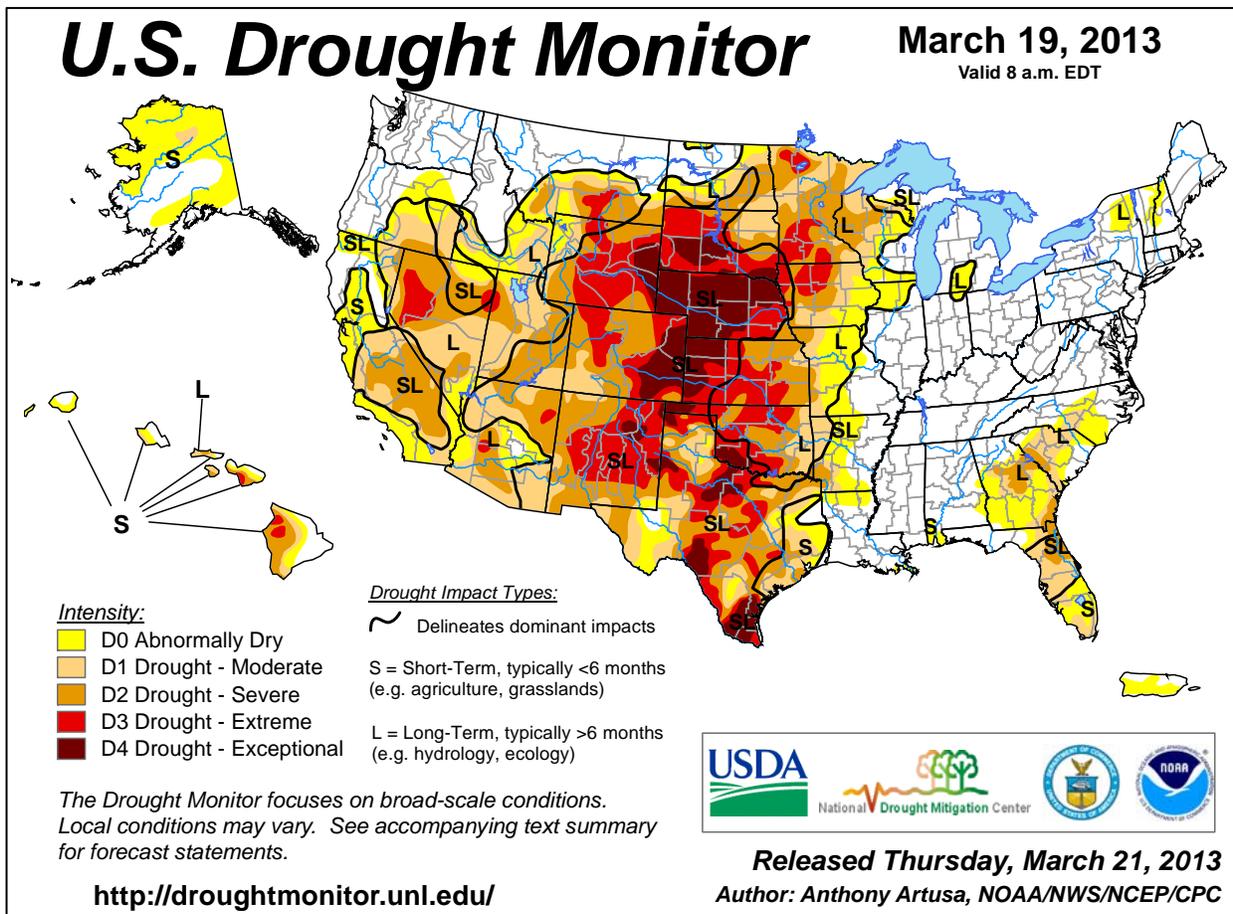


11.6 inches. By early Sunday morning, March 24, snow depths reached 5 inches at both **Wichita, KS**, and **Kansas City, MO**.

Temperatures plunged below -20°F on March 17 in a small section of the **north-central U.S.** **Grand Forks, ND**, posted consecutive daily-record lows (-18 and -23°F, respectively) on March 16-17. In stark contrast, highs soared to daily-record levels on March 18 in **Texas** locations such as **McAllen** (100°F), **Brownsville** (99°F), and **San Antonio** (95°F). Later, **Green Bay, WI**—with a high of 22°F on March 20—experienced its coldest first day of astronomical spring since March 20, 1986, when the high reached just 20°F. In 2012, **Green Bay's** first day of spring featured a high of 80°F. As the week progressed, cold air continued to overspread the **Midwest**. On March 21, daily-record lows dipped to -13°F in **Jamestown, ND**, and 11°F in **Fort Wayne, IN**. A day later, record-setting lows for March 22 included -8°F in **Sisseton, SD**, and 15°F in **Lincoln, IL**. Unusually cold conditions also reached the **Atlantic Coast States**, resulting in daily-record lows for March 22 in locations such as **Bangor, ME** (7°F), and **Elizabeth City, NC** (22°F). At week's end, a return to record-setting warmth across the **Deep South** contrasted with sharply colder conditions in the **West**. Record-breaking highs for March 23 soared to 102°F in **McAllen, TX**, and 90°F in **Melbourne, FL**, while daily-record lows plunged to -19°F at **Lake Yellowstone, WY**, and 9°F in **Winnemucca, NV**.

Cold weather prevailed in **Alaska**, especially across the eastern part of the state. On March 20, **Juneau** collected a daily-record low of 9°F—its lowest reading since January 29. Later, **Juneau's** temperature dipped to 8°F on March 22. **Alaskan** precipitation was mostly light and confined to the southern tier of the state, although **King Salmon** received a daily-record snowfall (1.8 inches) on March 22. Farther south, late-week showers accompanied a continuation of cool conditions in **Hawaii**. Showers were heaviest across the western part of the state, where **Lihue, Kauai**, received 1.22 inches of rain on March 22. Meanwhile, **Honolulu, Oahu**, reported a high of 81°F on March 22, ending a 12-day streak (March 10-21) with readings of 80°F or below. It was **Honolulu's** longest such cool spell since March 2-14, 2012. In **Lihue**, March 1-23 temperatures averaged more than 3°F below normal. **Lihue** also recorded lows of 56°F on March 16 and 17, and posted a daily-record low of 57°F on March 18.





National Weather Data for Selected Cities

Weather Data for the Week Ending March 23, 2013

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			
																90 AND ABOVE	82 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	62	44	76	31	53	-2	3.24	1.81	2.84	4.47	101	19.06	135	84	45	0	1	4	1
HUNTSVILLE	59	41	72	26	50	-3	2.06	0.51	1.52	4.17	83	16.05	103	83	55	0	1	2	2
MOBILE	73	51	81	39	62	1	0.26	-1.43	0.24	0.53	10	14.71	91	76	52	0	0	2	0
AK MONTGOMERY	67	48	85	37	58	0	1.60	0.15	0.77	2.60	53	19.37	126	82	39	0	0	4	1
ANCHORAGE	29	12	33	4	20	-6	0.14	0.01	0.12	0.38	79	2.84	149	70	55	0	7	2	0
BARROW	-4	-16	4	-34	-10	4	0.03	0.03	0.03	0.05	500	0.18	75	86	73	0	7	1	0
FAIRBANKS	19	-10	32	-18	5	-7	0.00	-0.06	0.00	0.00	0	1.27	115	74	65	0	7	0	0
JUNEAU	30	14	36	8	22	-12	0.26	-0.49	0.24	1.60	58	15.91	138	90	75	0	7	2	0
KODIAK	37	26	43	22	32	-1	0.08	-1.08	0.08	3.14	81	19.32	109	67	53	0	6	1	0
NOME	13	-6	25	-18	4	-6	0.03	-0.08	0.03	0.57	146	2.09	101	82	67	0	7	1	0
AZ FLAGSTAFF	57	27	62	23	42	5	0.00	-0.57	0.00	1.38	66	4.88	72	68	14	0	7	0	0
PHOENIX	85	60	87	55	72	9	0.00	-0.24	0.00	0.85	102	2.55	105	37	18	0	0	0	0
PRESCOTT	68	41	73	32	55	11	0.00	-0.41	0.00	0.24	15	2.56	51	44	9	0	1	0	0
TUCSON	81	54	85	51	68	9	0.00	-0.17	0.00	0.01	2	1.61	64	32	17	0	0	0	0
AR FORT SMITH	55	40	69	35	47	-6	0.76	-0.15	0.30	2.42	85	10.85	139	88	49	0	0	5	0
LITTLE ROCK	56	39	64	34	47	-7	1.61	0.49	0.58	2.50	74	12.06	117	92	52	0	0	4	1
CA BAKERSFIELD	70	47	78	40	59	2	0.00	-0.31	0.00	0.80	75	2.23	64	72	43	0	0	0	0
FRESNO	74	49	81	40	61	5	0.01	-0.48	0.01	0.33	19	1.80	30	69	46	0	0	1	0
LOS ANGELES	65	54	68	52	59	1	0.00	-0.52	0.00	0.66	33	2.16	27	88	69	0	0	0	0
REDDING	66	43	71	37	55	2	0.83	-0.33	0.72	2.12	52	3.63	23	67	36	0	0	2	1
SACRAMENTO	67	44	71	39	56	1	0.43	-0.18	0.30	0.66	29	1.98	21	77	31	0	0	2	0
SAN DIEGO	64	57	66	55	60	0	0.00	-0.51	0.00	1.22	71	3.06	51	77	65	0	0	0	0
SAN FRANCISCO	62	46	65	43	54	0	0.03	-0.68	0.02	0.33	13	1.20	11	79	58	0	0	2	0
STOCKTON	70	45	74	39	57	2	0.14	-0.36	0.10	0.25	14	1.75	25	75	53	0	0	2	0
CO ALAMOSA	50	14	56	5	32	-1	0.02	-0.07	0.02	0.38	141	0.60	82	77	34	0	7	1	0
CO SPRINGS	49	24	59	14	36	-2	0.04	-0.20	0.04	0.13	20	1.21	95	69	25	0	7	1	0
DENVER INTL	50	24	61	10	37	-2	0.48	0.28	0.24	1.00	154	2.08	187	67	29	0	6	2	0
GRAND JUNCTION	54	30	61	19	42	-2	0.11	-0.11	0.11	0.35	51	1.35	76	57	31	0	6	1	0
PUEBLO	56	24	68	17	40	-2	0.07	-0.15	0.07	0.17	29	0.86	74	59	39	0	7	1	0
CT BRIDGEPORT	41	30	48	26	36	-4	0.67	-0.29	0.39	2.36	81	9.38	98	65	45	0	6	3	0
HARTFORD	38	24	42	18	31	-8	0.90	0.01	0.45	2.33	85	7.84	82	69	40	0	7	2	0
DC WASHINGTON	49	34	60	28	42	-5	0.32	-0.51	0.32	2.21	82	6.41	75	67	32	0	3	1	0
DE WILMINGTON	46	30	53	27	38	-5	0.70	-0.21	0.54	1.80	62	7.81	85	81	35	0	5	2	1
FL DAYTONA BEACH	78	52	87	44	65	0	0.79	-0.09	0.58	0.82	30	2.70	31	92	41	0	0	4	1
JACKSONVILLE	72	47	81	38	60	-2	2.51	1.60	2.31	2.61	93	8.34	86	92	45	0	0	2	1
KEY WEST	78	70	81	66	74	0	1.29	0.87	1.28	1.46	117	3.00	60	90	71	0	0	2	1
MIAMI	80	65	86	59	73	0	0.82	0.26	0.58	0.82	49	3.21	57	92	58	0	0	5	1
ORLANDO	81	55	90	44	68	0	0.37	-0.46	0.22	0.59	23	1.50	20	88	49	1	0	4	0
PENSACOLA	71	54	76	43	63	2	0.50	-1.00	0.50	1.55	33	15.81	107	77	51	0	0	1	1
TALLAHASSEE	72	51	79	42	61	-1	2.83	1.31	2.14	3.59	74	16.80	113	77	45	0	0	4	1
TAMPA	76	58	83	48	67	-1	1.76	1.14	1.65	2.08	96	3.64	51	95	57	0	0	3	1
WEST PALM BEACH	79	62	86	54	71	0	0.59	-0.28	0.57	0.59	24	3.78	43	87	56	0	0	2	1
GA ATHENS	59	42	75	33	50	-4	1.75	0.62	1.13	2.65	70	13.97	108	79	54	0	0	2	2
ATLANTA	59	44	71	32	52	-3	2.20	0.97	1.34	3.42	83	15.82	115	74	48	0	1	3	2
AUGUSTA	64	43	76	33	54	-3	0.98	-0.06	0.49	1.43	41	11.42	95	76	40	0	0	2	0
COLUMBUS	66	49	80	40	58	0	1.49	0.17	0.81	2.58	60	18.27	134	80	35	0	0	3	2
MACON	65	43	75	34	54	-3	1.29	0.19	1.08	2.21	59	17.13	129	92	43	0	0	3	1
SAVANNAH	69	47	77	39	58	-2	0.55	-0.28	0.29	0.69	27	10.99	117	78	45	0	0	3	0
HI HILO	79	64	84	62	71	-1	0.28	-3.11	0.24	1.83	18	33.32	117	84	70	0	0	3	0
HONOLULU	79	66	81	61	73	-1	0.00	-0.39	0.00	2.20	146	5.29	80	81	71	0	0	0	0
KAHULUI	81	62	87	55	72	-1	0.01	-0.51	0.01	0.87	52	5.85	75	88	74	0	0	1	0
LIHUE	76	61	80	56	69	-4	1.35	0.55	1.20	1.51	57	8.42	80	85	75	0	0	4	1
ID BOISE	49	30	59	19	40	-4	0.27	-0.03	0.25	0.30	31	2.14	61	74	45	0	4	2	0
LEWISTON	52	33	64	22	42	-3	0.16	-0.09	0.14	0.26	34	1.84	65	68	48	0	3	3	0
POCATELLO	44	25	52	18	34	-4	0.39	0.09	0.33	0.72	73	1.80	58	67	44	0	6	3	0
IL CHICAGO/O'HARE	35	20	41	14	27	-11	0.08	-0.52	0.08	1.97	118	8.56	170	75	55	0	7	1	0
MOLINE	37	19	45	12	28	-11	0.08	-0.59	0.08	2.21	118	7.61	153	75	52	0	7	1	0
PEORIA	39	22	48	13	31	-9	0.03	-0.62	0.02	1.86	96	8.59	168	76	41	0	7	2	0
ROCKFORD	33	16	41	10	24	-13	0.12	-0.42	0.12	2.21	149	8.28	196	79	57	0	7	1	0
SPRINGFIELD	42	24	53	14	33	-9	0.09	-0.63	0.05	1.69	77	7.41	132	81	39	0	6	2	0
IN EVANSVILLE	44	29	58	21	37	-10	2.83	1.86	1.97	3.28	107	12.82	141	74	52	0	4	2	2
FORT WAYNE	37	22	46	11	29	-10	0.10	-0.54	0.08	1.84	96	7.13	121	85	56	0	7	2	0
INDIANAPOLIS	40	25	50	16	33	-9	0.61	-0.17	0.43	1.29	53	9.09	124	75	47	0	6	2	0
SOUTH BEND	34	20	40	15	27	-11	0.15	-0.50	0.08	1.18	62	8.73	142	81	55	0	7	3	0
IA BURLINGTON	40	22	49	13	31	-10	0.01	-0.67	0.01	1.58	79	5.54	114	82	40	0	7	1	0
CEDAR RAPIDS	34	16	41	7	25	-12	0.17	-0.34	0.13	2.39	172	4.34	123	88	54	0	7	3	0
DES MOINES	38	20	41	14	29	-10	0.23	-0.27	0.14	1.41	103	4.26	119	75	46	0	7	2	0
DUBUQUE	30	13	40	3	21	-15	0.29	-0.30	0.29	2.37	142	5.81	133	84	64	0	7	1	0
SIoux CITY	36	19	42	12	27	-10	0.06	-0.41	0.03	1.12	90	2.32	94	77	59	0	7	2	0
WATERLOO	32	14	39	7	23	-13	0.15	-0.33	0.15	2.45	186	5.53	172	81	57	0	7	1	0
KS CONCORDIA	43	28	52	20	35	-8	0.21	-0.34	0.07	0.55	34	2.03	68	88	68	0	7	4	0
DODGE CITY	52	24	58	18	38	-7	0.14	-0.29	0.14	0.23	19	1.61	65	84	40	0	7	1	0
GOODLAND	49	20	55	12	34	-6	1.05	0.77	0.63	1.24	149	2.09	123	89	43	0	7	4	1
TOPEKA	42	29	57	24	35	-10	0.50	-0.09	0.30	1.78	103	4.22	110	86	55	0	6	3	

