

WEEKLY WEATHER AND CROP BULLETIN

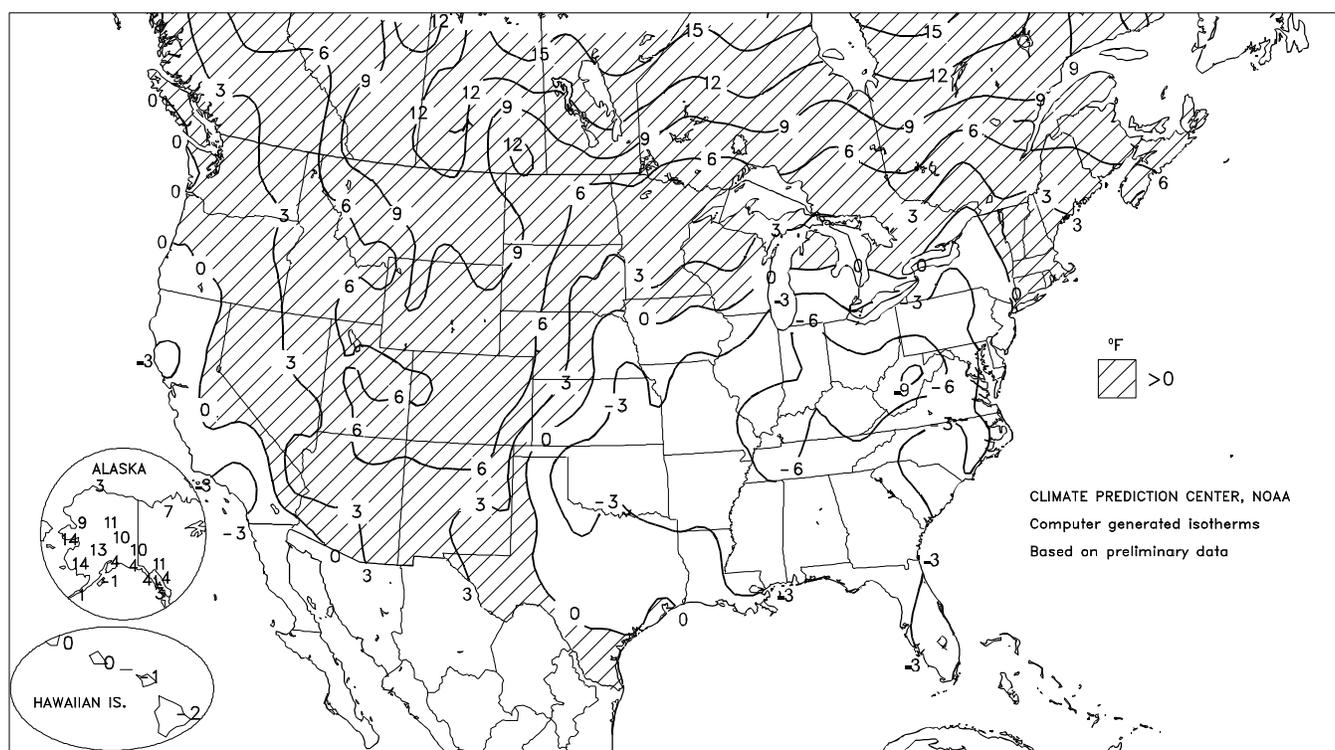
U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service

U.S. DEPARTMENT OF AGRICULTURE
National Agricultural Statistics Service
and World Agricultural Outlook Board



Departure of Average Temperature from Normal (°F)

MAR 21 - 27, 1999



HIGHLIGHTS

March 21 - 27, 1999

Exceptionally mild weather (5 to 13°F above normal) prevailed for a second consecutive week on the **northern Plains**, prompting winter wheat to break dormancy. Warmer-than-normal conditions also dominated the **West**, except in **California**, where temperatures averaged as much as 3°F below normal. Streaks of near- to below-normal temperatures reached 3 weeks on the **central and southern Plains**, 5 weeks in the **Southeast**, and 9 weeks in **California**, slowing the development of winter wheat and spring-sown crops. On March 26-27, scattered frost in the **Southeast** had few adverse effects on winter grains, spring-sown crops, and fruit tree blooms. Significant precipitation was confined to the **East**