Weather Data for the Week Ending March 23, 2013

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	49	33	59	30	41	-5	0.41	-0.22	0.39	1.22	65	4.24	113	89	51	0	4	2	0
KY JACKSON	47	29	53	17	38	-10	1.51	0.53	1.46	3.27	99	10.91	103	77	43	0	3	2	1
KY LEXINGTON	47	29	57	19	38	-8	2.29	1.29	1.71	3.24	98	9.22	93	79	51	0	3	2	2
KY LOUISVILLE	47	30	57	21	39	-9	1.94	0.94	1.03	3.60	110	10.62	108	72	46	0	4	2	2
LA PADUCAH	48	31	55	19	40	-8	1.84	0.90	1.01	2.51	81	14.26	136	85	47	0	3	3	2
LA BATON ROUGE	75	55	82	45	65	4	0.07	-1.06	0.03	2.41	66	24.45	164	88	47	0	0	3	0
LA LAKE CHARLES	77	58	81	50	67	6	0.21	-0.60	0.13	1.27	50	17.86	158	87	54	0	0	2	0
LA NEW ORLEANS	75	59	83	50	67	4	0.08	-1.09	0.03	0.74	20	14.54	96	84	61	0	0	3	0
LA SHREVEPORT	70	50	81	45	60	1	0.34	-0.57	0.33	1.14	37	8.58	72	81	48	0	0	2	0
ME CARIBOU	29	11	35	0	20	-6	1.00	0.42	0.59	1.59	88	7.49	110	83	52	0	7	5	1
ME PORTLAND	36	20	40	13	28	-6	0.69	-0.26	0.69	1.57	54	9.00	89	75	43	0	7	1	1
MD BALTIMORE	47	31	58	26	39	-5	0.39	-0.51	0.39	1.78	61	7.37	78	70	41	0	4	1	0
MA BOSTON	38	27	44	21	32	-7	0.75	-0.12	0.65	1.56	57	7.90	79	75	42	0	7	3	1
MA WORCESTER	34	21	37	16	28	-7	0.93	-0.05	0.80	2.92	97	9.79	96	84	44	0	7	2	1
MI ALPENA	31	15	39	4	23	-6	0.40	-0.09	0.26	1.28	88	5.76	126	84	53	0	7	5	0
MI GRAND RAPIDS	32	20	37	11	26	-9	0.15	-0.45	0.13	0.75	46	7.81	150	83	60	0	7	3	0
MI HOUGHTON LAKE	31	17	36	11	24	-6	0.17	-0.30	0.12	1.11	82	6.37	151	82	63	0	7	3	0
MI LANSING	31	19	37	14	25	-10	1.09	0.56	0.97	1.87	129	7.09	157	81	63	0	7	3	1
MI MUSKEGON	33	23	38	19	28	-7	0.18	-0.36	0.15	1.02	66	10.46	196	72	57	0	7	2	0
MI TRAVERSE CITY	31	20	39	16	26	-5	0.13	-0.31	0.04	1.46	120	8.67	145	84	54	0	7	3	0
MN DULUTH	27	3	36	-13	15	-11	0.34	-0.05	0.32	1.61	155	4.16	139	77	60	0	7	3	0
MN INT'L FALLS	25	-7	32	-28	9	-15	2.37	2.16	2.35	5.43	953	9.09	443	84	57	0	7	3	1
MN MINNEAPOLIS	30	10	39	5	20	-13	0.24	-0.20	0.24	1.89	164	4.08	137	75	51	0	7	1	0
MN ROCHESTER	27	7	37	0	17	-14	0.24	-0.19	0.23	2.89	263	4.89	175	76	58	0	7	1	0
MN ST. CLOUD	28	0	38	-8	14	-15	0.27	-0.08	0.26	2.20	259	3.98	181	83	47	0	7	1	0
MS JACKSON	70	46	84	38	58	1	2.44	1.13	1.02	5.14	128	22.57	159	84	44	0	0	3	2
MS MERIDIAN	67	44	82	35	56	-2	1.26	-0.33	0.59	2.65	52	21.48	131	88	54	0	0	3	2
MS TUPELO	61	41	75	29	51	-3	2.04	0.60	1.06	3.43	73	15.86	109	87	56	0	1	4	2
MO COLUMBIA	43	29	52	18	36	-9	0.70	-0.02	0.35	2.28	103	8.52	139	87	45	0	4	3	0
MO KANSAS CITY	38	26	52	21	32	-13	0.62	0.07	0.29	1.72	102	4.61	111	84	48	0	7	5	0
MO SAINT LOUIS	44	31	54	21	37	-9	1.27	0.44	1.17	3.52	139	9.91	143	67	49	0	4	3	1
MO SPRINGFIELD	43	30	53	22	37	-10	1.91	1.03	1.38	3.68	143	9.02	130	92	64	0	4	5	1
MT BILLINGS	42	19	57	12	31	-6	0.08	-0.17	0.07	0.25	36	1.12	54	81	31	0	7	2	0
MT BUTTE	36	15	51	2	25	-6	0.18	-0.01	0.13	0.23	42	0.63	41	90	32	0	7	3	0
MT CUT BANK	37	12	59	2	24	-7	0.00	-0.11	0.00	0.02	6	0.75	76	91	42	0	7	0	0
MT GLASGOW	26	7	37	-7	17	-15	0.70	0.61	0.46	0.91	325	1.57	176	84	71	0	7	4	0
MT GREAT FALLS	43	16	61	4	30	-4	0.13	-0.09	0.10	0.25	38	1.29	70	79	30	0	6	3	0
MT HAVRE	39	12	60	1	25	-8	0.20	0.04	0.07	0.39	85	1.91	148	82	65	0	7	4	0
MT MISSOULA	43	23	56	14	33	-5	0.24	0.03	0.07	0.53	82	2.00	81	87	59	0	7	6	0
NE GRAND ISLAND	41	24	51	15	33	-6	0.38	-0.10	0.16	0.80	60	1.93	76	84	61	0	7	4	0
NE LINCOLN	41	24	53	17	33	-7	0.20	-0.32	0.08	0.88	62	2.15	78	80	47	0	7	5	0
NE NORFOLK	37	21	50	12	29	-9	0.25	-0.21	0.10	0.87	69	1.77	68	78	61	0	7	4	0
NE NORTH PLATTE	44	22	51	7	33	-5	0.13	-0.15	0.09	0.21	26	1.49	88	82	41	0	7	3	0
NE OMAHA	39	22	51	15	31	-9	0.14	-0.36	0.08	1.34	96	2.63	89	72	49	0	7	3	0
NE SCOTTSBLUFF	50	19	60	12	35	-3	0.01	-0.25	0.01	0.08	11	0.65	35	85	43	0	7	1	0
NE VALENTINE	39	20	47	10	29	-7	0.26	0.01	0.14	4.43	633	5.66	382	82	58	0	7	3	0
NV ELY	50	25	59	12	37	1	0.03	-0.19	0.00	0.14	19	1.59	71	58	28	0	5	1	0
NV LAS VEGAS	76	58	81	46	67	8	0.00	-0.12	0.00	0.15	31	0.58	33	20	12	0	0	0	0
NV RENO	61	36	66	24	49	5	0.00	-0.18	0.00	0.13	19	0.25	9	48	33	0	3	0	0
NV WINNEMUCCA	54	24	65	9	39	-2	0.10	-0.09	0.05	0.27	47	0.73	36	64	32	0	5	3	0
NH CONCORD	36	16	40	8	26	-8	0.85	0.16	0.83	1.48	69	6.57	88	87	42	0	7	2	1
NJ NEWARK	43	29	48	25	36	-7	0.90	-0.08	0.65	2.76	91	9.10	91	62	38	0	6	2	1
NM ALBUQUERQUE	65	39	72	33	52	4	0.01	-0.13	0.01	0.17	40	0.52	38	39	10	0	0	1	0
NY ALBANY	35	18	38	11	27	-9	0.75	0.05	0.49	2.32	109	5.45	80	82	46	0	7	2	0
NY BINGHAMTON	32	18	39	14	25	-8	0.60	-0.06	0.29	1.56	76	6.11	86	81	53	0	7	4	0
NY BUFFALO	34	23	39	20	28	-7	0.19	-0.49	0.13	0.65	31	6.20	81	84	57	0	7	4	0
NY ROCHESTER	34	22	38	17	28	-7	0.40	-0.18	0.28	0.76	43	5.09	83	80	56	0	7	4	0
NY SYRACUSE	35	24	39	17	30	-4	0.95	0.26	0.37	1.55	76	5.97	88	85	52	0	7	4	0
NC ASHEVILLE	54	33	73	22	43	-4	0.47	-0.57	0.39	2.17	64	14.31	127	78	51	0	3	3	0
NC CHARLOTTE	57	37	77	26	47	-6	0.64	-0.37	0.61	2.06	62	9.81	90	74	38	0	2	2	1
NC GREENSBORO	53	33	65	20	43	-7	0.17	-0.71	0.17	1.43	50	10.10	107	71	37	0	2	1	0
NC HATTERAS	58	44	72	35	51	-2	0.32	-0.83	0.32	1.78	49	11.51	86	82	47	0	0	1	0
NC RALEIGH	54	35	67	23	44	-7	0.29	-0.63	0.29	1.38	45	8.56	81	73	51	0	2	1	0
NC WILMINGTON	62	40	75	31	51	-4	0.67	-0.29	0.56	1.23	38	8.50	75	87	34	0	1	3	1
ND BISMARCK	24	7	28	-2	16	-14	0.27	0.09	0.16	0.79	152	1.38	93	81	64	0	7	3	0
ND DICKINSON	27	7	37	3	17	-14	0.11	-0.03	0.07	0.34	113	0.42	38	88	57	0	7	2	0
ND FARGO	22	-4	32	-15	9	-19	0.28	0.01	0.16	0.99	132	3.18	151	78	63	0	7	3	0
ND GRAND FORKS	19	-7	26	-23	6	-20	0.33	0.14	0.19	0.96	171	1.75	96	85	63	0	7	2	0
ND JAMESTOWN	20	-4	27	-13	8	-21	0.09	-0.10	0.05	0.29	54	0.78	46	88	66	0	7	4	0
ND WILLISTON	21	1	27	-7	11	-19	0.61	0.44	0.27	1.35	293	1.92	138	88	76	0	7	6	0
OH AKRON-CANTON	38	23	47	14	30	-8	0.51	-0.21	0.46	1.50	67	5.69	81	76	68	0	7	3	0
OH CINCINNATI	43	26	53	17	35	-10	1.05	0.16	0.75	3.21	116	8.81	105	77	50	0	5	2	1
OH CLEVELAND	35	23	46	17	29	-9	0.45	-0.21	0.24	1.83	91	6.30	93	87	62	0	7	4	0
OH COLUMBUS	41	26	51	20	34	-9	1.10	0.45	1.10	2.64	130	6.71	99	76	54	0	5	1	1
OH DAYTON	40	25	48	18	32	-9	0.65	-0.09	0.62	2.18	98	6.57	92	82	54	0	7	2	1
OH MANSFIELD	37	22	48	15	29	-8	0.46	-0.31	0.46	1.46	66	6.19	88	86	58	0	7	1	0

Based on 1971-2000 normals

\*\*\* Not Available

Weather Data for the Week Ending March 23, 2013

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	0.1 INCH OR MORE	5.0 INCH OR MORE	
OK TOLEDO	36	22	42	16	29	-9	0.10	-0.49	0.10	0.54	31	6.98	126	78	53	0	7	1	0	
OK YOUNGSTOWN	35	21	41	12	28	-9	0.76	0.06	0.45	1.99	95	6.29	97	83	68	0	7	5	0	
OK OKLAHOMA CITY	54	37	62	33	46	-6	0.00	-0.66	0.00	0.31	15	4.17	84	83	50	0	0	0	0	
OR TULSA	51	36	62	29	43	-9	0.45	-0.38	0.31	0.74	29	5.46	90	92	60	0	2	4	0	
OR ASTORIA	49	37	52	34	43	-3	1.61	-0.03	0.90	3.92	70	19.28	83	86	70	0	0	5	1	
OR BURNS	47	21	57	13	34	-3	0.18	-0.09	0.14	0.18	19	0.92	28	77	45	0	7	2	0	
OR EUGENE	51	33	56	29	42	-4	0.89	-0.40	0.53	1.95	43	4.91	27	91	76	0	3	3	1	
OR MEDFORD	57	35	61	25	46	-1	0.05	-0.35	0.02	0.26	18	1.71	29	80	43	0	3	4	0	
OR PENDLETON	52	31	66	24	41	-5	0.14	-0.14	0.14	0.43	47	1.80	50	77	47	0	4	1	0	
OR PORTLAND	51	37	55	34	44	-3	0.90	0.09	0.55	1.46	51	6.21	51	84	67	0	0	3	1	
OR SALEM	51	34	54	30	42	-5	1.28	0.38	0.75	2.14	65	5.19	37	91	71	0	3	4	1	
PA ALLENTOWN	42	27	49	22	35	-4	0.55	-0.27	0.48	1.95	76	8.02	91	68	44	0	7	2	0	
PA ERIE	33	23	37	19	28	-9	0.85	0.15	0.37	2.03	95	8.52	123	85	67	0	7	6	0	
PA MIDDLETOWN	42	29	51	27	35	-7	0.61	-0.11	0.54	1.95	80	6.90	84	78	38	0	6	2	1	
PA PHILADELPHIA	46	31	53	28	39	-5	0.69	-0.19	0.51	1.76	64	7.21	80	66	37	0	6	2	1	
PA PITTSBURGH	39	24	46	17	32	-8	0.41	-0.31	0.40	0.94	42	5.51	75	79	48	0	7	2	0	
PA WILKES-BARRE	37	24	45	19	31	-8	0.38	-0.23	0.26	1.44	79	4.77	75	77	44	0	7	2	0	
PA WILLIAMSPORT	40	25	46	19	32	-7	0.38	-0.34	0.36	1.16	52	5.62	73	71	45	0	7	2	0	
RI PROVIDENCE	40	27	45	20	33	-6	1.25	0.23	0.98	2.37	76	9.33	85	63	43	0	7	2	1	
SC BEAUFORT	66	46	79	36	56	-2	0.92	0.07	0.70	1.08	42	13.01	134	86	37	0	0	3	1	
SC CHARLESTON	66	46	79	37	56	-2	0.94	0.00	0.49	1.02	35	11.84	118	79	35	0	0	2	0	
SC COLUMBIA	63	43	80	33	53	-3	1.77	0.72	1.02	2.06	61	8.78	74	76	40	0	0	2	2	
SC GREENVILLE	57	37	77	26	47	-5	0.57	-0.64	0.51	1.84	45	10.99	86	83	38	0	2	2	1	
SD ABERDEEN	27	3	35	-4	15	-16	0.06	-0.25	0.04	0.24	30	2.07	117	76	68	0	7	3	0	
SD HURON	30	12	36	6	21	-12	0.12	-0.27	0.08	0.71	68	2.10	100	83	63	0	7	2	0	
SD RAPID CITY	40	12	48	8	26	-9	0.42	0.19	0.27	0.79	125	1.40	96	83	46	0	7	3	0	
SD SIOUX FALLS	32	13	35	6	22	-11	0.07	-0.36	0.03	0.37	34	1.72	82	79	57	0	7	2	0	
TN BRISTOL	53	31	65	16	42	-5	0.98	0.10	0.94	3.09	104	14.94	151	83	37	0	3	3	1	
TN CHATTANOOGA	58	40	73	26	49	-3	1.34	-0.09	0.75	2.68	58	16.36	110	75	48	0	1	2	2	
TN KNOXVILLE	56	38	73	24	47	-3	1.01	-0.18	0.90	3.50	90	18.59	149	73	38	0	3	2	1	
TN MEMPHIS	58	41	71	31	50	-4	1.19	-0.07	0.37	2.68	67	16.25	129	86	50	0	1	4	0	
TN NASHVILLE	55	35	65	22	45	-6	1.47	0.36	1.39	3.28	90	13.00	115	81	44	0	3	2	1	
TX ABILENE	72	45	85	40	59	2	0.56	0.26	0.56	0.56	56	2.45	79	71	51	0	0	1	1	
TX AMARILLO	66	34	79	25	50	2	0.02	-0.23	0.02	0.15	21	3.44	180	70	27	0	2	1	0	
TX AUSTIN	81	53	90	44	67	5	0.31	-0.14	0.21	1.40	85	4.75	86	83	52	1	0	3	0	
TX BEAUMONT	77	60	83	50	68	5	0.36	-0.50	0.34	0.36	14	11.88	102	94	53	0	0	2	0	
TX BROWNSVILLE	87	65	99	58	76	7	0.01	-0.17	0.01	0.28	52	1.76	57	95	64	2	0	1	0	
TX CORPUS CHRISTI	85	65	92	60	75	9	0.00	-0.36	0.00	0.06	5	1.75	37	85	58	1	0	0	0	
TX DEL RIO	89	60	95	55	74	10	0.00	-0.19	0.00	0.00	0	1.33	61	71	40	4	0	0	0	
TX EL PASO	77	53	80	44	65	8	0.00	-0.03	0.00	0.00	0	0.71	70	26	11	0	0	0	0	
TX FORT WORTH	67	49	72	45	58	0	0.10	-0.57	0.10	0.11	5	5.85	88	78	48	0	0	1	0	
TX GALVESTON	75	64	78	60	70	5	0.02	-0.61	0.02	0.19	10	9.61	111	96	68	0	0	1	0	
TX HOUSTON	80	60	90	48	70	7	0.12	-0.63	0.12	0.54	23	5.07	56	87	54	1	0	1	0	
TX LUBBOCK	71	38	81	26	54	2	0.00	-0.15	0.00	0.00	0	2.23	132	78	40	0	2	0	0	
TX MIDLAND	77	46	88	38	61	5	0.00	-0.07	0.00	0.00	0	1.53	106	66	38	0	0	0	0	
TX SAN ANGELO	81	49	86	42	65	7	0.00	-0.19	0.00	0.00	0	1.82	67	67	35	0	0	0	0	
TX SAN ANTONIO	83	59	95	55	71	8	0.00	-0.41	0.00	0.78	57	3.71	77	87	46	1	0	0	0	
TX VICTORIA	80	59	90	52	70	6	0.02	-0.48	0.02	0.32	20	4.41	72	89	67	1	0	1	0	
TX WACO	72	49	80	38	60	1	0.20	-0.32	0.12	1.83	95	8.97	144	80	55	0	0	3	0	
TX WICHITA FALLS	63	41	79	36	52	-3	0.02	-0.48	0.02	0.29	18	2.98	69	76	52	0	0	1	0	
UT SALT LAKE CITY	50	31	57	22	40	-4	0.33	-0.10	0.17	0.69	51	2.89	71	74	35	0	6	4	0	
VT BURLINGTON	33	20	37	8	27	-5	0.59	0.06	0.54	1.94	126	4.37	80	81	47	0	7	4	1	
VA LYNCHBURG	51	28	62	19	40	-7	0.37	-0.50	0.22	2.21	78	9.84	104	72	39	0	5	2	0	
VA NORFOLK	51	35	63	30	43	-6	0.19	-0.74	0.14	1.56	52	9.12	89	82	42	0	2	3	0	
VA RICHMOND	51	31	66	27	41	-7	0.74	-0.20	0.52	4.48	147	12.41	130	76	55	0	4	3	1	
VA ROANOKE	51	30	60	22	41	-7	0.78	-0.09	0.60	2.25	80	11.54	127	67	42	0	3	2	1	
WA WASH/DULLES	47	29	59	22	38	-6	0.46	-0.34	0.46	2.60	101	7.93	94	76	53	0	5	1	0	
WA OLYMPIA	49	32	53	27	41	-3	1.58	0.41	0.92	3.68	90	11.63	65	94	75	0	4	6	1	
WA QUILLAYUTE	50	35	51	33	42	-2	1.98	-0.45	1.06	16.39	190	38.50	111	84	65	0	0	6	1	
WA SEATTLE-TACOMA	51	37	55	33	44	-2	1.11	0.28	0.56	2.63	92	8.37	69	80	63	0	0	3	1	
WA SPOKANE	46	27	52	22	36	-4	0.42	0.09	0.42	0.83	73	3.20	72	84	42	0	6	1	0	
WA YAKIMA	54	28	59	22	41	-2	0.22	0.08	0.13	0.73	152	0.86	35	70	38	0	5	3	0	
WV BECKLEY	43	25	49	10	34	-9	0.31	-0.51	0.15	1.30	48	7.49	84	77	55	0	5	5	0	
WV CHARLESTON	47	28	53	17	37	-9	0.97	0.09	0.64	2.04	70	8.07	86	76	40	0	4	3	1	
WV ELKINS	42	25	47	16	33	-8	0.68	-0.20	0.35	1.97	68	8.57	90	87	43	0	6	4	0	
WV HUNTINGTON	47	28	54	18	38	-8	1.80	0.93	1.00	2.90	101	8.58	94	78	43	0	4	3	2	
WI EAU CLAIRE	28	5	37	-4	16	-16	0.04	-0.39	0.04	1.26	116	3.83	131	85	48	0	7	1	0	
WI GREEN BAY	29	13	35	8	21	-11	0.37	-0.11	0.37	1.66	129	6.31	180	79	57	0	7	1	0	
WI LA CROSSE	30	9	40	1	20	-15	0.28	-0.18	0.24	1.81	157	4.21	126	82	46	0	7	1	0	
WI MADISON	30	12	36	5	21	-13	0.30	-0.22	0.30	2.36	170	7.64	195	79	55	0	7	1	0	
WI MILWAUKEE	31	17	35	12	24	-11	0.18	-0.41	0.18	1.62	102	7.82	154	72	57	0	7	1	0	
WY CASPER	41	15	53	8	28	-8	0.45	0.26	0.28	0.67	108	1.44	78	75	44	0	7	4	0	
WY CHEYENNE	41	19	51	8	30	-4	0.09	-0.15	0.05	0.32	48	1.26	81	78	35	0	7	2	0	
WY LANDER	42	19	55	14	31	-5	0.42	0.14	0.31	0.42	55	2.40	132	77	28	0	7	2	0	
WY SHERIDAN	39	17	51	12	28	-8	0.18	-0.04	0.11	0.25	42	2.00	104	82	62	0	7	4	0	

Based on 1971-2000 normals

\*\*\* Not Available

## National Agricultural Summary

March 18 – 24, 2013

*Weekly National Agricultural Summary provided by USDA/NASS*

Cooler-than-normal weather dominated much of the United States during the week, with temperatures averaging more than 15°F below normal on the northern Great Plains. Elsewhere, warm weather in the South allowed producers ample time to prepare fields and plant spring crops. Precipitation was scattered throughout the country. Much of the Southeast accumulated rainfall totaling more than 200 percent of normal.

Topsoil moisture levels in Florida improved during the week, as a cold front delivered much-needed, widespread precipitation. Portions of Florida received more than 4 inches of rain. Producers in the Panhandle planted peanuts and corn. Sugarcane harvest was winding down, with one mill officially finished for the 2012-2013 season. Unseasonably low evening temperatures left many fruit and vegetable growers worrying about frost damage. Despite increased rainfall, many fields were being irrigated. Winter vegetables were harvested in Miami-Dade County. Citrus growers continued to harvest Valencia oranges and complete general grove maintenance.

Temperatures fluctuated across Texas during the week, as some areas experienced unseasonably warm weather and frost blanketed others. Moisture was scarce, with very few areas reporting any measurable rainfall. Dry conditions coupled with high winds continued to deplete soil moisture. Winter wheat in the Blacklands and East Texas, as well as irrigated fields in the Plains, continued to develop well; however, dryland small grains across the rest of the state were stressed by lack of moisture. Some fields in the Plains regions were treated for green bugs. Producers in the Plains and the Trans-Pecos continued to prepare for cotton planting, while corn planting in the Blacklands and

East Texas was wrapping up. Planting of corn, sorghum, and soybeans continued in the Edwards Plateau and South Central Texas, with some producers starting to plant cotton.

Above-average temperatures and dry conditions allowed producers in Arizona ample time for fieldwork during the week. Cotton planting advanced ahead of both last year and the average pace. Most small grain crops were reported in good to excellent condition. Producers were harvesting hay from more than three-quarters of the state's alfalfa fields, with over 80 percent of the crop reported in good to excellent condition. A variety of vegetables were harvested and shipped by central and western growers.

Near-normal temperatures blanketed California during the week. While the southern portions of the state remained dry, a mid-week storm system brought beneficial moisture to many northern locations. Wheat and barley continued to develop, with some fields starting to head. Producers continued to irrigate, as additional moisture was needed to sustain growth. Producers applied fertilizers and sprayed with selective herbicides to control broad leaf weeds. Rice fields were drained, and cultivation and leveling were underway. Cotton producers in the southern San Joaquin Valley were planting their fields. Irrigation continued in vineyards and stone fruit orchards. Stone fruit trees were leafing out, while cherries were in full bloom. Cling peaches and prunes were in petal fall and leafing out. Grapes were leafing out. Blueberries were blooming. Buds were forming on citrus trees. A variety of citrus crops were harvested. Almond bloom was virtually complete, with petal fall underway. Nutlets were evident in early varieties. Spring and summer vegetables were being planted in Fresno and Tulare Counties.

## March State Agricultural Summaries

*These summaries, issued weekly through the summer growing season, provide brief descriptions of crop and weather conditions important on a national scale. More detailed data are available in Crop Progress and Condition Reports published each Monday by NASS State Statistical Offices in cooperation with the National Weather Service. The crop reports are available on the Internet through the NASS Home Page on the World Wide Web at <http://www.nass.usda.gov>.*

**ALABAMA:** The month of March brought light to moderate rains and below normal temperatures throughout most areas in Alabama. As producers prepare for the planting season, many were still indecisive about their intentions. Additionally, the desire for warmer weather was expressed due to pastures and hayfields being in poor condition throughout Central Alabama. James Jones, Jr., ACES CEC, said corn plantings have begun in Henry County, and small grains were doing well with recent moisture. Tim Malone, FSA CED, reported fescue pastures were starting to green up, wheat was starting to grow, and hay feedings have slowed down in Marion and Winston County. According to the US Drought Monitor released on March 19, 2013, 89.70 percent of the State was free of drought while 10.30 percent was abnormally dry. The average mean temperature over the past month ranged from 46.2°F in Guntersville to 55.7°F in Mobile. Total precipitation for the month ranged from 1.46 inches in Coden to 6.68 inches in Bankhead.

**ALASKA: DATA NOT AVAILABLE**

**ARIZONA:** Temperatures were below normal the first week of March, but warmed up considerably during the third week to 96 degrees and continued in the 90's for the final week. Temperatures in March ranged from 3 degree below normal to 13 degrees above normal. Canyon De Chelly recorded the coldest temperature at 10 degrees during the first week. The high reaching 96 degrees in Yuma occurred on the third week. Scattered rain fell during the first week and third week of the month. Conditions were favorable throughout the month with greening up rangeland and pastures as summer months approach. Alfalfa harvesting was active over three-quarters of the State. Cotton planting started on the third week of the month, and by the end of the month 21 percent of the cotton had been planted. Vegetable and citrus harvesting activities continued throughout the month.

**ARKANSAS:** Temperatures were normal during the first part of March, but the month ended with lower than normal temperatures. Most counties experienced significant rain and high winds in late March. A snow event occurred in the northern part of the State during the same timeframe. The southwestern portion was still experiencing drought conditions. For many producers, field preparation was slow due to wet conditions. Producers continued to apply nitrogen and herbicides to the wheat crop. Planting of rice and corn was limited due to cold weather. Cool conditions also delayed forage growth. This development has caused many livestock producers to continue feeding hay.

**CALIFORNIA:** Wheat, barley and other winter forage crops continued to grow as some field were starting to head. Irrigation continues, rainfall is needed to sustain growth. Producers were applying fertilizers and spraying with selective herbicides to control broad leaf weeds. Rice producers began draining leveling and cultivating fields. Cotton planting began in the southern San Joaquin Valley. Some stone fruit were blooming. Vineyards and stone fruit were irrigated, and began leafing out. Blueberries began blooming. Buds were forming on citrus trees. Navel and Valencia oranges, lemons and mandarins continued to be harvested. Hass avocado harvest continued. Almond bloom was nearly complete; trees were

experiencing petal fall. Nutlets were showing on early varieties. Trees continued to leaf out. Pruning was ongoing in walnut and pistachio orchards, with bloom commencing in early varieties. Pistachios were showing bud break. In Tulare County, warmer temperatures were helping vegetables to grow. Fresno County reported that tomatoes were being transplanted, while bell peppers and carrots were being planted. Winter vegetables such beets, broccoli, cauliflower, cabbage, turnips, daikon, green onions, herbs, choys, chards and kales were harvested. The weather has been good for onions and garlic, which have been irrigated and fertilized. Fields were prepared for spring and summer vegetables. Range and pasture conditions were reported to be in fair to good condition. The continued lack of significant precipitation in some regions of the State has been detrimental with hindered grass development and unseasonably early desiccation. Sheep and cattle grazed on idle fields, dry land grain and alfalfa fields. Supplemental feeding of livestock continued. Bees were active pollinating almond and stone fruit orchards.

**COLORADO:** Most areas of the State received normal to slightly above normal precipitation during most of March. The eastern plains region received much needed moisture from snow storms the last half of March. Higher elevations also received significant snowfall during the month. Statewide, the mountain snowpack is currently 77% of average, up from 74% a month ago. Temperatures were above normal the first half of the month for most areas, but below normal during the 3rd week. The winter wheat crop is breaking dormancy in mostly fair to very poor condition. Generally, soil moisture ratings continue as mostly short to very short. Farmers are currently slightly behind schedule in planting small grains, onions, and sugarbeets.

**DELAWARE:** Wet cold weather during the month. Rain and snow causing farmers problems for getting small grains top dressed with fertilizer and pesticides. Farmers are trying to spread manure on dry areas of the fields. Soil moisture levels remain mostly adequate throughout the State. Hay supplies are tightening as State is mostly short. Pasture conditions continue to be in fair condition. Winter wheat and barley are in good condition. Farmers have started planting green peas.

**FLORIDA:** In Putnam and Flagler counties, potatoes were covered and uncovered repeatedly due to cold weather. Winter wheat looks good with recent rain. Some wheat fields being sprayed for disease. In Panhandle, land being prepared for peanuts. Field corn being planted. Sugarcane harvest close to completion. Rice planting begun. Planting of corn and watermelon delayed in northern part of State due to excessive rains, cold weather. Cabbage harvesting delayed due to weather conditions. Harvesting strawberries started. Early March patchy frost, temperatures near freezing in south Florida. Some damage reported due to frost, cold. Heavy winds battered sensitive vegetables. Cooler nights slowed growth vegetables. Harvesting string beans, sweet corn, winter vegetables in south Miami-Dade County. Vegetables coming to market include; tomatoes, peppers, eggplants, beans, corn, cucumbers, cabbage, broccoli, squash, potatoes, strawberries, and a variety of specialty crops. High temperatures for the month in mid 80s, lows in 40s. Rainfall

light across citrus producing region. Drought conditions throughout citrus region. Harvesting of early oranges (Navels and Hamlins). Honey tangerines and tangelos about complete. White, colored grapefruit, Valencia oranges harvest strong and steady. Widespread citrus bloom heavy with all varieties showing varying stages of bloom. Cultural practices included irrigation, young tree care, and limited hedging and topping. Statewide Pastures in Panhandle in poor condition beginning of month due to freeze, drought. Drought the first limiting factor for forage growth, followed by cold. Later in month, rains helped pastures in Panhandle. Pasture recovered slowly due to colder than normal weather. Pastures throughout rest of State in poor to fair condition due to drought, cold. Cattle mostly in fair condition for the entire State.

**GEORGIA:** Days suitable for fieldwork 4.2. Topsoil moisture 1% very short, 2% short, 58% adequate, 39% surplus. Subsoil moisture 1% very short, 10% short, 68% adequate, 21% surplus. Range and Pasture 3% very poor, 10% poor, 37% fair, 42% good, 8% excellent. Blueberries 16% poor, 29% fair, 37% good, 18% excellent. Blueberries blooming 97%, 100% 2012. Corn planted 18%, 43% 2012, 29% avg. Oats 1% very poor, 1% poor, 30% fair, 63% good, 5% excellent. Onions 2% poor, 55% fair, 39% good, 4% excellent. Peaches 9% poor, 28% fair, 10% good, 53% excellent. Peaches blooming 74%, 75% 2012, 76% avg. Rye 2% poor, 35% fair, 59% good, 4% excellent. Tobacco transplanted 14%, 2% 2012. Watermelons planted 11%, 22% 2012, 17% avg. Winter Wheat 1% very poor, 1% poor, 25% fair, 58% good, 15% excellent. Precipitation estimates for the State ranged from no rain up to 4.7 inches. The week's average temperatures ranged from the lower 30s to the mid 80s.

**HAWAII:** The month of March began with approximately 58 percent of the State rated as abnormally dry or drier according to the U.S. Drought Monitor. Throughout the month precipitation fell primarily in light isolated showers with a handful of brief heavier rainfall events. These heavy showers resulted in flash flood warnings and advisories being issued within Hawaii and Oahu Counties towards the middle of the month. While storm systems were absent, typical trade wind weather prevailed with intermittent overcast skies and average daytime high temperatures which ranged from the low seventies to the mid eighties. Weekly summaries follow. During the first week in March, moderately heavy rains fell on windward areas of the Isle of Hawaii early in the week. Otherwise, most areas received only very light passing showers. Trade winds were breezy and consistently blowing 5 to 15 MPH. The average weekly total rainfall across the State was 0.64 inch, most of which occurred on the Island of Hawaii. Overall drought conditions dropped this week, primarily as a result of rains which fell during the end of February. The second week of March brought about an increase in overall drought conditions. Lack of rainfall over the past week caused drought conditions to expand by 7.27 percentage points. Heavy isolated rains fell over the Counties of Maui and Honolulu over the weekend, triggering a flash flood warning for Oahu on Sunday March 10. During the remainder of the week, trade winds blew steadily from the north east, and conditions fluctuated between overcast and clear with very light passing showers. Daytime high temperatures were in the mid seventies for most areas. The average weekly total rainfall across the State was 0.37 inch, the majority of which fell on the Island of Oahu. Growth of most crops and pastures slowed this week due to slightly lower temperatures. Pastures in many windward and mountain areas were observably greener this week compared to the past several weeks. Weather during the third week in March consisted of gusty trade winds with isolated showers dropping variable amounts

of rain. Rains were concentrated primarily on the Island of Hawaii with Oahu receiving some notable precipitation early in the week. Most other areas across the State experienced only light showers. Daytime high temperatures were in the mid to low eighties for most areas. The average weekly total rainfall across the State was 0.75 inch. Overall drought conditions remained unchanged from the previous week however, some areas which already had a drought rating experienced an increase in drought intensity. Most crops and pastures in areas which received some precipitation over the past several weeks are growing normally. The final week in March started off very dry with hardly any measurable precipitation falling during the first half of the week. Drought conditions remained unchanged from the previous week. Trade winds were fairly consistent throughout the week, but tapered off at times allowing the Kona winds to bring vog from the Isle of Hawaii northward to the other isles. Average weekly total rainfall across the State dropped to 0.20 inch. Day length continues to increase bringing longer periods of sunshine and increased temperatures. Despite lack of rains throughout the month of March, State irrigation reservoirs remain near holding capacities and provide service to the areas where available. Beneficial rains fell in most areas the final Sunday of March.

**IDAHO:** Topsoil moisture 1% very short, 21% short, 69% adequate, 9% surplus. Calving complete 76%, 59% 2012, 40% avg. Lambing complete 64%, 66% 2012, 33% avg. Hay and roughage supply 0% very short, 36% short, 62% adequate, 2% surplus. Winter wheat condition 0% very poor, 0% poor, 35% fair, 54% good, 11% excellent. Farmers across Idaho are top dressing, fertilizing, spraying and seeding as weather permits. The major activity has been hauling manure and burning ditches.

**ILLINOIS:** Topsoil moisture 2% very short, 6% short, 81% adequate, 11% surplus. Subsoil moisture 11% very short, 26% short, 58% adequate, 5% surplus. For the month of March, temperatures averaged 32.5 degrees, -7.1 degrees below normal. Precipitation was also below normal with an average of 2.27 inches, -0.02 inches below normal. Winter Wheat was rated as 9% poor, 26% fair, 57% good, and 8% excellent. The cold winter continued with rain and snow covering much of the State during the month. Spring calving continues but the wet cold conditions have been hard on the herds. Wet soil conditions have allowed very little fieldwork to be accomplished. Farmers are moving corn and beans to market, attending seminars and preparing machinery and equipment for spring planting.