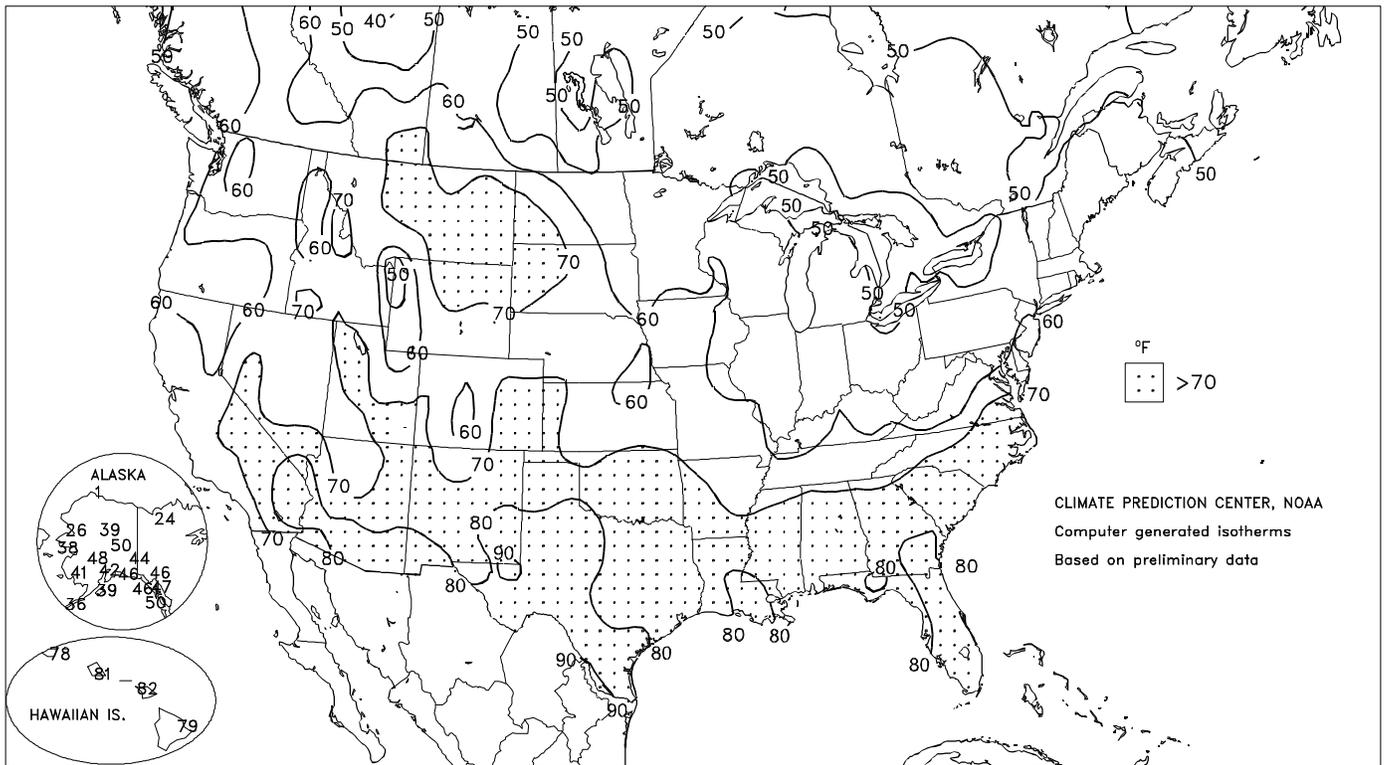
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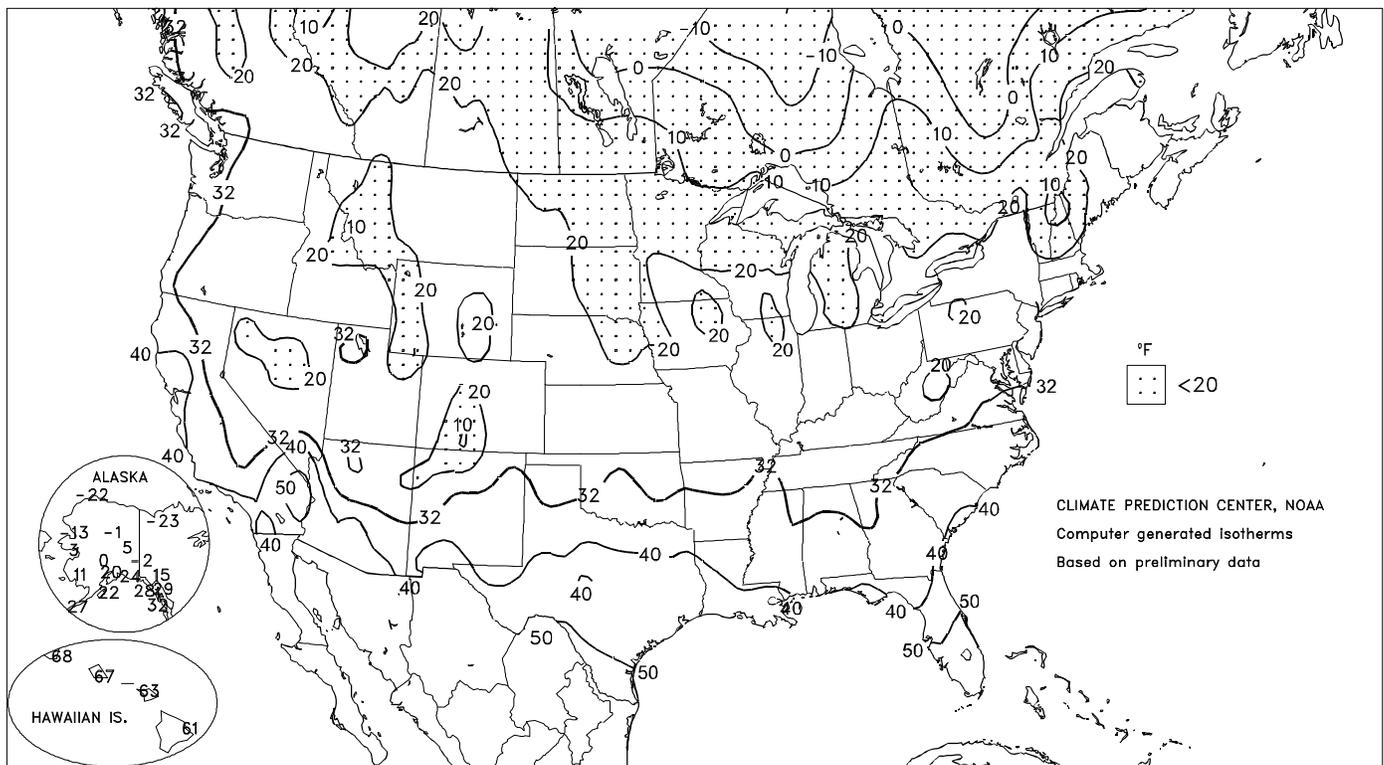
Extreme Maximum Temperature (°F)

MAR 21 - 27, 1999



Extreme Minimum Temperature (°F)

MAR 21 - 27, 1999



Weather Data for Selected Locations in the Delta

Weather Data for the Week Ending March 27, 1999

Data provided by the Mississippi State Delta Research and Extension Center and compiled by USDA/OCE/WAOB's Stoneville Field Office