**INDIANA:** Cold and dry conditions continued through March. Temperatures through the 24th of the month have averaged 33.90 which is 5.40 below normal. The State received an average of 1.88 inches of precipitation which was just 75 percent of normal. Northwest Indiana was the driest, but the southern third of the State actually received precipitation slightly in excess of normal. Very little field work has been done thus far due to the cool, damp weather conditions. The winter wheat crop remains dormant in most areas with only a small amount of acreage beginning to grow in some of the southernmost counties. Much of the crop received little snow cover. Winter wheat condition remains mostly good. Concerns over hay supplies were underscored by the delay in pasture growth. Spring calving is active on many livestock operations with few problems reported. Other activities included preparing tillage and planting equipment, spreading fertilizer and lime, hauling grain to market and tending to livestock.

**IOWA:** Topsoil moisture levels rated 35 percent very short, 49 percent short, 16 percent adequate, and 0 percent surplus.

Winter storms delivered needed moisture, but with the soil still frozen it did little to help alleviate concerns about soil moistures. Grain movement from farms to elevators was slow, rating 43% none, 42% light, 13% moderate, and 2% heavy. Cattle and hog losses were rated mostly average to below average. Hay and roughage supplies are rated at 54% short, 45% adequate, and 1% surplus. Hay and roughage quality rated 22% poor, 51% fair, and 27% good.

**KANSAS:** Days Suitable for field work was 11.4 days. Topsoil moisture 17% very short, 30% short, 50% adequate, 3% surplus. Subsoil Moisture 42% very short, 40% short, 17% adequate, and 0% surplus. Winter wheat jointed 3%, 33% 2012, 13% avg.; condition 11% very poor, 20% poor, 40% fair, 27% good, and 2% excellent; wind damage 81% none, 14% light, 4% moderate, and 1% severe. Range and Pasture condition 49% very poor, 31% poor, 17% fair, 3% good, and 0% excellent. Feed grain supplies 19% very short, 26% short, 53% adequate, 2% surplus. Hay and forage supplies 36% very short, 37% short, 26% adequate, 1% surplus. Stock water supplies 37% very short, 31% short, 32% adequate, 0% surplus. Kansas wheat producers were top dressing their crop and spraying for weeds. Livestock producers were challenged with below normal temperatures and freezing precipitation as spring calving progressed.

**KENTUCKY:** March weather has been true to form as a transition period. Overall, the Bluegrass State experienced below normal temperatures during March with short periods of warm weather. The State recorded precipitation from below normal to above normal. Producers continue making planting decisions for the upcoming 2013 crop season. Costs of inputs are being weighed against anticipated selling prices. Farmers were busy performing routine equipment maintenance in preparation for the upcoming planting season.

**LOUISIANA:** The State averaged 2.50 inches of rain over the last four weeks. The cumulative rainfall during this time totaled 18.73 inches, four inches above the State norm. Corn, sorghum and rice have been planted in many areas with corn starting to emerge across the State. However, the significant rainfall at the latter part of the month has slowed down field crop plantings. Wheat across the State has started to head. Producers continue spraying and harvesting strawberries. Vegetable producers have been busy preparing for spring and summer crops. Crawfish producers have reported an improvement in size of crawfish in their catches. Livestock producers were fertilizing pasture and feeding hay.

**MARYLAND:** Wet cold weather during the month. Rain and snow limited field activities. Cold temperatures are affecting vegetable crops. Farmers are preparing for spring planting season. Hay supplies are being hauled in from out of State. Soil moisture levels remain mostly adequate throughout the State. Hay supplies are tightening as State is short to adequate. Pasture conditions are in fair to good condition. Winter wheat and barley are in good condition. Farmers have started planting green peas, tomatoes, sweet corn and potatoes. Green houses are filled with the first round of bedding and ornamental plants.

**MICHIGAN:** Precipitation for the four weeks ended March 24 was 1.94 inches in the Upper Peninsula and varied from 1.83 to 2.48 inches in the Lower Peninsula. The amount of snow cover for winter wheat varied based on region. Some areas reported adequate snow cover, while others reported minimal amounts. Current wheat condition is 60% good to excellent. The main activity for fruit growers is pruning. The consistent cold weather in March has slowed down fruit bud development. The weather has been good for sugarbeet storage piles as well.

**MINNESOTA:** PRECIPITATION AND TEMPERATURE SUMMARY FOR March, 2013. March Statewide temperatures were 1.4 and 1.8 degrees below normal respectively for the first two weeks of the month then dropped to 8.6 degrees below normal as of the week of March 17, 2013. Statewide precipitation was above normal as frequent snows were received. The U.S. Drought Monitor, released on March 21, places large portions of the northwest, west central, southwest, and south central Minnesota in the Extreme Drought category. Over 67 percent of the State's landscape is categorized in Extreme or Severe drought, down from 80 percent last month.

**MISSISSIPPI:** The month of March started with rain in some parts of the State but weather conditions were good. The favorable weather dried wet fields and allowed for corn planting to start. However, the latter part of the month, field work had begun but was halted due to excess rain. Planting will be delayed for several weeks. Strawberries are coming in well and looking good.

**MISSOURI:** March was colder and drier than normal. Two late season snow storms hit Missouri on March 21st and March 23rd - 24th. The March 21st snow storm was across the southwestern part of the State with some south-central district counties receiving over 7 inches of snowfall. The March 23rd and 24th winter storm dropped heavy snow across the center and portions of the northern part of the State. Average temperatures were 5 degree to 9 degrees below normal. Precipitation averaged 2.96 inches compared to the 30 year average of 3.24 inches. The east-central district received 4.44 inches of precipitation in March. Potatoes have been planted in the southeast district. A few fields planted to corn have been reported but most are waiting for warmer soil temperatures. Topsoil moisture supplies were 1% very short, 12% short, 73% adequate, and 14% surplus. Subsoil moisture supply was 15% very short, 25% short, 58% adequate, and 2% surplus. The condition of the winter wheat crop was 2% poor, 33% fair, 61% good and 4% excellent. Stock water supplies were 6% very short, 15% short, 77% adequate, and 2% surplus. Supply of hay and other roughages was 38% very short, 37% short and 25% adequate.

**MONTANA:** Topsoil moisture 16% very short, 6% last year; 23% short, 33% last year; 57% adequate, 57% last year; 4% surplus, 4% last year. Subsoil moisture 22% very short, 7% last year; 34% short, 36% last year; 43% adequate, 50% last year; 1% surplus, 7% last year. Livestock grazing 50% open, 79% last year; 23% difficult, 6% last year; 27% closed, 15% last year. Livestock receiving supplemental feed – cattle 95%, 92% last year. Livestock receiving supplemental feed – sheep 97%, 90% last year. Livestock birthing – calving complete 38%, 41% last year. Livestock birthing – lambing complete 24%, 24% last year. Montana was mostly dry with temperatures fluctuating between above and below average during the month of March. Average low temperatures were the mid teens to upper 30s at most reporting stations. Opheim received the largest amount of precipitation for the month with 2.03 inches of moisture and most other stations saw 0.05 to 1.82 inches of precipitation. High temperatures ranged from the mid 40s to lower 70s, with the State-wide high temperature of 72 degrees recorded in Huntley and Hysham. The coldest reported low of -15 degrees was recorded in West Yellowstone followed by Opheim with -11 degrees.

**NEBRASKA:** Wheat conditions rated 23% very poor, 38% poor, 33% fair, 6% good, and 0% excellent. Hay and forage supplies rated 16% very short, 37% short, 46% adequate, and 1% excellent. Cattle and Calves condition rated 1% very poor, 4% poor, 19% fair, 74% good and 2% excellent. Percent cows calved since

January 1, 49%. For the month of March 2013, snow fall across the State brought much needed moisture to drought impacted areas. Wheat condition continued well below year ago levels with most of the crop rated fair to poor. Cattle are in mostly good condition with calving nearly half way done. Snow depth averaged 1.8 inches across the State.

**NEVADA:** March weather did little to alleviate heightening concerns over drought. A couple of storms passed through the State early in the month, but little precipitation resulted. Temperatures averaged above normal Statewide and some areas warmed appreciably during the second half of the month. The winter snowpack above primary northern watersheds diminished and were generally 70-75 percent of average. Some fields were plowed in preparation of the growing season and herbicide applications continued. Winter seeded garlic was being sprinkler irrigated. Greenhouse production was active in the South. Onion shipping ended. Remaining 2012 crop hay was moving to contractual buyers. Calving continued and extra feeding was necessary in the North. Main farm and ranch activities included early field preparation, equipment maintenance, calving, lambing, feeding and doctoring livestock.

**NEW ENGLAND:** March overnight temperatures were average in southern New England but were above normal across the northern States. Daytime temperatures during March were below normal across the southern region but were generally average across the northern States. The region received several storms during the month, but as of the week ending March 24, monthly precipitation totals were well below normal in most locations. The month began with average daytime temperatures and above normal overnight temperatures. Maine received about a half inch of precipitation by week ending March 3 while most other locations were relatively dry. Average daytime temperatures and above normal nighttime temperatures continued through the second week of March. Most areas received precipitation during the week with the southern areas receiving between 0.30 to 1.10 inches and the northern areas receiving between a trace to less than 0.50 inches of precipitation. The week ending March 17 started warmer than normal across the region. Most areas received significant precipitation on March 12 and 13 with an inch or more recorded at many locations. The rest of the week was mostly dry with below normal temperatures. Temperatures during the week ending March 24 were generally below average and the region received between 0.30 and 1.40 inches of precipitation.

**NEW JERSEY:** March temperatures ranged from highs in the upper 50s to lows in mid 20s. Rainfall fell below average for the month. Light amounts of snow fall were reported in some areas across the State. Agricultural producers continued repairing machinery, feeding stored hay to livestock, and attending educational meetings.

**NEW MEXICO:** First week of March Remnants of the winter storm on February 24th had impacts in Northern, Central, and much of Eastern NM. Extreme winter conditions also closed a stretch of I-40 East of Albuquerque to the Oklahoma State line until midweek. After the storm moved east, temperatures stayed below average across the State until toward the weekend. An upper level ridge brought some early spring like weather to much of the State. Second week of March A cold front moved south through the region on Monday bringing isolated areas of precipitation mostly in the Northeast. High pressure behind the front then settled into the area on Tuesday bringing nice weather and warmer temperatures on Wednesday and Thursday, another frontal system moved into the region on Friday bringing widespread areas of rain along with snow in the higher elevations and colder temperatures. As the storm system

exited to the east on Sunday conditions were improving conditions with only a few residual rain and snow showers were being reported. Third week of March Dry air moved out by the end of the week allowing a few light showers and thunderstorms across the Northeast and Eastern plains. Precipitation was less than .05 inches for all locations. Significant warming occurred during the late work week period, with near record and record highs throughout the State Thursday and Friday. The largest temperature departures above normal include 8 degrees in Gallup, 7 degrees in Los Alamos and 7 degrees in Ruidoso. Fourth week of March Average temperatures across the State were mostly in the 40's and mid 50's for Southern New Mexico and temperatures in the 30's for Northern New Mexico. The Northeastern part of the State received measurable amounts of precipitation.

**NEW YORK:** Outside activities and daily chores continued. Temperatures ranged from the low teens to the upper 50's. Scattered snow showers and lake effect snow throughout the month, punctuated by two moderate snow accumulations. Producers were kept busy repairing machinery and removing snow when needed. Major activities included caring for livestock, spreading manure, grading and packing potatoes, onions, apples and cabbage. Winter meetings and trade shows were well attended.

**NORTH CAROLINA:** There were 2.5 days suitable for field work for week ending March 24th, same days as for week ending February 24th. Statewide soil moisture levels were rated at 3% short, 50% adequate and 47% surplus which is very similar to the month of February as well. Many areas of the State received over 1 inch of rain during the past week with several areas receiving over 2 inches. Most of the State is still recovering from dry conditions so the rainfall is very beneficial. Average temperatures for this past week were below normal with low temperatures ranging from 14 to 34 degrees. Most tobacco seed greenhouses are ready for the upcoming season. The cool, wet weather is causing a delay in corn land preparations, requiring frost protection for strawberries and has caused pastures to become very muddy which raises concerns for animal health.

**NORTH DAKOTA:** Days suitable for fieldwork were 0. Approx. starting date for fieldwork April 22, 2013. Average snow depth was 12.2 inches. Calving 34% complete. Lambing 51% complete. Shearing was 78% complete. Cattle/calf conditions 1% very poor, 4% poor, 17% fair, 67% good, and 11% excellent. Sheep/lamb conditions 5% poor, 21% fair, 65% good, and 9% excellent. Hay and forage supplies 2% very short, 15% short, 77% adequate, and 6% surplus. For the month of March 2013, colder than average temperatures and decent snowfall totals during March have producers in the eastern part of the State concerned with the potential of spring flooding. However, producers impacted by drought across the State in 2012 welcomed the additional precipitation. Agricultural activities during March included hauling grain to market, calving and lambing, and marketing cattle.

**OHIO:** The March 2013 average temperature for Ohio was 34.0 degrees, 4.1 degrees below normal. Precipitation for the State averaged 1.97 inches, 0.34 inches below normal. Winter wheat producing counties report that the crop is in good to excellent condition. There was some snow-cover in March and flooding has been insignificant so far this year. Cattle are in good to excellent condition. Hay inventories are low, but an increase of supply at auctions has brought the price down slightly. There are no reports of widespread diseases affecting cattle in the State.

**OKLAHOMA:** Topsoil moisture 18% very short, 33% short, 48% adequate, 1% surplus. Subsoil moisture 45% very short,

43% short, 12% adequate. Wheat condition 10% very poor, 23% poor, 41% fair, 25% good, 1% excellent; jointing 41% this week, 31% last week, 70% last year, 50% average. Canola condition 15% very poor, 27% poor, 32% fair, 24% good, 2% excellent. Rye condition 19% very poor, 15% poor, 32% fair, 32% good, 2% excellent; jointing 40% this week, 35% last week, 79% last year, 67% average. Oats condition 10% very poor, 18% poor, 44% fair, 25% good, 3% excellent; planted 86% this week, 76% last week, 94% last year, 91% average. Corn seedbed prepared 53% this week, 42% last week, 64% last year, 56% average. Sorghum seedbed prepared 26% this week, 23% last week, 31% last year, 23% average. Soybeans seedbed prepared 20% this week, 13% last week, 25% last year, 23% average. Peanuts seedbed prepared 14% this week, 5% last week, 20% last year, 32% average. Cotton seedbed prepared 27% this week, 26% last week, 45% last year, 40% average. Livestock condition 4% very poor, 17% poor, 43% fair, 32% good, 4% excellent. Pasture and range condition 36% very poor, 34% poor, 25% fair, 5% good. Improvements to crop conditions and pastureland from moisture received during February and early March were reported. The U.S. Drought Monitor showed improvements to drought conditions during March, although the entire State was still rated in a moderate drought or higher. Precipitation was below normal for March, at only 39 percent of normal for the State. Freezing temperatures towards the end of the month put small grains and canola at risk, as two fifths of wheat and rye were already jointing. Forage and grasses also showed little growth due to the cold temperatures.

**OREGON:** Almost all stations reported below normal precipitation, while about half of the stations reported above normal temperatures this March. High temperatures ranged from 57 degrees in Astoria & Florence to 73 degrees in Roseburg. Low temperatures ranged from 32 degrees in North Bend down to 8 degrees in Christmas Valley. Twenty-two of the forty-one stations reported above normal temperatures; all stations that reported below normal temperature were outside the Willamette Valley. The exception to the below normal precipitation in the State was Parkdale. Total precipitation (rain or melted snow/ice) varied from 0.08 of an inch in Christmas Valley to 5.4 inches at Detroit Lake. Less than half of the State received snowfall, as 17 stations of 70 reported snowfall & only 14 stations still had measurable snow on ground at the end of the month. Recent rain moistened soil for farms in the south Willamette Valley, so the area has to wait another week or two to till/farm the soil. Prune & peach trees were blooming. Pears trees were very near bloom. However the mornings were very cold still, creating frost in some places. The raspberry & blackberry plants were pushing new growth. All indications look like the area was about two weeks early in general, but really early if one thinks about 2012. Some peas were up, so some of the soil was at 50 degrees, which is the needed temperature for cole crops. Low Washington County temperature for the month was 29 degrees while the high was 56 degrees. The area received 2.2 inches of rain (combined with hail) last week. There was still snow on the Coast range. There was some inter-row planting of filberts, either adding new varieties or to replace diseased trees. Fertilizing grass for seed field was still ongoing. Some producers were preparing for planting sweet or field corn. In the Cornelius Plains some producers were preparing for new drained fields to deal with excess moisture. Wasco County Crop year is 65% of normal moisture through the end of February. Warm, then cold weather has been unusual & confusing for the crops. There has not been much growth in range, hay or wheat. Fruit trees were really confused. Tulips & daffodils were up for goodness sake! Days for farming in Sherman County this past week were zero because the main activity has been spraying & it has been too windy. Plus it was

cold despite the blue skies. Looking out the window, it is a beautiful day but dare to step outside & you were chilled to the bone. Rainfall/snowfall was horrible in January & February; the area moved from about 1.5 inches over normal crop year moisture to two inches below normal, & is heading into the drier season. Fortunately, the March weather has been wetter than the previous two months & it's allowing the area to gain a bit but still a ways to go to catch up. The wheat crop is looking pretty great as 2013 temperatures (including the wild March weather of snow/hail, wind, & rain) has been such that wheat crops have grown well; plants were big for this time of year, but they have been sucking up any moisture that was there. Producers are concerned if there be enough moisture to grow the wheat all spring. Morrow County crop-year rainfall was approximately two inches below the long-term average. The rainfall in February was the lowest on record. Dry land wheat crop was holding up for now, but timely rains will be required for an average (or better) crop. Wallowa County March moisture was below normal, so farmers in the County were hoping that April bails them out again. Producers were gearing up for spring seeding. Lake County was 88 percent of average for precipitation since the beginning of the water year. The area received a significant amount of rain during mid week. Livestock producers will begin turning out onto government allotments within the next few weeks. Klamath County spring field work has begun. The Bureau of Reclamation is expected to make an announcement in the last week of March concerning water availability for the year. Some precipitation last week brought additional moisture to the area.