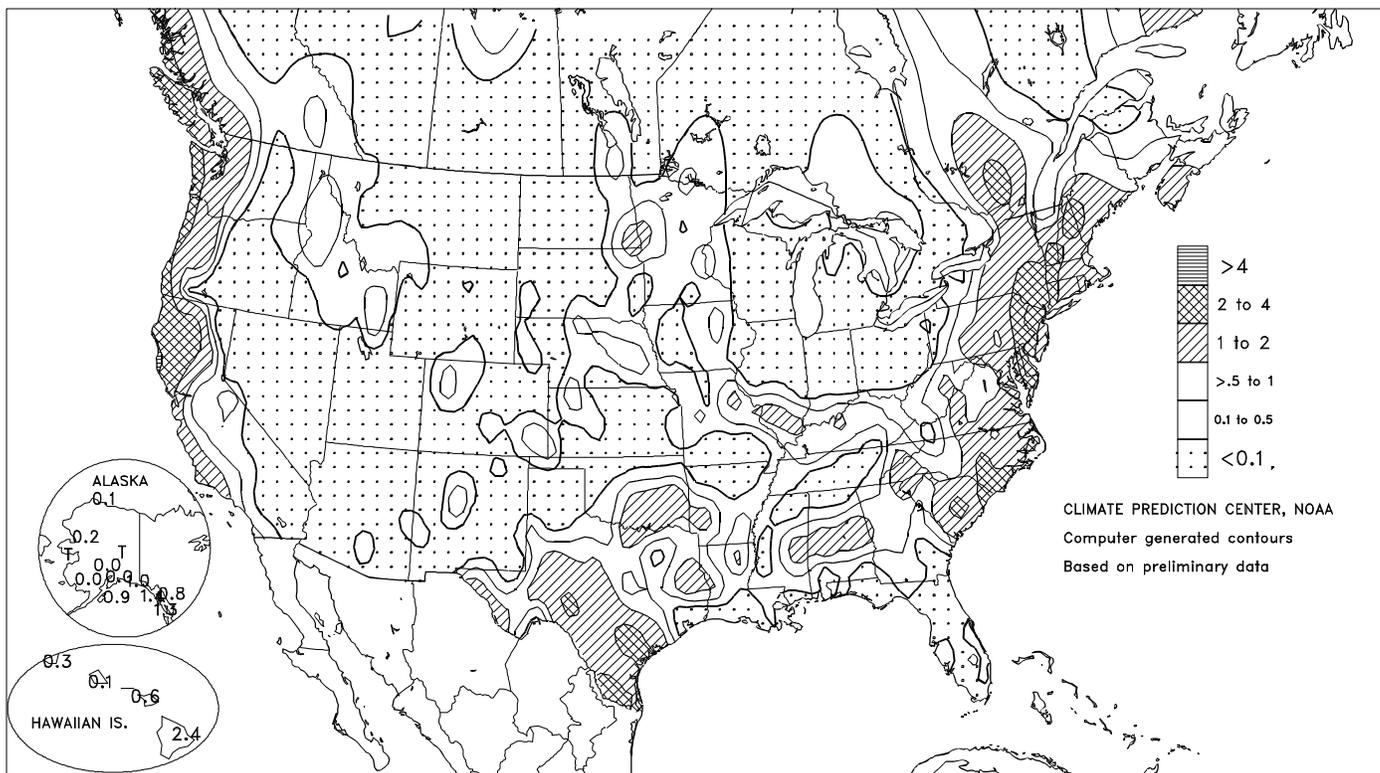
STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION						4-INCH SOIL TEMP, °F		NUMBER OF DAYS				
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN. SINCE Mar 1	PCT. NORMAL SINCE Mar 1	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	50 INCH OR MORE
MS	INDIANOLA 1S	64	43	74	34	54	--	0.43	--	0.41	4.22	--	15.67	--	59	52	0	0	2	0
	INVERNESS 5E	65	44	76	37	55	--	0.45	--	0.41	2.98	--	--	--	63	55	0	0	2	0
	LYON	63	39	67	30	51	--	0.09	--	0.03	4.38	--	15.09	--	--	--	0	1	3	0
	ONWARD	67	45	76	36	56	--	1.25	--	1.14	5.88	--	16.18	--	57	55	0	0	2	1
	SIDON	65	44	75	38	55	--	0.56	--	0.40	3.19	--	15.36	--	63	55	0	0	2	0
	STONEVILLE *	65	42	74	35	54	-3	0.31	-0.88	0.24	3.24	71	18.34	130	64	52	0	0	3	0

* Based on 1964-93 normals.

Delta Weather and Crop Summary: Seasonably mild conditions were observed throughout the Delta. Precipitation remained scattered, with heavier rainfall recorded in the lower Mississippi Delta. Soil moisture diminished slightly from previous weeks' levels. As a result, rice farmers prepared fields for planting. Meanwhile, the mild weather has helped Mississippi's early-planted corn to emerge.

Total Precipitation (Inches)

MAR 21 - 27, 1999



National Weather Data for Selected Cities

Weather Data for the Week Ending March 27, 1999

Data Provided by Climate Prediction Center (301-763-8000 EXT. 7503)