**PENNSYLVANIA:** March Madness does not just describe sports this year, it seems to be moonlighting as the theme of Pennsylvania's weather. The State received precipitation in the form of rain, sleet and snow during the month, with the majority of the snowfall happening on the 19th of the month. Principal farm activities for the month of March included spreading lime, manure, and chopping stalks. Temperatures and weather conditions have been varied within the State to say the least. The Harrisburg area received 2.3 inches of snow or ice throughout March. The average high temperature was 45.3 degrees and the average low was 30.2 degrees. March 10th was the warmest day of the month, with a high at 61 degrees. The lowest temperature of the month was 24 degrees, which happened on March 15th. The average temperature for the month was 37.7 degrees, which is 2.8 degrees below normal.

**SOUTH CAROLINA:** More cold moved into the State on Friday, March 1. Cedar Creek's sunrise temperature fell to 25 degrees. During the morning hours of Saturday, winter weather moved southeast from the North Carolina Mountains bringing snow showers in its wake. Only a novelty by the measurements, the public reported nearly two inches around the Rock Hill area and one inch over parts of Spartanburg County. The Town of Lancaster observed a "dusting." Shaw AFB in Sumter reported a Saturday high temperature of 45 degrees which was nearly twenty degrees below the long term average high for the date. Although the "climatological spring" was into its third day, Sunday was as cold as a mid-winter day. Overcast skies and northwest winds held the Sunday high temperature at Beaufort to just 45 degrees. The lowest official temperature reported was 20 degrees at Chesnee on March 3. The Edisto Beach temperature of 32 degrees on the first Monday morning of the month was that location's first freeze of the season. Hartsville reached a minimum of 24 degrees and the Charleston AP reported 27 degrees. Areas of rain moved through the State on Tuesday as an approaching boundary of colder air dropped into the Southeast. At 500 a.m., Anderson observed snow flurries. A "trace" of snow was noted at Caesars Head and Table Rock. Long Creek's high

temperature on Wednesday was a cold 36 degrees. The Cedar Creek sunrise temperature on Friday morning was 24 degrees. Mullins made it to 55 degrees on Friday afternoon while Beaufort settled for 63 degrees. A slow moderation in temperature began on Saturday. Charleston reached a mild 67 degrees. Southeast winds on a sunny, Sunday afternoon helped bring the temperature and calendar closer to the date's climatology. While most locations reported high temperatures in the upper 60's, Florence warmed to 71 degrees. The State average temperature for the period was five degrees below the weekly long term average. The highest official temperature reported was 73 degrees at Pinopolis on March 10. The lowest official temperature reported was 17 degrees at Hunts Bridge, Cedar Creek and Pelion on March 4. The State average rainfall for the period was 0.2 inches. Monday arrived with mild weather and no reports of freezing. The Georgetown AP and Hartsville AP both reported afternoon high temperatures of 73 degrees. An area of rain entered the far western corner of the State during the evening hours. On Tuesday morning, Jocassee Dam had received 1.62 inches of rain. Sunny skies replaced the passing rains and Shaw AFB in Sumter warmed up to 74 degrees. Strong west winds on Wednesday brought much colder air to South Carolina. Cedar Creek and Walhalla started the day at 29 degrees. The Charleston AP reported one of the warmer afternoon high temperatures at 68 degrees. Colder air to the north only allowed Sandy Springs and Rock Hill to reach 54 degrees. Freezing air settled into the State for Thursday morning. The temperature at Pelion fell 41 degrees overnight to a Thursday morning low of 27 degrees. North Myrtle Beach and the Charleston AP recorded 35 degrees. Most of the State's airports reported sunny skies from sunrise through the middle of the afternoon. The highest temperature reported on Thursday belonged to Edisto Beach and Barnwell with 59 degrees. Some light frost was observed on Friday morning but a return to more seasonal weather came quickly to start the weekend. Clarks Hill reported 73 degrees on Friday afternoon. Strong west to southwesterly surface winds on Saturday delivered a round of 80-degree warmth from the Upstate to the coastal plain. Walhalla, Sandhill and Beaufort all shared an 80-degree, Saturday high temperature. Chesterfield's 82 degrees was that site's warmest day since October 26, 2012. A few high clouds on Sunday scaled back the warming a few degrees but Hartsville and Dillon still reached 82 degrees. The State average temperature for the period was four degrees above the long term average. The highest official temperature reported was 83 degrees at Columbia Metro AP, Florence Regional AP and Jamestown on March 16. The lowest official temperature reported was 20 degrees at Caesars Head on March 14. The State average rainfall for the period was 0.4 inches.

**SOUTH DAKOTA:** Topsoil moisture 33% very short, 41% short, 24% adequate, 2% surplus. Subsoil moisture 49% very short, 34% short, 17% adequate. Winter wheat condition 31% very poor, 40% poor, 27% fair, 2% good. Feed supplies 16% very short, 37% short, 45% adequate, 2% surplus. Stock water supplies 26% very short, 30% short, 44% adequate. Accessible livestock feed supplies 87% readily, 10% difficult, 3% inaccessible. Accessible stock water supplies 86% readily, 13% difficult, 1% inaccessible. Range and pasture condition 27% very poor, 37% poor, 31% fair, 5% good. Cattle death losses 18% below normal, 82% normal. Calf deaths 10% below average, 89% average, 1% above average. Cattle moved to pasture 1% complete. Calving 27% complete. Cattle condition 2% poor, 23% fair, 69% good, 6% excellent. Sheep & lamb deaths 8% below average, 91% average, 1% above average. Lambing 59% complete. Road conditions--township 91% open, 7% difficult, 2% closed. Road conditions--county 94% open, 5% difficult, 1% closed. Sheep condition 3% poor, 19% fair, 68% good, 10% excellent. Major activities included

moving snow, caring for livestock, hauling grain, repairing equipment and preparing for spring.

**TENNESSEE:** Wheat condition 2% poor, 16% fair, 64% good, 18% excellent. Cattle condition 4% poor, 24% fair, 64% good, 8% excellent. Farmers prepared for planting corn, top-dressed wheat, spread fertilizer, made lime and insecticide applications, and seeded pastures. Wheat progressed well with little to no disease or insect pressure. Fruit trees began to bud. Some farmers dealt with muddy feeding conditions. Most livestock operations in good shape with adequate hay stocks due to mild winter conditions. Hay stocks 7% very short, 20% short, 64% adequate, 9% percent surplus. Temperatures were highly variable with highs reaching the 80s and lows in the 20s.

**TEXAS:** East Texas and the Blacklands received one to three inches of precipitation in March, with areas in the Plains experiencing significant snowfall early in the month. Other areas saw less precipitation, with high winds across the state drying out soil moisture. Irrigated crops fared well, but dry land small grains struggled with insufficient moisture. Planting activities across the state persisted despite dry conditions with producers making good progress on corn and sorghum. Fruit trees bloomed and producers in the Lower Valley harvested vegetable crops. Pastures progressed enough in East Texas and the Blacklands for producers to reduce supplemental feeding. Across the rest of the state, however, pastures were stressed by dry conditions and high winds, and most cattle producers continued heavy supplemental feeding as pastures were not in good enough condition to support grazing. Some producers in the Plains moved cattle onto wheat fields.

**UTAH:** Days Suitable For Field Work 4. Subsoil Moisture 6% very short, 20% short, 73% adequate, 1% surplus. Corn harvested (grain) 1%, 1% 2012, 1% avg. Cows Calved 1%, 34% 2012, 12% avg. Cattle and calves moved To Summer Range 1%, 1% 2012, 1% avg. Cattle and calves condition 1% very poor, 3% poor, 12% fair, 83% good, 1% excellent. Sheep and lambs moved To Summer Range 1%, 1% 2012, 1% avg. Sheep Condition 1% very poor, 3% poor, 12% fair, 83% good, 1% excellent. Range and Pasture 11% very poor, 20% poor, 39% fair, 28% good, 2% excellent. Sheep Sheared On Farm, Sheared On Farm 1%, 26% 2012, 9% avg. Sheep Sheared On Range, Sheep Sheared On Range 29%, 11% 2012, 5% avg. Ewes Lamb On Farm, Ewes Lamb On Farm 48%, 22% 2012, 8% avg. Ewes Lamb On Range, Ewes Lamb On Range 1%, 13% 2012, 4% avg. Beaver County reports concerns about moisture and irrigation water. In Box Elder County the snow pack has melted except on some of the higher farming and ranching elevations. The ground was so dry that the water in the snowpack went into the ground rather than running off. Temperatures continue to be colder than normal with just a couple of warm days since the first of March. Carbon County reports that the snow has melted in the valley. The western part of the county is at the average level of precipitation accumulation while the eastern end of the county is close to 60% of normal precipitation. Topsoil moisture is good at this point and all depends on spring winds. In Box Elder County ranchers are busy testing bulls and calving. Some ranchers had trouble because calving began earlier than normal this year and many cows calved in deep snow. Reports from cattle and sheep producers are that cows are still calving and sheep in range flocks are getting ready to lamb. It has been a difficult calving season with deep snow and colder than normal temperatures. Sheep producers anticipate shearing their herds in the next couple weeks before lambing gets underway in mid April. Range conditions are reported to be poor at the current time. There is some green up beginning with the annual grasses, but March has been a dry month and a good

rain storm is needed to bring the growth along. Beaver County reports that there are problems with ground squirrels in the Milford area. In Box Elder County farmers have been busy planting onions on some of the more sandy areas in the county. Some farmers have been applying fertilizer on their fall planted grain where the ground is firm enough to get on. Application of fertilizers and sprays is starting, depending on the crop planted or to be planted. Very little tractor work has been done in the county with the exception of onion planting. It looks like the weather will be dry enough this week to begin spring seeding of barley, oats, and spring wheat. Some safflower may also be seeded in the next couple of weeks on dry farms. Fall seeded grain is beginning to green up. Most crops in fields on irrigated ground look fair to good. Most of the Fall seeded grain did not get very well established last Fall, due to dry conditions, until very late in the planting season. Morgan County crop producers are applying herbicides to alfalfa and fertilizer to all of their fields. Weber County farmers are applying fertilizers and applying herbicide to their alfalfa fields. A few farmers are planting alfalfa and small grains.

**VIRGINIA:** Topsoil moisture 1% very short, 3% short, 55% adequate, 41% Surplus. Subsoil moisture 1% very short, 3% short, 67% adequate, 29% surplus. Beef Cattle Forage Obtained from Pastures 10%, 34% 2012. Milk Cow Forage Obtained from Pastures 4%, 14% 2012. Sheep Forage Obtained from Pastures 8%, 46% 2012. Pasture 3% very poor, 11% poor, 42% fair, 37% good, 7% excellent. Livestock 2% very poor, 7% poor, 26% fair, 58% good, 7% excellent. Small grain and winter grazing crops 1% poor, 22% fair, 67% good, 10% excellent. The Commonwealth of Virginia experienced a cold, snowy March. It was unseasonably cool, with most areas about 7 degrees below normal. Between the snowfall and muddy fields, farmers increased supplemental feeding when compared to last month. In most cases, producers were behind on spring applications (e.g. fertilizers, herbicides, and lime). Concern was voiced on condition of small grain crops if timely applications fertilizers cannot be applied. Spring calving was underway; the weather has made spring calving challenging. Other farming activities for the month included finishing up the maple syrup harvest, treating foot rot for sheep, and preparing to plant row crops.

**WASHINGTON:** Area producers began spring operations at full speed as the month of March provided a wide range of weather throughout the State. In Whitman and Walla Walla Counties, monthly precipitation was below normal with a total of 0.89 of an inch received mostly in the form of rain and some snow showers. Area producers began spring operations at full speed and were working whenever the weather allowed. In Asotin and Garfield Counties, spring wheat and barley, along with some Canola, was seeded. Temperatures in Lincoln County were still too low for field activity with snow mold affecting some winter wheat crops. In Grant and Adams Counties, potatoes and onions were starting to be planted. Yakima County received between 0.35 to 0.8 inches of precipitation in higher altitudes which contributed to an adequate reservoir of irrigation water for the 2013 season. In Whatcom County, most of the month was typical wet winter weather. Signs of spring occurred later in the month with raspberry and blueberry plants budding out. Blueberry growers were beginning pesticide applications. Grasses for pasture and silage were showing growth. In Stevens County, most fields were cleared of snow and crop producers began tillage operations. Ranchers continued calving while hay supplies continued to be tight. In Pend Oreille County temperatures and precipitation were normal. Calves were being born on a number of ranches and hay is still in demand at a high price.

**WEST VIRGINIA:** Topsoil moisture was 1% very short, 8% short, 66% adequate, and 25% surplus compared to 3% short, 87% adequate, and 10% surplus last year. Hay and roughage supplies were 4% very short, 7% short, and 89% adequate compared to 3% short, 78% adequate, and 19% surplus last year. Feed grain supplies were 5% short and 95% adequate compared to 2% short and 98% adequate last year. Winter wheat conditions were 44% fair and 56% good. Cattle and calves were 20% fair, 78% good, and 2% excellent. Calving was 64% complete, compared with 69% last year. Sheep and lambs were 16% fair, 82% good, and 2% excellent. Lambing was 69% complete, compared with 75% last year. During the month of March, the weather has been mostly cold and dry with a few days of warmer weather and rain as frontal systems moved over the State. The first day of spring was welcomed with chilly temperatures. Farming activities for the month included winter feeding of livestock, calving, lambing, and tagging. Farmers are also looking forward to warmer weather.

**WISCONSIN:** March average temperatures for the State of Wisconsin ranged from 6 to 9 degrees below normal. Average high temperatures ranged from 31 to 33 degrees. Average low temperatures ranged from 13 to 22 degrees. Full month precipitation ranged from 1.62 inches in Milwaukee to 2.40 inches in Madison. The entire State received snow in March. Of the reporting stations, Eau Claire received the most snow, with 23.7 inches since March 1.

**WYOMING:** Topsoil moisture 22% very short, 30% short, 48% adequate. Subsoil moisture 42% very short, 33% short, 25% adequate. Average depth of snow cover 1.3 inches. Winter wheat condition 1% very poor, 28% poor, 39% fair, 32% good; wind damage 5% none, 71% light, 23% moderate, 1% severe; freeze damage 86% none, 13% light, 1% moderate. Barley planted 9%, 33% last year, 20% average. Spring calves born 29%. Farm flock sheep shorn 21%; lambled 27%. Range flock sheep shorn 9%; lambled 7%. Calf losses 57% light, 43% normal. Lamb losses 44% light, 56% normal. Cattle condition 6% poor, 45% fair, 48% good, 1% excellent. Calves condition 1% poor, 32% fair, 67% good. Sheep condition 1% very poor, 6% poor, 41% fair, 52% good. Lamb condition 1% very poor, 3% poor, 31% fair, 65% good. Range and pasture condition 19% very poor, 43% poor, 23% fair, 15% good. Spring grazing prospects 28% very poor, 37% poor, 29% fair, 6% good. Stock water supplies 5% very short, 49% short, 46% adequate. Hay and roughage supplies 8% very short, 37% short, 55% adequate. Farm activities included tending to livestock, calving, and lambing. High temperatures ranged from 50 degrees in Jackson Hole to 74 degrees in Torrington. Low temperatures ranged from 17 degrees below zero in Lake Yellowstone to 13 degrees in Greybull. Average temperatures ranged from 21 degrees at Lake Yellowstone to 38 degrees in Cody and Torrington. Temperatures were below normal in eight stations. Big Piney and Buford were the most above normal at a plus six degrees while Powell, Big Horn, Midwest, Sundance, and Wheatland were the most below normal at a minus three degrees. Rock Springs was the only station receiving no precipitation during the month of March. Lake Yellowstone received the most precipitation at 2.2 inches. Twenty-seven out of the 33 reporting stations reported below normal precipitation for the year so far. Converse County reported below normal precipitation, April and May will need to catch us up. Irrigation prospects are not good. Lincoln County reported still pretty cold in the mornings, despite some moisture last week, snowpack is still quite low. Natrona County reported one to six inches of snow. In Uinta County, recent snowstorms have helped but the county needs more spring snow storms and precipitation.

# International Weather and Crop Summary

**March 17-23, 2013**

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

## HIGHLIGHTS

**EUROPE:** Cold weather continued over much of the continent, with additional northern snow and southern rain favoring winter crops but hampering fieldwork and crop development.

**WESTERN FSU:** Rain and northern snow boosted moisture for winter grains but slowed spring grain planting.

**MIDDLE EAST:** Somewhat cooler weather eased stress on winter wheat and barley.

**NORTHWEST AFRICA:** Widespread showers maintained favorable soil moisture and excellent yield prospects for winter wheat and barley.