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION								RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN. SINCE Mar 1	PCT. NORMAL SINCE Mar 1	TOTAL IN. SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. °F		PRECIP.		
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
AL BIRMINGHAM	65	40	73	32	52	-4	0.45	-0.97	0.32	5.11	94	16.00	105	84	28	0	1	3	0	
AL HUNTSVILLE	63	38	70	30	51	-4	0.03	-1.47	0.03	4.96	86	16.95	107	86	34	0	1	1	0	
AL MOBILE	71	45	78	36	58	-5	0.44	-0.97	0.43	8.99	159	15.28	96	92	45	0	0	2	0	
AL MONTGOMERY	68	42	78	37	55	-4	1.02	-0.36	0.98	8.41	152	13.30	85	87	34	0	0	2	1	
AK ANCHORAGE	39	25	42	20	32	4	0.00	-0.15	0.00	0.22	35	0.86	39	94	59	0	7	0	0	
AK BARRROW	-6	-14	1	-22	-10	3	0.06	0.03	0.00	0.19	173	0.34	100	78	69	0	7	3	0	
AK FAIRBANKS	38	14	50	5	26	10	0.03	-0.05	0.02	0.20	63	0.66	54	86	39	0	7	2	0	
AK JUNEAU	44	33	47	29	38	4	0.79	0.08	0.19	2.54	88	13.27	119	10	73	0	3	7	0	
AK KODIAK	36	29	39	22	33	-1	0.89	-0.12	0.59	2.99	73	14.65	88	95	69	0	7	6	1	
AK NOME	32	17	38	3	24	14	0.01	-0.12	0.00	0.15	34	2.30	125	80	59	0	7	1	0	
AZ FLAGSTAFF	58	25	61	18	42	5	0.00	-0.56	0.00	0.50	22	1.26	20	72	18	0	7	0	0	
AZ PHOENIX	78	54	83	50	66	2	0.01	-0.18	0.00	0.12	15	0.30	14	46	15	0	0	1	0	
AZ TUCSON	79	47	85	40	63	3	0.10	-0.05	0.00	0.10	16	0.11	5	39	11	0	0	1	0	
AZ YUMA	75	56	81	51	66	-1	0.05	-0.01	0.00	0.05	24	0.65	83	61	25	0	0	1	0	
AR FORT SMITH	65	38	79	33	52	-3	0.31	-0.63	0.29	3.95	115	7.24	91	89	32	0	0	2	0	
AR LITTLE ROCK	62	41	66	35	52	-4	0.16	-1.01	0.16	2.48	59	11.30	100	93	40	0	0	1	0	
CA BAKERSFIELD	66	46	72	39	56	-3	0.01	-0.21	0.01	0.23	25	4.61	162	85	39	0	0	1	0	
CA EUREKA	55	42	62	35	48	-1	3.25	2.09	2.52	6.97	148	21.66	140	91	64	0	0	6	1	
CA FRESNO	67	46	70	41	57	0	0.16	-0.24	0.04	0.67	40	4.68	87	90	39	0	0	3	0	
CA LOS ANGELES	62	49	64	46	56	-3	0.92	0.53	0.91	2.27	127	4.67	70	89	64	0	0	2	1	
CA REDDING	59	42	67	36	51	-2	1.67	0.74	1.34	3.18	81	13.95	97	94	49	0	0	6	1	
CA SACRAMENTO	62	46	66	41	54	0	0.53	0.00	0.37	1.43	62	8.83	99	92	51	0	0	4	0	
CA SAN DIEGO	64	54	66	50	59	-1	0.56	0.18	0.56	1.14	73	3.37	68	78	57	0	0	1	1	
CA SAN FRANCISCO	58	48	61	43	53	-1	1.06	0.42	0.44	3.33	122	10.91	106	88	54	0	0	5	0	
CO ALAMOSA	60	25	64	14	42	7	0.00	-0.11	0.00	0.24	62	0.31	33	83	14	0	7	0	0	
CO CO SPRINGS	61	32	70	28	46	7	0.25	0.01	0.15	0.38	48	0.55	37	84	22	0	4	2	0	
CO DENVER	65	32	73	30	49	8	0.01	-0.32	0.00	0.21	19	0.76	35	78	18	0	4	1	0	
CO GRAND JUNCTION	67	36	72	29	52	6	0.00	-0.22	0.00	0.03	4	0.40	22	46	14	0	2	0	0	
CO PUEBLO	69	33	78	25	51	7	0.20	0.01	0.20	0.60	90	0.72	56	90	21	0	4	1	0	
CT BRIDGEPORT	49	34	52	30	42	1	1.09	0.21	0.65	3.14	97	13.59	143	93	50	0	2	4	1	
CT HARTFORD	51	29	57	22	40	-1	1.49	0.65	0.98	3.61	115	12.38	126	76	35	0	5	4	1	
DC WASHINGTON	53	38	58	32	46	-4	1.30	0.59	1.26	3.95	143	11.92	145	81	40	0	1	3	1	
DE WILMINGTON	52	34	60	31	43	-2	2.10	1.31	1.74	4.03	135	12.97	145	86	39	0	3	4	1	
FL DAYTONA BEACH	75	52	82	46	64	-2	0.00	-0.62	0.00	1.00	39	7.63	91	93	43	0	0	0	0	
FL JACKSONVILLE	73	46	82	39	60	-3	0.25	-0.53	0.12	0.61	19	6.74	64	95	35	0	0	3	0	
FL KEY WEST	78	67	82	61	73	-2	0.00	-0.38	0.00	0.72	48	4.80	90	91	64	0	0	0	0	
FL MIAMI	81	63	82	59	72	-1	0.01	-0.54	0.00	0.26	12	3.52	57	93	44	0	0	1	0	
FL ORLANDO	79	54	82	50	66	-2	0.03	-0.64	0.03	0.58	20	3.84	47	94	34	0	0	1	0	
FL PENSACOLA	69	49	76	43	59	-3	0.16	-1.05	0.16	3.86	77	10.49	70	88	38	0	0	1	0	
FL TALLAHASSEE	73	41	80	36	57	-5	0.10	-1.23	0.10	3.20	58	9.12	58	96	30	0	0	1	0	
FL TAMPA	75	56	78	53	65	-3	0.01	-0.59	0.01	0.72	26	4.06	52	93	47	0	0	1	0	
GA WEST PALM	80	60	83	56	70	-1	0.32	-0.50	0.32	0.85	26	9.26	107	91	42	0	0	1	0	
GA ATHENS	64	42	73	36	53	-3	0.43	-0.79	0.24	2.65	55	10.80	78	95	48	0	0	4	0	
GA ATLANTA	62	42	72	36	52	-4	0.62	-0.67	0.35	3.84	76	11.15	76	84	34	0	0	3	0	
GA AUGUSTA	67	41	79	31	54	-4	0.96	-0.06	0.77	2.64	64	10.72	86	98	40	0	1	4	1	
GA COLUMBUS	68	43	77	39	56	-4	1.04	-0.25	0.90	3.43	68	9.27	64	85	26	0	0	2	1	
GA MACON	68	41	78	34	54	-5	1.48	0.44	0.91	2.84	67	11.02	82	96	39	0	0	3	2	
GA SAVANNAH	70	45	80	39	57	-4	0.51	-0.34	0.33	1.30	39	9.37	92	97	43	0	0	4	0	
HI HILO	77	64	79	61	71	-2	2.38	-0.97	1.06	9.52	80	43.72	136	92	64	0	0	6	2	
HI HONOLULU	80	69	81	67	75	0	0.12	-0.36	0.09	0.57	29	3.45	45	74	46	0	0	2	0	
HI KAHULUI	79	66	82	63	73	-1	0.56	-0.03	0.47	1.16	49	5.30	56	84	54	0	0	2	0	
HI LIHUE	77	69	78	68	73	0	0.36	-0.60	0.12	0.98	27	6.55	51	84	62	0	0	5	0	
ID BOISE	58	38	69	31	48	4	0.35	0.05	0.24	0.91	81	4.26	117	86	28	0	1	4	0	
ID LEWISTON	57	39	63	33	48	3	0.40	0.15	0.31	0.74	80	2.63	84	79	37	0	0	3	0	
ID POCATELLO	57	32	71	24	45	6	0.36	0.06	0.25	0.71	65	3.36	110	86	25	0	4	3	0	
IL CHICAGO/O'HARE	47	26	57	22	36	-4	0.02	-0.67	0.00	1.00	44	7.11	138	81	38	0	7	1	0	
IL MOLINE	51	26	59	20	38	-3	0.00	-0.77	0.00	0.55	22	4.59	87	77	29	0	7	0	0	
IL PEORIA	51	28	58	23	40	-3	0.00	-0.74	0.00	0.80	32	5.04	93	79	30	0	6	0	0	
IL ROCKFORD	49	24	58	20	37	-2	0.00	-0.64	0.00	0.34	17	4.61	102	81	28	0	7	0	0	
IL SPRINGFIELD	52	27	58	21	40	-5	0.00	-0.80	0.00	0.93	34	5.02	83	84	28	0	6	0	0	
IN EVANSVILLE	53	32	59	25	42	-7	0.73	-0.36	0.71	3.63	88	11.57	117	84	38	0	4	2	1	
IN FORT WAYNE	44	26	53	23	35	-6	0.00	-0.70	0.00	1.14	46	6.46	103	88	45	0	7	0	0	
IN INDIANAPOLIS	49	30	54	25	39	-5	0.00	-0.91	0.00	1.73	53	11.65	145	85	41	0	4	0	0	
IN SOUTH BEND	44	24	56	19	34	-7	0.00	-0.77	0.00	1.27	48	5.97	88	84	42	0	7	0	0	
IA BURLINGTON	54	30	61	27	42	0	0.00	-0.73	0.00	0.40	17	5.14	107	70	24	0	5	0	0	
IA CEDAR RAPIDS	51	23	59	20	37	-2	0.00	-0.59	0.00	0.21	11	4.08	103	81	26	0	7	0	0	
IA DES MOINES	53	28	63	25	41	0	0.01	-0.59	0.01	0.71	36	2.94	73	73	23	0	7	1	0	
IA DUBUQUE	48	25	56	20	37	-1	0.00	-0.73	0.00	0.63	26	3.75	75	74	30	0	7	0	0	
IA SIOUX CITY	53	25	60	16	39	-1	0.07	-0.42	0.07	0.44	26	1.58	54	79	26	0	6	1	0	
IA WATERLOO	52	22	61	18	37	-1	0.00	-0.59	0.00	0.25	13	2.45	64	82	27	0	7	0	0	
KS CONCORDIA	54	31	59	27	43	-2	0.00	-0.55	0.00	0.84	44	1.61	50	77	32	0	6	0	0	
KS DODGE CITY	58	34	63	30	46	0	0.02	-0.38	0.02	1.85	140	3.83	158	89	48	0	4	1	0	
KS GOODLAND	60	29	74	24	45	3	0.17	-0.11	0.09	0.95	95	1.52	86	91	40	0	6	1	0	
KS TOPEKA	55	31	61	22	43	-3	0.00	-0.62	0.00	0.97	46	3.07	75	81	31	0	3	0	0	