**EASTERN ASIA:** Warm weather and periodic rainfall favored winter crop development and spring crop establishment.

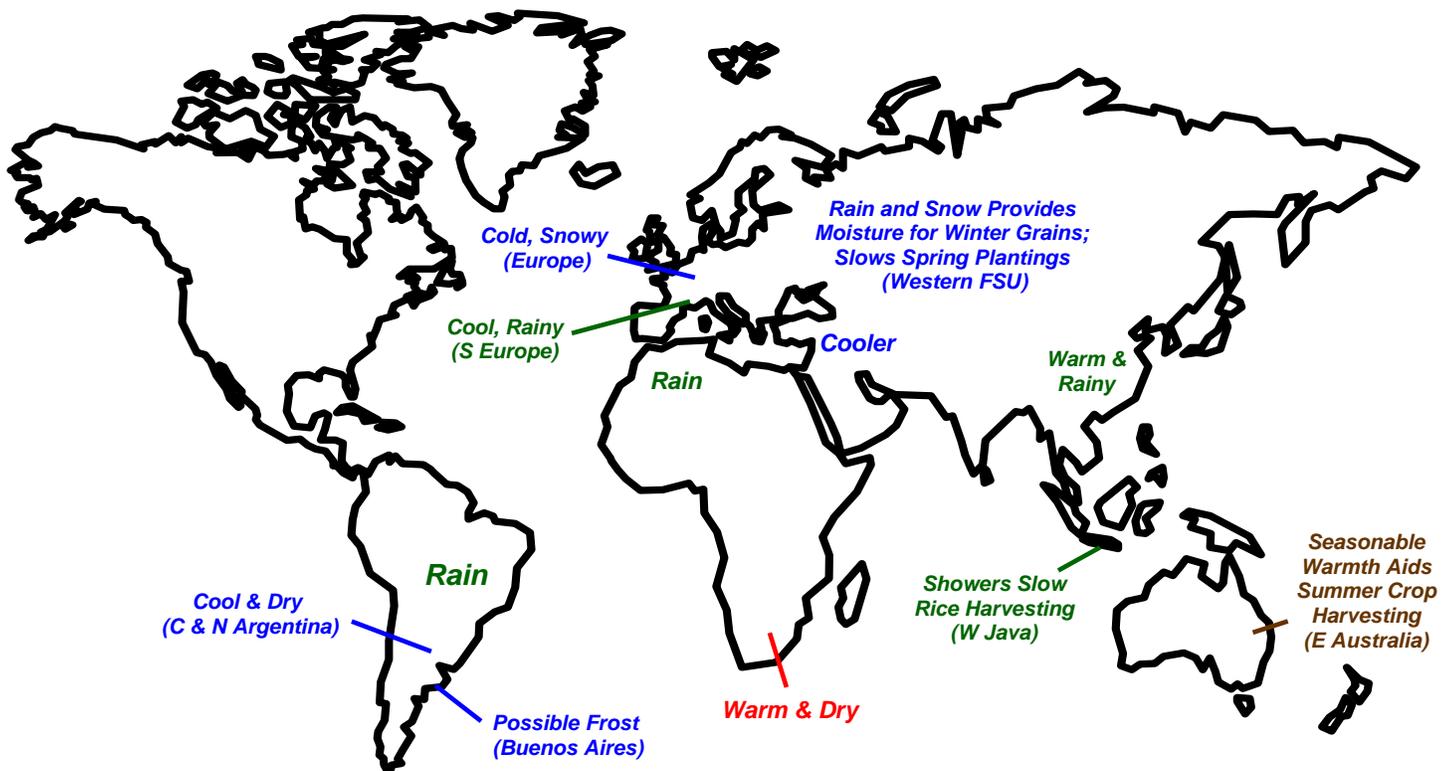
**SOUTHEAST ASIA:** Heavy showers continued to slow rice harvesting in Java, Indonesia.

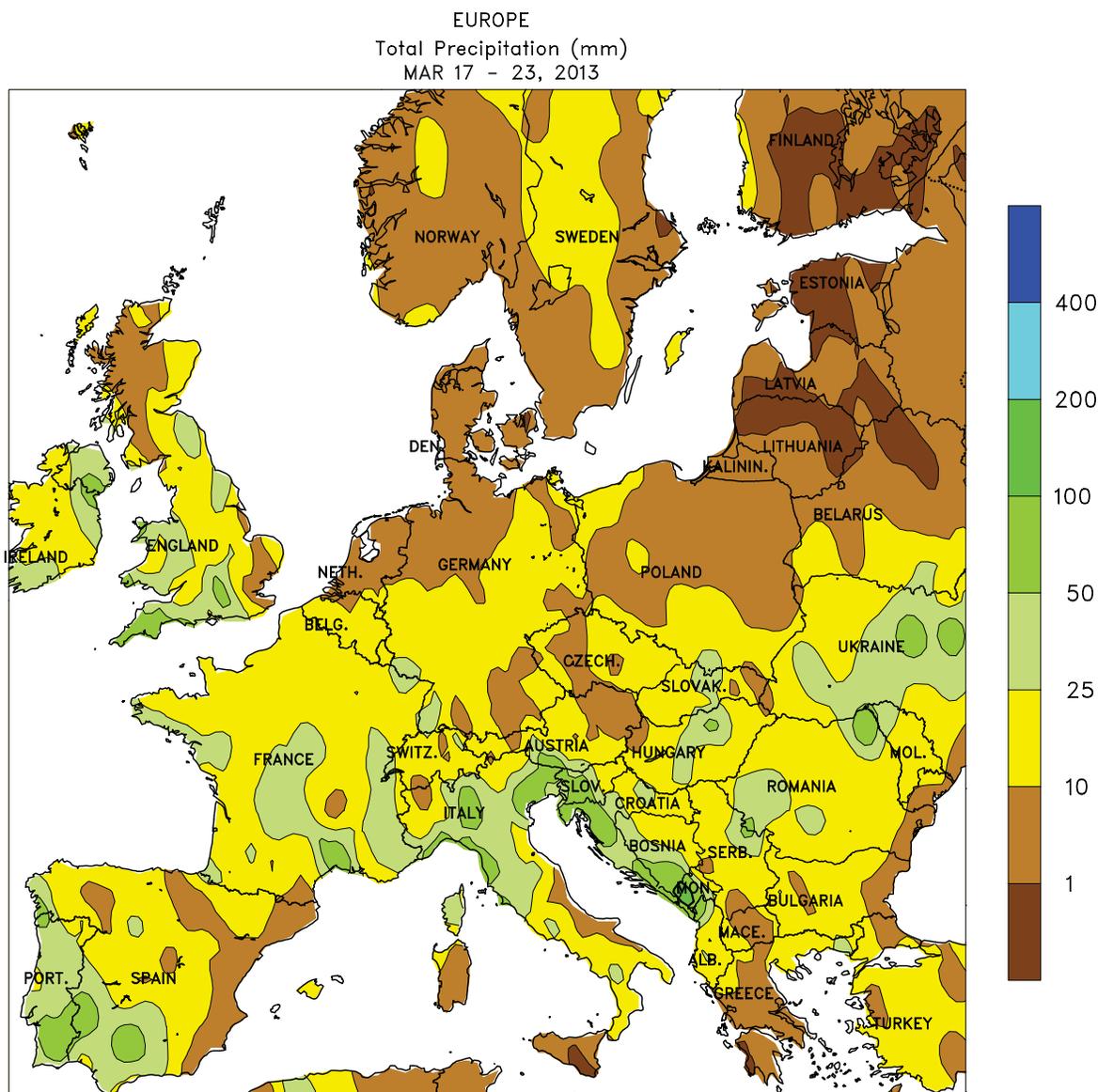
**AUSTRALIA:** In the east, dry, seasonably warm weather during much of the week aided summer crop maturation and harvesting.

**SOUTH AFRICA:** Warm, dry weather hastened maturation of corn and other rain-fed summer crops.

**ARGENTINA:** Cool, mostly dry weather dominated much of Argentina, possibly resulting in some localized frost.

**BRAZIL:** Widespread, locally heavy rain increased moisture for corn and other immature crops in all major production areas, though some delays in soybean harvesting were likely.





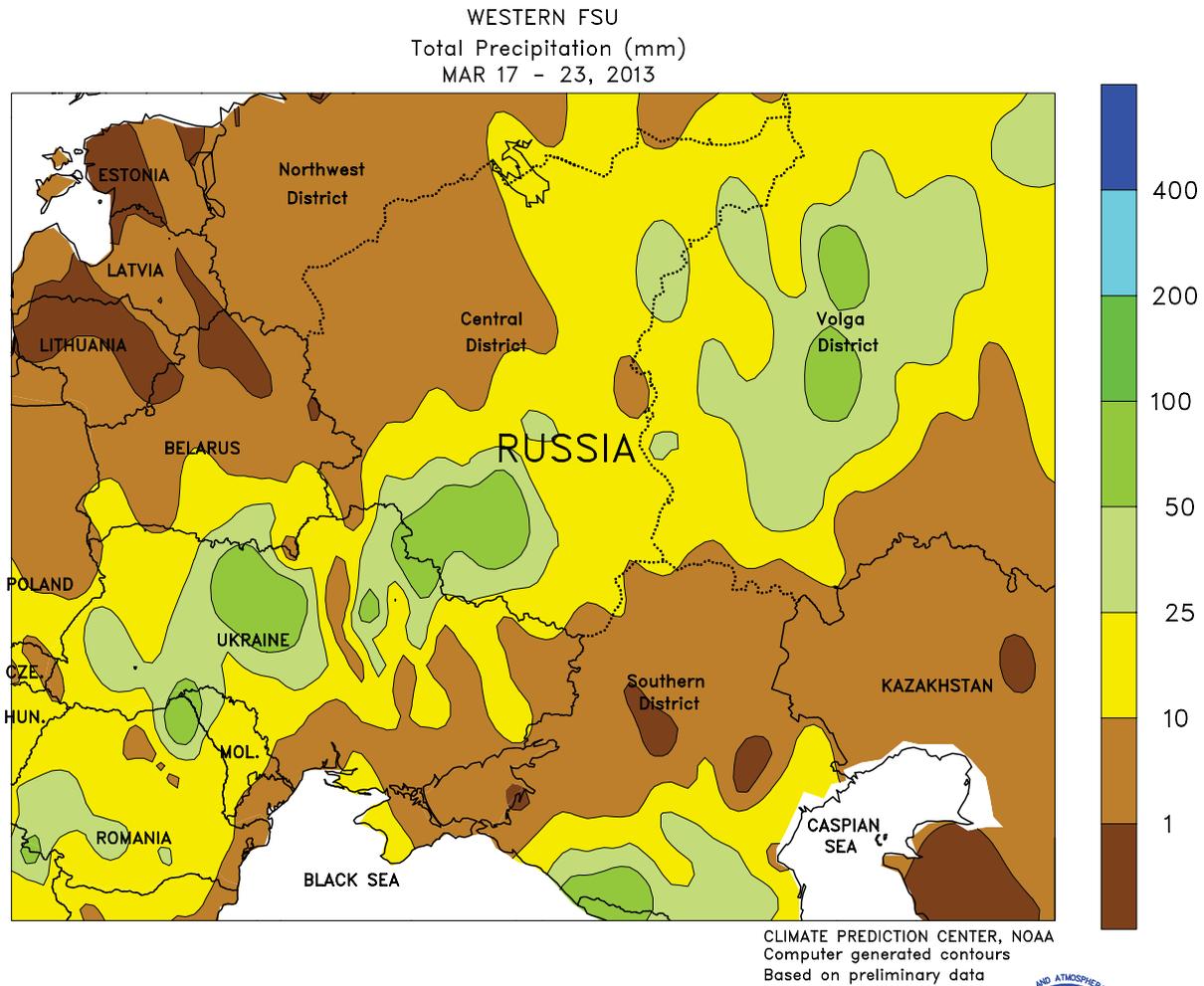
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**EUROPE**

Colder-than-normal weather prevailed over much of the region, with rain in the south contrasting with additional snow in northern growing areas. Another late-season winter storm produced moderate to heavy rain (10-60 mm) from Spain into Italy and the central Balkans, while moderate to heavy rain and snow (5-50 mm liquid equivalent) fell from southeastern England and northern France and Germany into Poland. The precipitation maintained favorable early prospects for vegetative (south) to dormant (north) winter crops but hampered fieldwork,

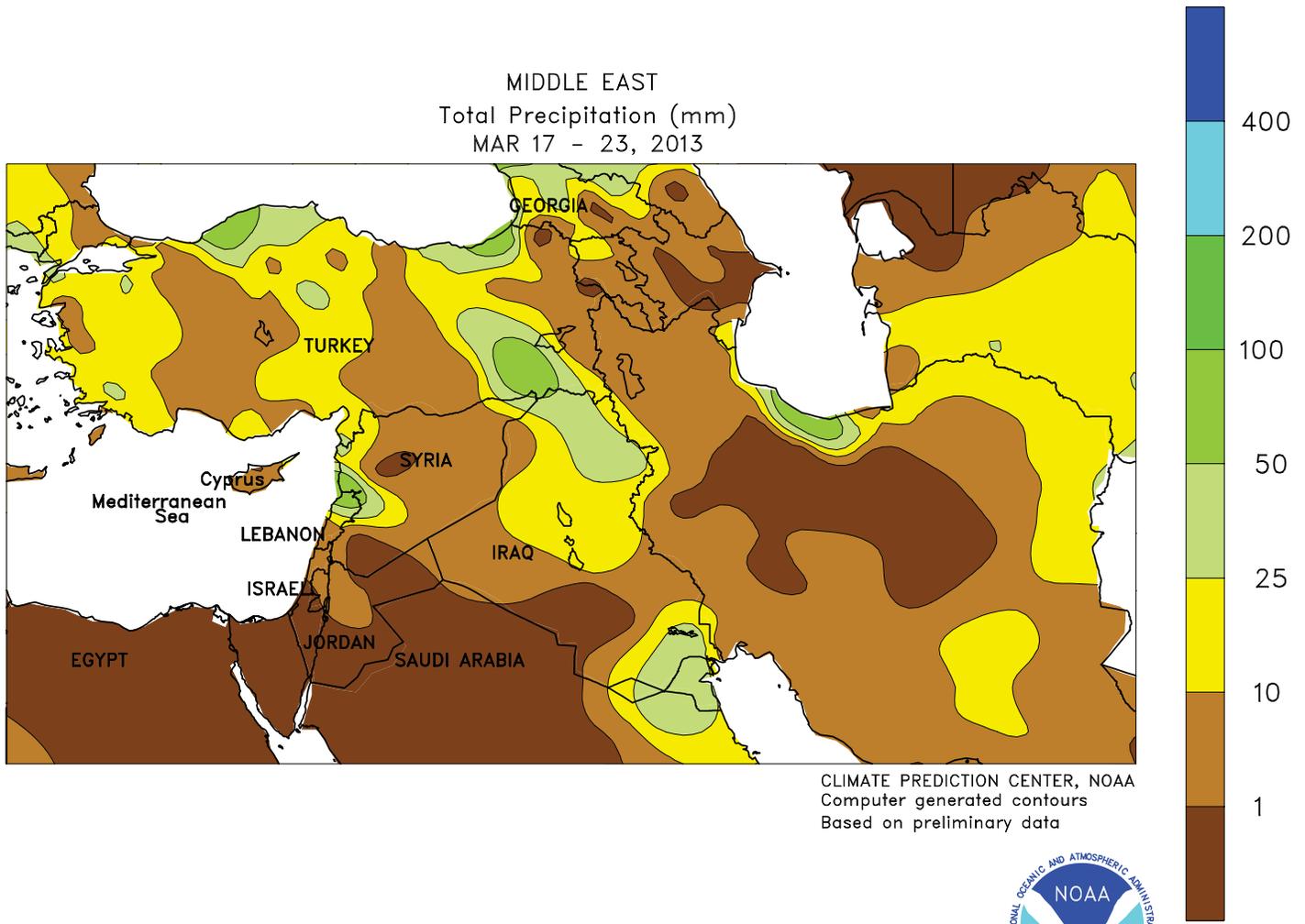
including corn planting and citrus harvesting in the Mediterranean region. Temperatures averaged 3 to 8°C below normal in northern Europe, halting winter crop growth in France and southeastern England and keeping winter crops dormant under a moderate snowpack (5-20 cm) in Germany, Poland, and the Baltic States. Cooler weather (1-4°C below normal) also settled over the Balkans, with nighttime freezes (-7 to -2°C) slowing winter wheat growth but not causing any significant burnback or crop damage.