Based on 1961-90 normals

Weather Data for the Week Ending March 27, 1999

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS					
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN, SINCE Mar 1	PCT. NORMAL SINCE Mar 1	TOTAL IN, SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP.	
																		04 INCH OR MORE	50 INCH OR MORE		
KY WICHITA	57	35	65	27	46	-3	0.07	-0.52	0.00	1.87	89	3.62	94	78	37	0	2	1	0		
KY JACKSON	50	34	58	30	43	-8	0.32	-0.76	0.27	2.97	71	12.59	107	86	35	0	2	3	0		
KY LEXINGTON	50	32	57	28	41	-7	0.91	-0.11	0.77	3.72	97	12.20	123	84	35	0	4	2	1		
KY LOUISVILLE	53	35	61	31	44	-5	0.83	-0.24	0.83	3.28	81	12.89	126	77	30	0	3	1	1		
KY PADUCAH	54	33	61	25	44	-7	0.70	-0.45	0.70	3.00	70	11.37	99	90	34	0	4	1	1		
LA BATON ROUGE	72	47	82	39	59	-4	0.38	-0.69	0.32	2.24	53	9.21	63	93	41	0	0	1	0		
LA LAKE CHARLES	72	50	77	43	61	-1	0.00	-0.72	0.00	3.07	107	9.83	90	98	55	0	0	0	0		
LA NEW ORLEANS	71	52	80	47	61	-2	0.07	-0.98	0.00	2.44	56	6.56	43	87	43	0	0	1	0		
LA SHREVEPORT	70	47	78	40	58	-1	0.60	-0.20	0.32	4.43	141	17.81	162	92	42	0	0	2	0		
ME CARIBOU	43	26	56	23	35	6	0.25	-0.32	0.21	2.16	102	7.11	110	85	43	0	7	2	0		
ME PORTLAND	45	27	49	20	36	0	0.68	-0.18	0.63	2.16	68	12.18	121	85	39	0	5	2	1		
MD BALTIMORE	51	33	56	28	42	-5	1.19	0.43	1.13	3.33	112	10.69	117	89	40	0	4	3	1		
MA BOSTON	48	33	53	30	41	0	0.41	-0.42	0.31	1.87	59	11.08	107	86	46	0	4	2	0		
MA WORCESTER	48	30	50	23	39	3	1.37	0.46	1.07	3.57	104	12.96	123	83	38	0	5	3	1		
MI ALPENA	40	24	51	20	32	1	0.24	-0.27	0.16	0.87	48	4.62	97	90	46	0	7	3	0		
MI GRAND RAPIDS	45	25	56	22	35	-2	0.00	-0.67	0.00	0.71	32	5.73	104	82	38	0	7	0	0		
MI HOUGHTON LAKE	42	22	56	17	32	1	0.05	-0.45	0.04	0.42	24	3.58	81	91	38	0	7	2	0		
MI LANSING	45	22	55	15	33	-3	0.02	-0.55	0.01	0.96	49	4.27	89	89	47	0	7	1	0		
MI MARQUETTE	39	21	52	8	30	3	0.34	-0.32	0.30	1.15	48	9.24	146	79	42	0	6	3	0		
MI MUSKOGON	42	26	49	22	34	-2	0.03	-0.59	0.00	0.48	22	4.19	70	83	45	0	7	1	0		
MN DULUTH	43	22	55	12	32	4	0.12	-0.36	0.12	0.35	21	1.86	51	66	32	0	6	1	0		
MN INT'L FALLS	42	20	52	9	31	4	0.35	0.08	0.35	1.24	139	1.83	76	82	32	0	6	1	0		
MN MINNEAPOLIS	50	26	60	20	38	3	0.28	-0.21	0.28	0.58	35	3.64	105	73	29	0	7	1	0		
MN ROCHESTER	46	26	56	22	36	2	0.00	-0.47	0.00	0.11	7	3.19	106	84	37	0	7	0	0		
MN ST. CLOUD	48	24	55	19	36	5	0.20	-0.17	0.20	0.78	66	1.69	67	81	29	0	6	1	0		
MS JACKSON	67	42	76	32	55	-4	0.95	-0.40	0.60	4.07	81	14.59	97	91	35	0	1	2	1		
MS MERIDIAN	67	39	75	30	53	-5	0.95	-0.58	0.80	5.53	94	13.33	81	98	34	0	1	2	1		
MS TUPELO	65	39	73	31	52	-4	0.12	-1.27	0.12	7.16	135	21.63	145	86	34	0	1	1	0		
MO COLUMBIA	51	30	61	26	41	-5	0.63	-0.15	0.33	2.31	85	6.91	115	91	44	0	5	2	0		
MO KANSAS CITY	55	31	65	25	43	-3	0.19	-0.44	0.16	1.45	68	5.50	127	82	34	0	5	2	0		
MO SAINT LOUIS	53	33	60	30	43	-6	0.94	0.09	0.67	2.33	75	10.93	156	83	40	0	4	2	1		
MO SPRINGFIELD	56	33	61	24	45	-4	0.01	-0.94	0.01	3.00	90	8.85	121	84	29	0	2	1	0		
MT BILLINGS	61	32	72	27	46	9	0.00	-0.30	0.00	0.78	80	1.85	73	79	29	0	4	0	0		
MT BUTTE	53	26	65	18	39	9	0.20	0.01	0.10	0.80	123	1.70	108	91	29	0	7	3	0		
MT GLASGOW	60	31	73	28	46	13	0.00	-0.11	0.00	0.34	97	1.72	177	80	32	0	5	0	0		
MT GREAT FALLS	59	30	72	20	45	9	0.04	-0.24	0.00	0.18	19	0.87	36	66	23	0	5	1	0		