**WESTERN FSU**

Wet weather continued, with a stationary front separating persistent warmth in the south from seasonably cold weather in the north. Temperatures up to 6°C above normal across the region’s southern tier accelerated winter crop growth, with daytime highs topping 15°C (locally higher than 20°C) from central Ukraine into southern Russia. Additional showers (5-50 mm) boosted soil moisture for winter wheat in Ukraine and Russia’s Southern District following an

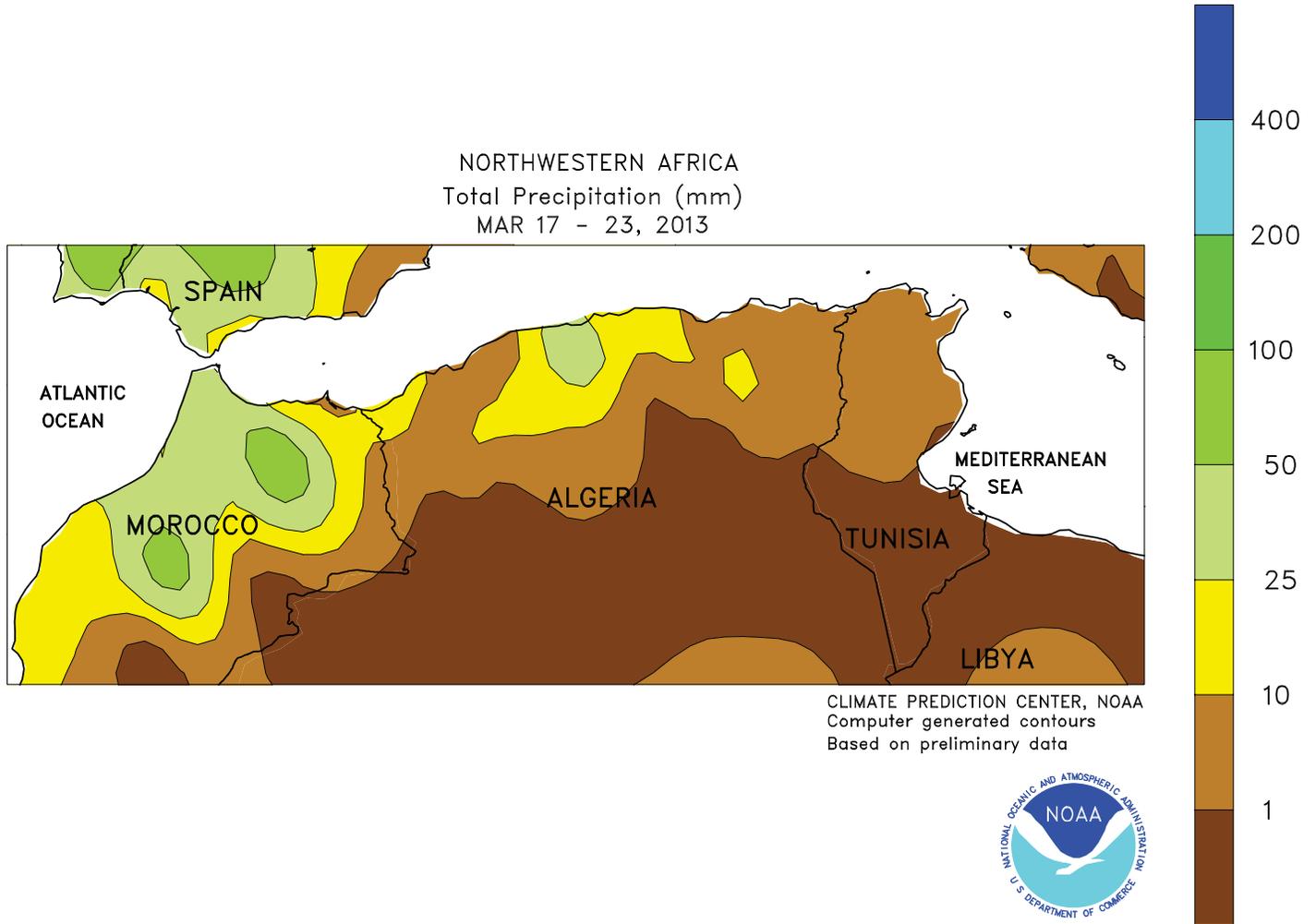
unfavorably dry autumn and winter, although rain was not as widespread as last week. Meanwhile, another late-season winter storm produced moderate to heavy rain and snow (10-50 mm liquid equivalent, locally more) from southern Belarus and northern Ukraine into central Russia, boosting moisture reserves for dormant winter crops. At week’s end, snow depths averaged 10 to 50 cm from Belarus and northern Ukraine into Russia’s Volga District.



**MIDDLE EAST**

Unsettled weather continued, while somewhat cooler conditions returned to the region. Daytime highs (20-30°C) returned to values more typical for the season in southern growing areas, easing stress on reproductive winter grains after last week's excessive heat. Nevertheless, temperatures still

averaged 1 to 3°C above normal for the week, maintaining high crop-water demands and accelerating winter grain growth. Showers were scattered but locally heavy (10-50 mm), providing moisture for vegetative wheat and barley in Turkey, Iraq, and Iran.

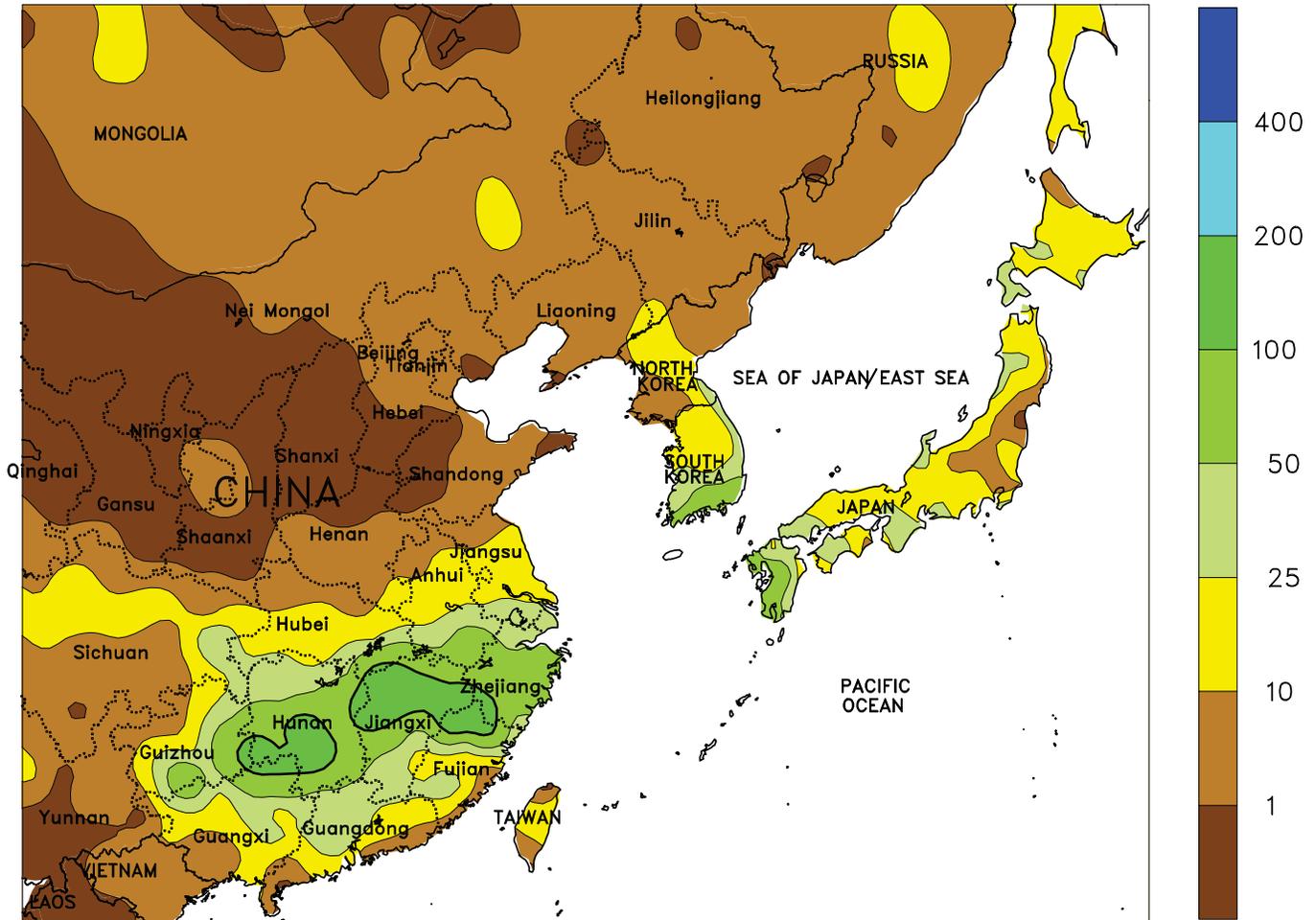


**NORTHWEST AFRICA**

Widespread showers maintained favorable soil moisture and excellent yield prospects for winter wheat and barley. Rain was heaviest in Morocco, where 10 to 80 mm maintained abundant to locally excessive soil moisture for reproductive (south) to vegetative (north) wheat and

barley. Scattered showers (2-30 mm) favored vegetative winter grains in Algeria and Tunisia. Temperatures averaged 1 to 3°C above normal, with daytime highs in the middle and upper 20s (degrees C) accelerating crop growth.

EASTERN ASIA  
Total Precipitation (mm)  
MAR 17 - 23, 2013



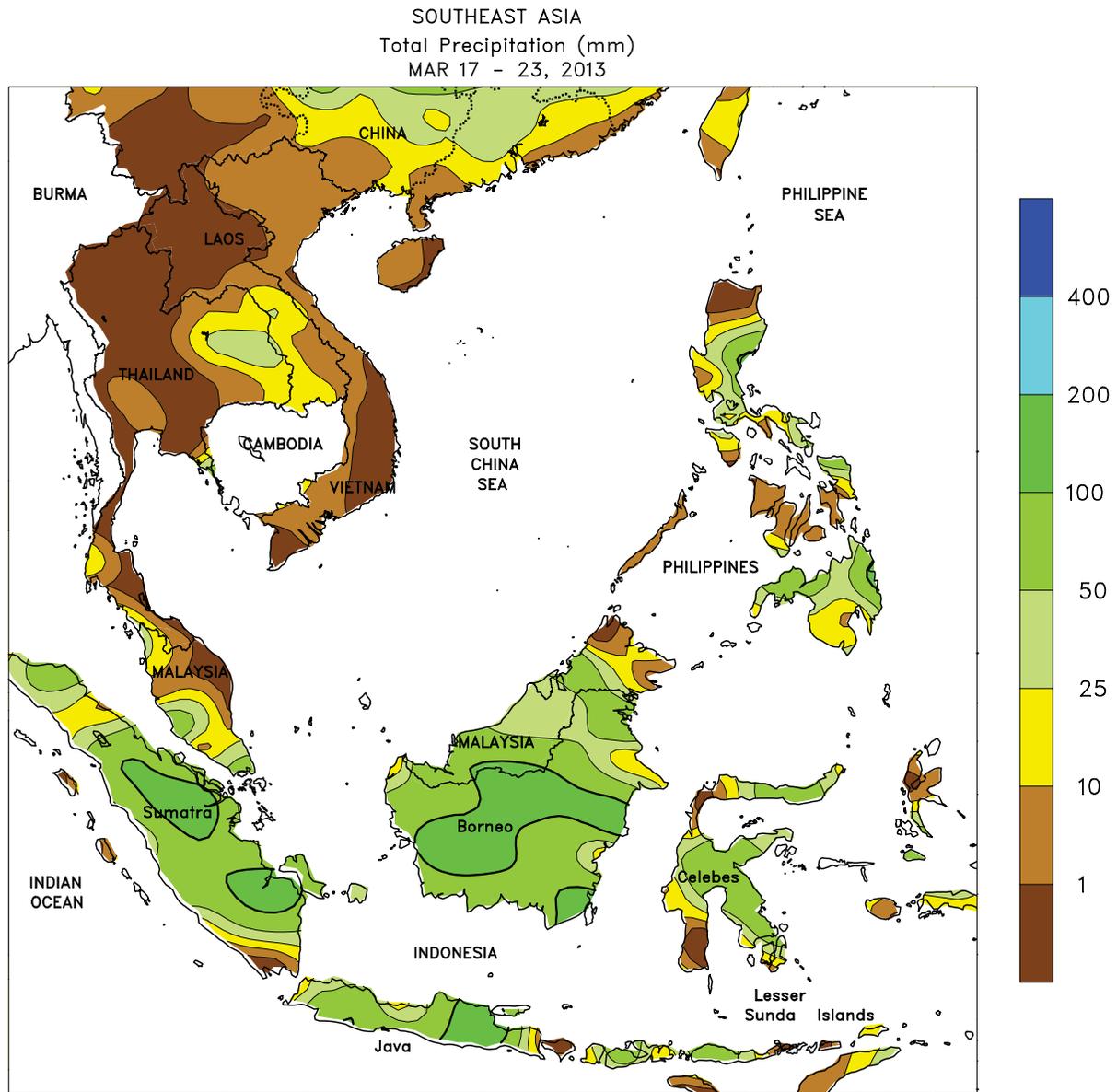
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**EASTERN ASIA**

Warmer-than-normal weather and periodic rainfall promoted winter and spring crop development. Light showers (1-10 mm) on southern portions of the North China Plain benefited vegetative winter wheat, while higher rainfall totals (50-125 mm) in the Yangtze Valley boosted moisture supplies for reproductive winter rapeseed. Additionally, as spring corn planting continued in the

Sichuan Basin and early rice transplanting proceeded in the southern provinces, the frequent rainfall aided crop establishment. The heavy rainfall extended into Guangdong, although significant moisture deficits continued. Meanwhile in northeastern China, unusually heavy snow (up to 30 cm) provided a favorable boost to moisture reserves leading up to corn planting in May.



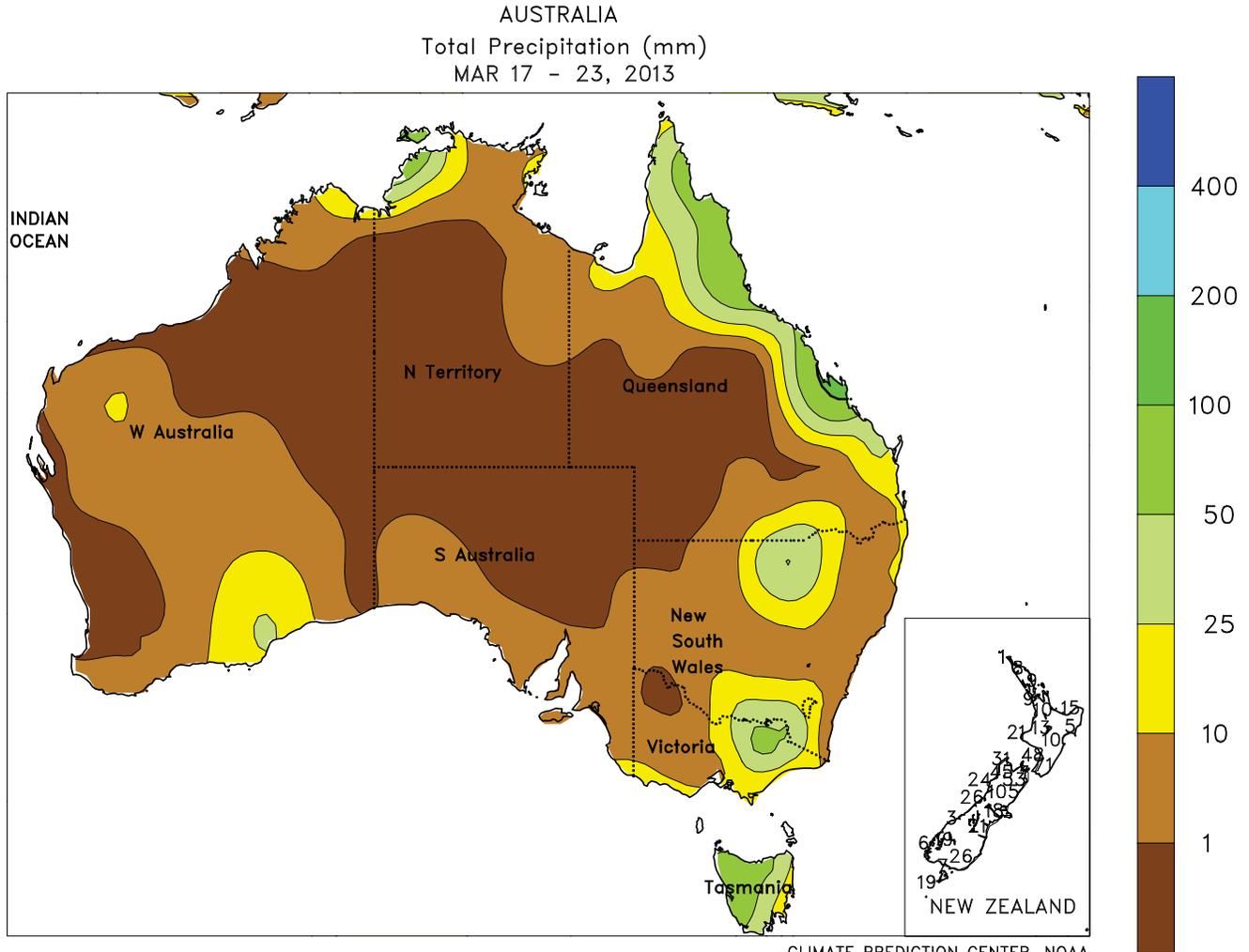
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**SOUTHEAST ASIA**

Heavy rainfall (50-125 mm) continued in Java, Indonesia, slowing rice harvesting. By the end of the week, however, drier weather allowed harvesting to resume at a normal pace. Oil palm benefited from more rainfall (50-150 mm) in the remainder of Indonesia and across portions of Malaysia (mainly Sarawak and Sabah) with few harvest delays reported. Seasonal showers (25-130 mm)

continued across the eastern and southern Philippines, maintaining abundant moisture supplies for the smaller spring grown rice and corn crop while slowing harvesting of the winter-grown crop. Dry weather in southern Vietnam aided winter-spring rice harvesting, although conditions remained unfavorably dry for developing rice in the north.