MT KALISPELL	56	29	66	26	43	7	0.10	-0.12	0.08	1.00	116	3.56	102	93	31	0	6	3	0		
MT MILES CITY	64	33	79	28	48	12	0.00	-0.17	0.00	0.12	24	0.75	50	74	25	0	5	0	0		
MT MISSOULA	58	29	67	25	43	6	0.09	-0.13	0.03	0.38	45	2.44	84	88	28	0	6	4	0		
NE GRAND ISLAND	53	28	64	19	40	-1	0.40	-0.08	0.33	0.61	38	1.26	45	84	32	0	6	3	0		
NE LINCOLN	53	26	59	19	39	-3	0.64	0.10	0.57	1.52	86	3.16	105	92	30	0	6	2	1		
NE NORFOLK	51	26	64	19	39	-1	0.36	-0.10	0.28	0.72	46	1.57	55	84	30	0	6	2	0		
NE NORTH PLATTE	56	29	68	21	43	3	0.36	0.04	0.35	0.75	74	1.36	75	86	38	0	4	2	0		
NE OMAHA	53	28	59	22	40	-2	0.59	0.07	0.47	1.51	87	3.50	108	90	28	0	5	2	0		
NE SCOTTSBLUFF	61	30	70	23	45	7	0.29	0.01	0.24	1.04	113	1.33	71	91	33	0	6	2	0		
NE VALENTINE	54	30	63	22	42	6	0.22	-0.05	0.16	0.48	55	1.35	87	84	35	0	4	2	0		
NV ELY	56	25	61	19	41	5	0.00	-0.22	0.00	0.11	13	0.92	42	70	19	0	6	0	0		
NV LAS VEGAS	75	51	79	46	63	5	0.00	-0.08	0.00	0.00	0	0.08	6	38	12	0	0	0	0		
NV RENO	60	33	65	24	46	2	0.00	-0.14	0.00	0.26	41	2.27	83	72	21	0	2	0	0		
NV WINNEMUCCA	58	28	68	20	43	1	0.04	-0.15	0.02	0.18	26	2.23	109	84	26	0	6	3	0		
NH CONCORD	48	25	56	18	36	1	0.93	0.30	0.66	2.45	103	10.66	144	88	36	0	6	3	1		
NJ NEWARK	53	36	59	31	45	0	1.64	0.73	0.93	2.87	85	12.84	131	80	37	0	1	4	2		
NM ALBUQUERQUE	68	41	72	38	55	6	0.28	0.15	0.28	1.12	255	1.24	91	68	16	0	0	1	0		
NY ALBANY	49	27	57	22	38	0	1.61	0.92	1.18	3.18	125	9.57	133	85	40	0	6	2	1		
NY BINGHAMTON	39	25	50	22	32	-3	1.01	0.35	0.63	2.65	109	8.95	125	91	53	0	7	2	1		
NY BUFFALO	42	28	53	25	35	-2	0.28	-0.35	0.16	2.08	90	8.95	122	90	53	0	7	2	0		
NY ROCHESTER	42	27	49	22	34	-3	0.21	-0.32	0.13	3.40	173	8.01	130	86	48	0	7	2	0		
NY SYRACUSE	43	28	52	24	35	-2	1.16	0.49	0.70	3.67	154	10.42	152	86	42	0	7	2	1		
NC ASHEVILLE	55	36	68	30	46	-4	0.66	-0.36	0.28	2.70	66	12.37	110	88	38	0	1	4	0		
NC CHARLOTTE	62	43	74	37	52	-1	0.47	-0.49	0.41	1.73	44	7.91	69	88	31	0	0	2	0		
NC GREENSBORO	58	39	68	34	49	-3	1.03	0.22	0.67	2.52	77	9.42	97	88	37	0	0	5	1		
NC HATTERAS	58	46	66	38	52	-2	3.50	2.55	1.93	5.59	148	11.79	89	94	62	0	0	5	2		
NC RALEIGH	62	41	74	32	52	-1	1.55	0.74	1.22	4.21	126	11.94	113	96	38	0	1	4	1		
NC WILMINGTON	65	44	80	38	55	-2	2.05	1.21	1.14	3.14	92	9.93	90	92	47	0	0	5	2		
ND BISMARCK	54	27	68	20	41	9	0.00	-0.21	0.00	0.35	56	1.88	123	86	36	0	5	0	0		
ND DICKINSON	57	28	74	22	42	10	0.00	-0.21	0.00	0.10	18	1.35	106	87	31	0	6	0	0		
ND FARGO	43	27	55	19	35	5	0.13	-0.16	0.00	0.18	20	1.53	76	87	48	0	5	1	0		
ND GRAND FORKS	39	23	48	16	31	2	0.12	-0.12	0.12	0.82	103	2.04	103	96	65	0	6	1	0		
ND JAMESTOWN	45	26	58	21	35	5	0.00	-0.24	0.00	0.21	29	1.84	102	91	49	0	6	0	0		
ND WILLISTON	55	29	74	23	42	10	0.03	-0.15	0.03	0.43	75	2.72	175	82	38	0	6	1	0		
OH AKRON-CANTON	45	25	54	22	35	-6	0.06	-0.71	0.02	2.19	76	8.49	117	93	44	0	7	2	0		
OH CINCINNATI	49	29	58	23	39	-7	0.05	-0.94	0.00	2.05	56	10.47	117	82	34	0	5	1	0		
OH CLEVELAND	42	28	48	25	35	-5	0.00	-0.69	0.00	1.75	70	7.46	111	91	53	0	6	0	0		
OH COLUMBUS	49	29	58	25	39	-5	0.00	-0.77	0.00	1.92	68	7.56	104	87	39	0	6	0	0		
OH DAYTON	48	27	56	24	37	-6	0.00	-0.82	0.00	0.95	32	8.86	122	83	40	0	7	0	0		
OH MANSFIELD	44	25	51	21	35	-6	0.00	-0.80	0.00	1.18	42	7.49	110	86	47	0	7	0	0		