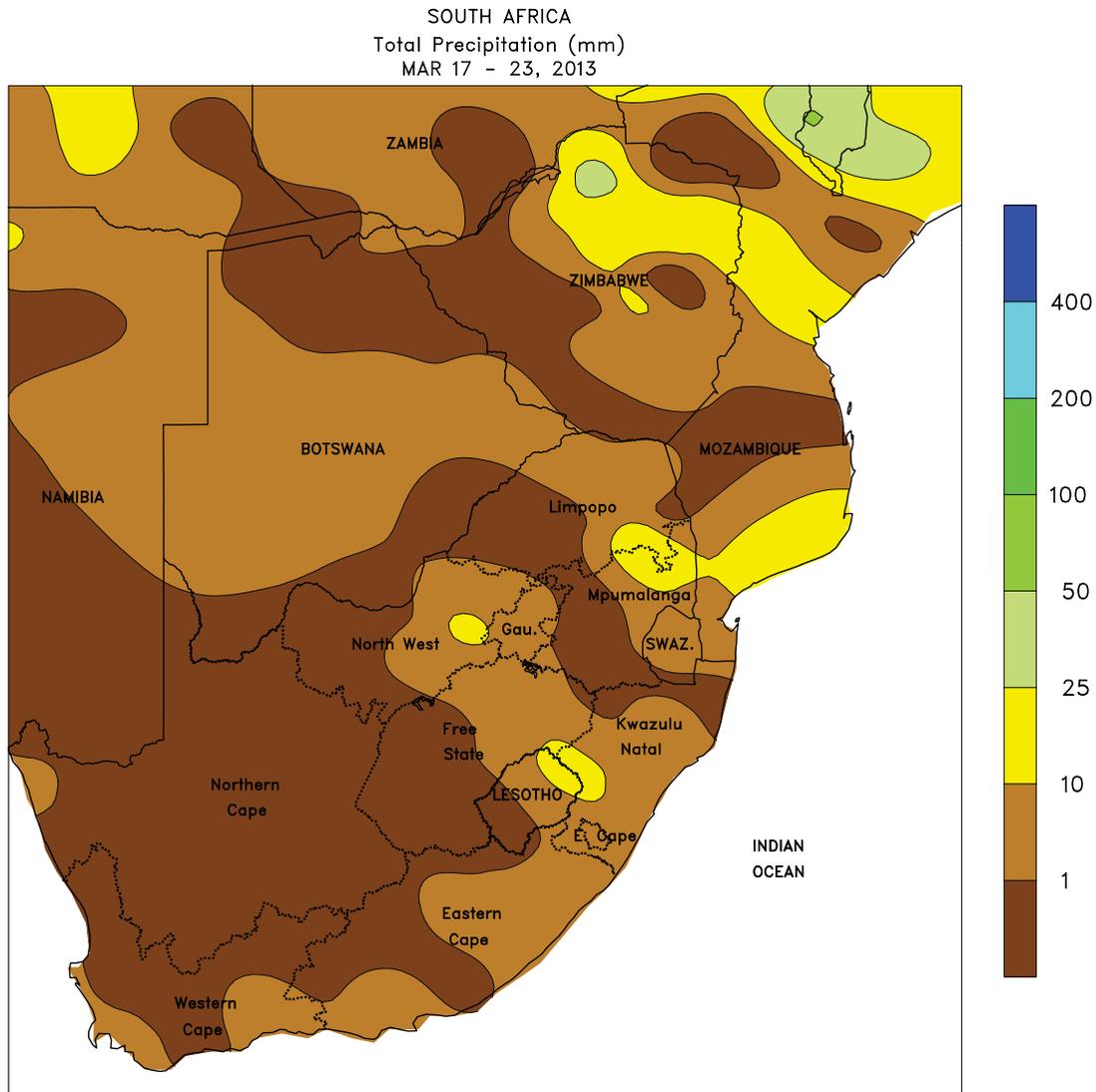
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**AUSTRALIA**

In southern Queensland and northern New South Wales, dry, seasonably warm weather during much of the week aided summer crop maturation and harvesting. A weak disturbance produced showers and thunderstorms (5-30 mm, locally more) late in the week, likely disrupting

fieldwork but helping condition topsoils in advance of winter wheat planting. Winter wheat planting typically begins in mid-April in central Queensland. Elsewhere in Australia, the bulk of the wheat crop is normally planted during May and June.



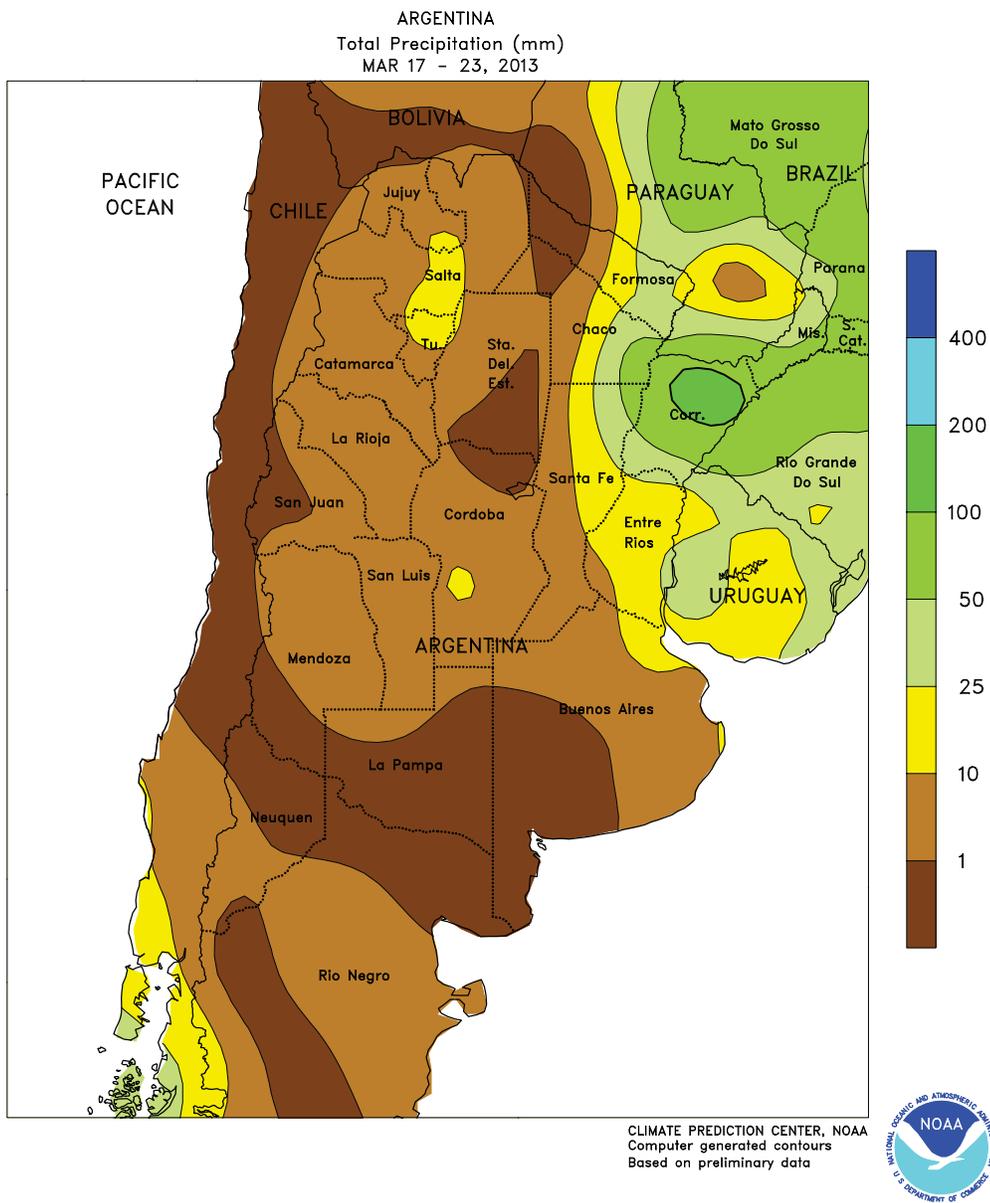
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**SOUTH AFRICA**

Unseasonable warmth and dryness continued throughout the region, hastening maturation and drydown of rain-fed summer crops. Little to no rain fell across the corn belt, with just a few locations in North West recording more than 5 mm. In addition, weekly temperatures averaged 1 to 3°C above normal, maintaining high evaporative losses. Daytime highs ranged from the lower 30s (degrees C) in eastern sections of the corn belt (southwestern Mpumalanga) to the middle 30s in the west

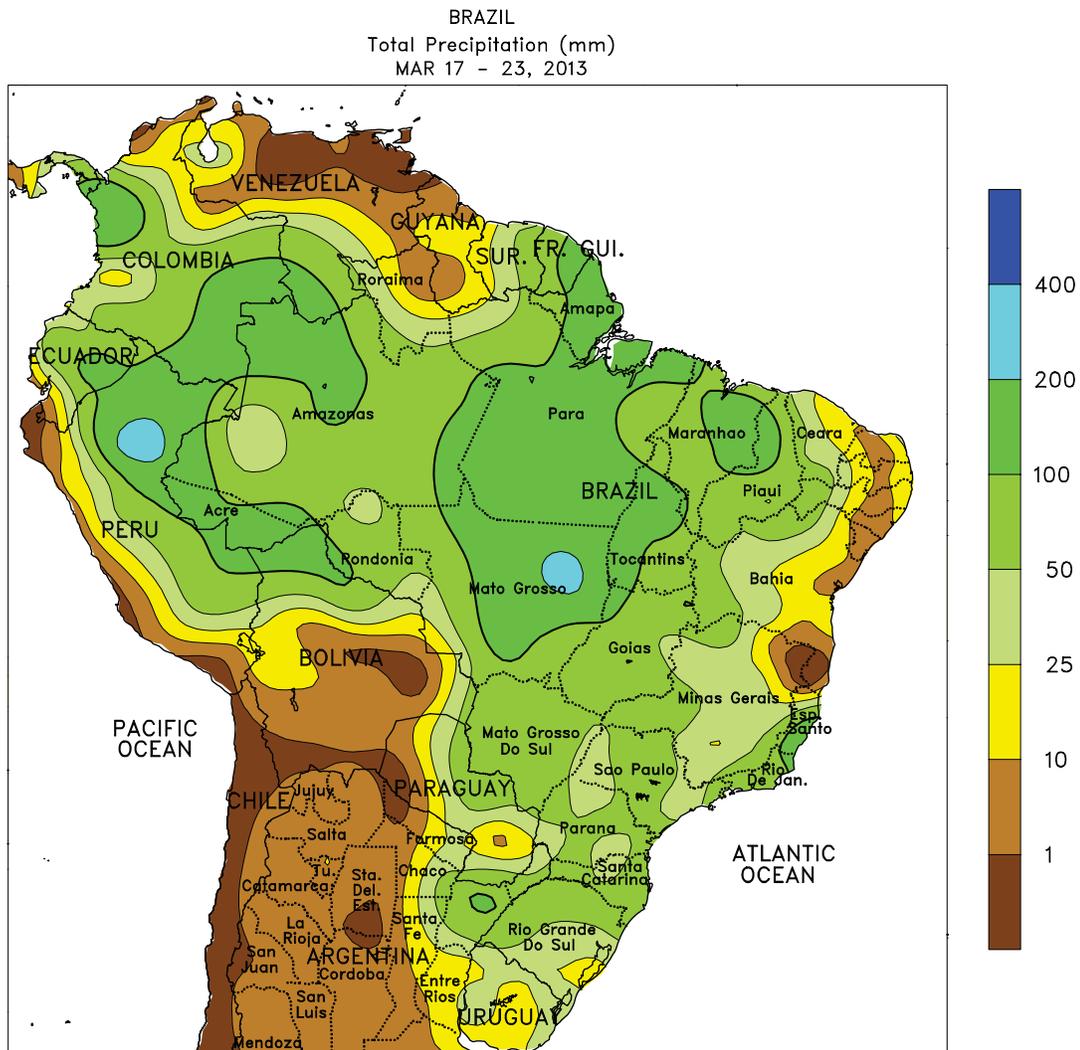
(outlying farming areas of North West and Free State), raising concern for additional declines in yield potential of filling crops. Similar conditions were recorded in KwaZulu-Natal, where preparations for sugarcane harvesting were likely underway; fieldwork typically occurs from April through September. Higher temperatures (daytime highs approaching 40°C) accompanied the dryness in the Cape Provinces, hastening maturation of corn, cotton, and other irrigated row crops.



**ARGENTINA**

Following last week's rain, cool, dry weather dominated much of Argentina. Weekly temperatures averaged 2 to 3°C below normal throughout the main agricultural districts of central and northern Argentina, slowing growth and maturation of summer grains, oilseeds, and cotton. Southeastern Buenos Aires recorded morning low temperatures of 1°C at the beginning of the week, resulting in localized frost that may have had some impact on agriculture. Daytime highs gradually rose into the upper 20s (degrees C) by week's end in southern farming areas (La Pampa and Buenos Aires), with northern production areas experiencing temperatures in the lower 30s during the latter part of the week. Rainfall was generally scattered and light from La Pampa and Buenos Aires northward to Salta and

western portions of Chaco and Formosa, with only a few locations recording amounts in excess of 10 mm. In contrast, heavier rain (25-75 mm) returned to the northeast (eastern Chaco through Misiones) at midweek, maintaining adequate to abundant rain for cotton and other crops. According to Argentina's Ministry of Agriculture, sunflowers were 77 percent harvested as of March 21, 6 percentage points ahead of last season. Harvesting in Buenos Aires, the country's largest producer of sunflowers, was at 56 percent, compared with 58 percent last year. Corn was 20 percent harvested nationally, slightly ahead of last year's pace. Soybean harvesting was reportedly underway but no national-level figures were provided.



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



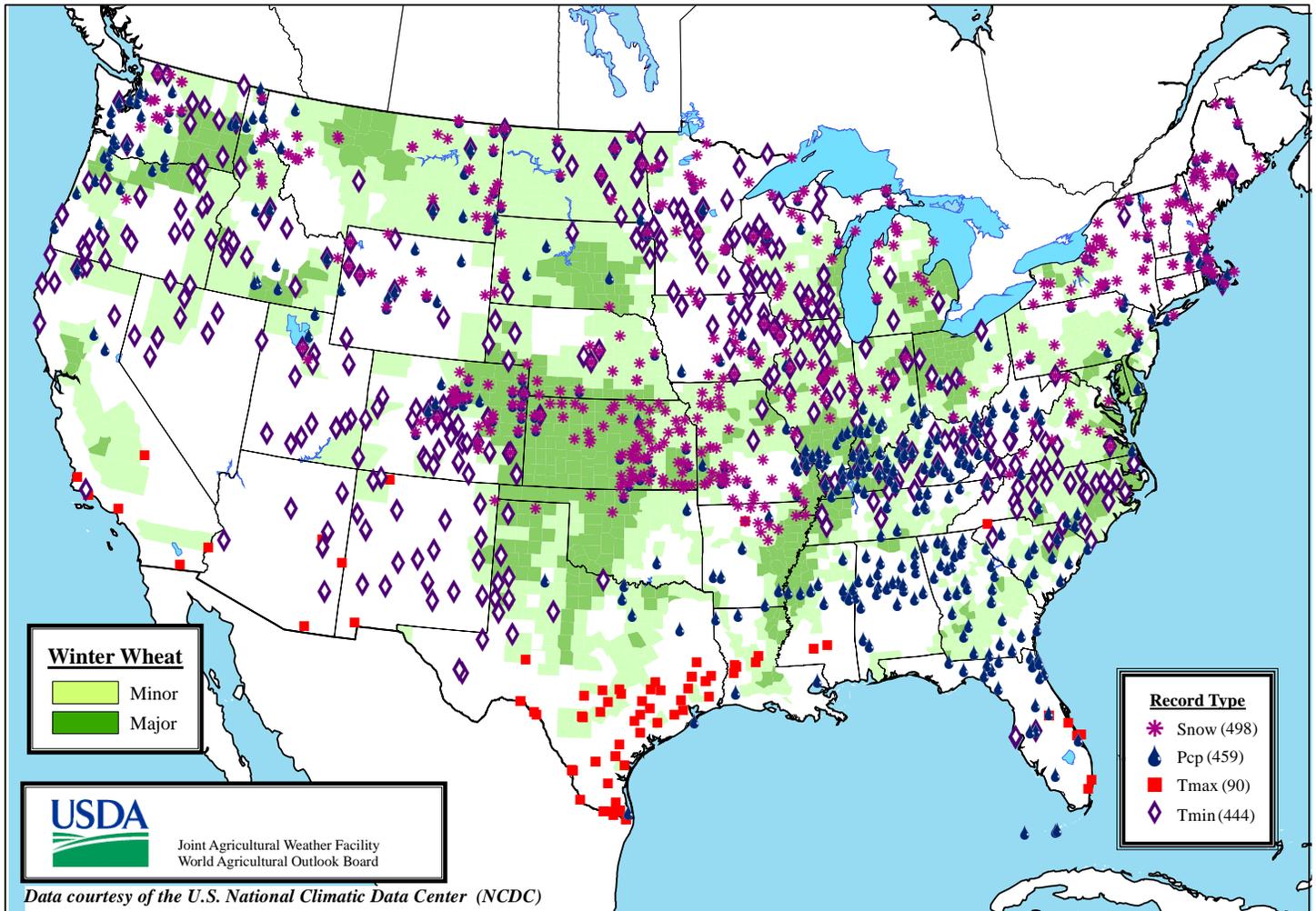
**BRAZIL**

Widespread, locally heavy rain maintained generally favorable levels of moisture for immature row crops throughout the country. Rainfall totaled more than 50 mm over much of the south (Rio Grande do Sul to Mato Grosso do Sul and western Minas Gerais), giving a late-season boost in moisture to immature soybeans and corn, as well as sugarcane, coffee, and citrus. Similar amounts were recorded in Rio de Janeiro and Espirito Santo, but rain was lighter (less than 50 mm) in farming areas of southern and central Minas Gerais. Near- to below-normal temperatures accompanied the southern moisture, although daytime highs reached 30°C at some locations by week's end after several

days of drier weather. Heavier rain (50-200 mm) fell in the Center-West Region (Mato Grosso, Goias, and northern Mato Grosso do Sul) and in the northeastern interior (notably western Bahia and Tocantins). While slowing soybean harvesting, the moisture benefited secondary (safrinha) corn and cotton. Weekly average temperatures were near to above normal in these more northerly areas, with daytime highs reaching the middle and upper 30s (degrees C) in the traditionally warmer production areas. Elsewhere, showers increased along the northeastern coast, with rainfall totaling 5 to 25 mm as far south as southeastern Bahia, boosting moisture for sugarcane, cocoa, and other crops.

# Daily Weather Records (ASOS & COOP)

## March 17-23, 2013



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Correspondence to the meteorologists should be directed to:  
**Weekly Weather and Crop Bulletin, NOAA/USDA, Joint Agricultural Weather Facility, USDA South Building, Room 4443B, Washington, DC 20250.**

Internet URL: <http://www.usda.gov/oce/weather>

E-mail address: [brippey@oce.usda.gov](mailto:brippey@oce.usda.gov)

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### U.S. DEPARTMENT OF AGRICULTURE World Agricultural Outlook Board

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