Based on 1961-90 normals

Weather Data for the Week Ending March 27, 1999

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	45	26	51	20	36	-4	0.03	-0.62	0.00	0.91	40	5.74	100	87	41	0	7	2	0
OK	45	25	53	22	35	-4	0.15	-0.59	0.04	2.29	85	9.70	141	87	41	0	7	4	0
OK	61	40	76	35	51	-3	0.40	-0.23	0.14	3.58	153	6.59	131	87	45	0	0	4	0
OR	59	39	77	30	49	-4	0.37	-0.46	0.29	3.66	123	7.93	123	83	34	0	1	2	0
OR	52	41	58	37	46	0	1.95	0.43	0.48	8.19	131	40.24	169	97	63	0	0	7	0
OR	49	31	54	25	40	2	0.26	0.04	0.05	0.83	93	4.40	165	95	40	0	5	5	0
OR	54	40	61	33	47	-1	1.01	-0.17	0.54	2.79	57	20.49	111	97	53	0	0	7	1
OR	56	40	61	35	48	0	0.16	-0.23	0.08	0.93	57	8.90	143	91	41	0	0	3	0
OR	58	40	66	33	49	3	0.31	0.05	0.24	0.81	78	2.85	77	80	39	0	0	3	0
OR	55	42	61	35	48	0	0.60	-0.16	0.18	3.32	105	18.66	151	96	52	0	0	6	0
PA	54	40	61	34	47	1	0.48	-0.40	0.15	3.39	91	24.40	173	95	53	0	0	7	0
PA	49	29	57	26	39	-3	1.52	0.76	1.09	2.92	102	11.02	123	84	35	0	6	4	1
PA	41	27	53	24	34	-4	0.01	-0.70	0.01	1.06	41	7.86	111	87	49	0	6	1	0
PA	52	35	59	29	43	-1	0.15	-0.59	0.15	1.77	62	8.61	100	85	36	0	2	1	0
PA	53	35	60	32	44	-1	2.14	1.33	1.75	4.06	136	11.90	132	91	49	0	1	4	1
PA	46	28	55	24	37	-5	0.05	-0.75	0.03	1.32	45	8.61	109	86	36	0	7	2	0
PA	45	29	55	22	37	-2	1.25	0.65	0.79	2.74	125	9.00	139	91	55	0	5	2	1
PA	48	28	57	24	38	-3	0.99	0.25	0.97	3.63	131	10.51	130	87	39	0	6	2	1
RI	51	32	53	25	41	2	0.91	-0.03	0.39	3.09	88	15.26	139	84	40	0	4	4	0
SC	68	47	77	42	58	-3	0.70	-0.22	0.46	1.26	35	6.20	58	95	49	0	0	3	0
SC	69	47	79	41	58	-2	0.73	-0.22	0.37	2.23	58	9.20	87	96	42	0	0	3	0
SC	65	44	78	37	55	-3	1.04	-0.02	0.40	2.48	58	8.78	69	96	38	0	0	4	0
SC	60	43	71	37	52	-2	0.91	-0.28	0.66	2.67	56	9.33	70	91	43	0	0	4	1
SD	50	24	61	14	37	3	0.59	0.24	0.59	0.79	71	1.61	82	89	32	0	6	1	1
SD	52	25	60	15	39	3	0.07	-0.35	0.07	0.22	16	0.87	35	90	30	0	6	1	0
SD	58	30	73	24	44	7	0.26	-0.02	0.12	0.94	109	1.19	68	89	38	0	6	3	0
SD	50	24	56	15	37	1	0.18	-0.25	0.16	1.09	80	1.72	68	83	29	0	6	1	0
TN	54	37	62	30	46	-4	0.26	-0.57	0.16	2.51	77	10.43	105	93	43	0	2	4	0
TN	63	39	69	32	51	-2	0.48	-0.87	0.33	3.24	61	16.78	112	92	32	0	1	2	0
TN	58	38	67	31	48	-3	0.50	-0.64	0.39	4.13	92	13.65	107	92	34	0	1	3	0
TN	62	42	67	36	52	-4	0.24	-1.02	0.24	5.63	120	13.87	109	85	36	0	0	1	0
TX	58	37	65	30	47	-5	0.24	-0.87	0.21	3.65	86	15.21	131	85	30	0	1	2	0
TX	67	46	82	40	56	-2	1.14	0.81	1.14	2.99	258	4.93	147	84	43	0	0	1	1
TX	62	36	75	29	49	0	0.00	-0.22	0.00	1.38	166	4.06	209	92	45	0	2	0	0
TX	71	54	77	48	63	-1	0.51	0.10	0.51	4.06	252	4.30	78	89	58	0	0	1	1
TX	73	52	77	45	63	-1	0.00	-0.74	0.00	1.88	66	6.10	55	93	53	0	0	0	0
TX	79	65	84	54	72	1	0.11	-0.02	0.05	0.20	44	1.97	64	94	62	0	0	2	0
TX	78	59	84	44	68	1	0.05	-0.14	0.03	0.09	11	0.88	20	91	57	0	0	2	0
TX	76	58	85	54	67	1	1.70	1.51	1.67	1.94	359	1.97	96	87	50	0	0	2	1
TX	76	48	80	42	62	5	0.01	-0.05	0.00	0.05	19	0.15	14	56	21	0	0	1	0
TX	69	48	75	40	58	-1	0.26	-0.41	0.24	2.96	124	4.86	76	80	45	0	0	2	0
TX	72	60	75	53	66	3	0.01	-0.49	0.01	0.51	27	3.88	52	87	61	0	0	1	0
TX	75	51	81	43	63	0	0.09	-0.57	0.00	2.36	93	5.28	60	96	50	0	0	1	0
TX	66	42	84	37	54	0	0.01	-0.18	0.01	1.18	159	2.53	140	89	38	0	0	1	0
TX	70	47	88	43	59	0	0.62	0.48	0.62	1.22	230	1.55	100	85	30	0	0	1	1
TX	70	47	82	39	59	-2	1.32	1.10	1.30	2.34	304	2.96	112	90	45	0	0	2	1
TX	72	53	79	43	62	-1	1.46	1.11	1.45	3.17	244	3.26	67	93	52	0	0	2	1
TX	74	54	81	44	64	-2	0.12	-0.23	0.02	1.91	144	4.48	81	99	61	0	0	2	0
TX	69	49	76	41	59	-2	0.41	-0.15	0.24	3.10	155	5.47	95	91	55	0	0	3	0
TX	65	42	79	36	53	-3	0.58	0.04	0.49	5.50	293	8.06	184	90	45	0	0	2	0
UT	60	39	73	31	50	6	0.22	-0.25	0.09	0.63	38	2.87	72	61	24	0	1	3	0
VT	45	28	51	22	36	2	0.61	0.07	0.50	2.29	120	6.94	130	81	42	0	6	3	1
VA	54	34	56	29	44	-5	0.74	-0.04	0.59	2.35	77	9.53	107	86	32	0	2	2	1
VA	57	43	74	37	50	-1	1.31	0.49	0.63	3.30	102	9.14	87	94	56	0	0	5	1
VA	56	37	68	30	46	-4	1.60	0.79	1.47	4.11	130	10.28	107	83	37	0	1	3	1
VA	55	36	59	31	45	-4	1.01	0.22	0.76	2.93	96	8.78	101	71	30	0	1	3	1
WA	50	32	54	24	41	-4	0.65	-0.07	0.61	3.04	111	11.05	134	88	37	0	4	2	1
WA	52	39	60	34	45	1	1.30	0.25	0.38	5.80	132	33.57	185	99	55	0	0	7	0
WA	49	38	54	32	43	0	4.16	1.71	1.26	13.26	130	54.61	147	99	65	0	1	7	4
WA	52	41	63	36	47	1	0.65	-0.10	0.27	3.41	109	17.20	138	92	52	0	0	7	0
WA	53	35	59	28	44	4	0.30	-0.03	0.11	0.64	48	5.77	121	90	39	0	1	4	0
WA	57	33	63	27	45	0	0.01	-0.13	0.01	0.05	8	2.76	109	86	31	0	4	1	0
WV	48	29	50	25	38	-6	0.50	-0.27	0.29	3.19	109	11.50	131	86	38	0	6	3	0
WV	50	31	56	26	40	-8	0.56	-0.27	0.31	3.73	118	11.21	123	90	40	0	5	3	0
WV	45	22	50	16	33	-9	0.56	-0.33	0.43	3.64	110	12.40	132	97	48	0	7	4	0
WV	51	32	60	28	42	-7	0.58	-0.27	0.41	3.30	102	10.35	116	80	32	0	4	3	0
WI	50	23	61	18	36	3	0.00	-0.45	0.00	0.36	26	3.07	98	80	29	0	7	0	0
WI	47	24	57	21	35	2	0.00	-0.51	0.00	0.20	11	2.69	68	79	34	0	7	0	0
WI	52	26	62	22	39	2	0.00	-0.51	0.00	0.39	23	4.01	114	76	26	0	7	0	0
WI	48	23	57	18	35	-1	0.00	-0.55	0.00	0.42	23	3.43	86	78	27	0	7	0	0
WI	43	26	54	21	35	-2	0.00	-0.68	0.00	0.37	16	5.73	108	77	40	0	7	0	0
WY	57	25	69	20	41	5	0.13	-0.11	0.13	0.45	56	0.98	51	82	23	0	5	1	0
WY	57	28	66	26	42	7	0.17	-0.09	0.08	0.59	68	1.07	65	91	27	0	7	2	0
WY	58	32	66	28	45	9	0.01	-0.30	0.01	0.17	18	0.91	45	69	20	0	4	1	0
WY	61	26	74	22	43	7	0.07	-0.19	0.05	0.57	70	1.16	53	87	28	0	6	2	0

NOTE: These data are preliminary and subject to change. In the past, precipitation totals from a number of stations have been incomplete.

National Agricultural Summary

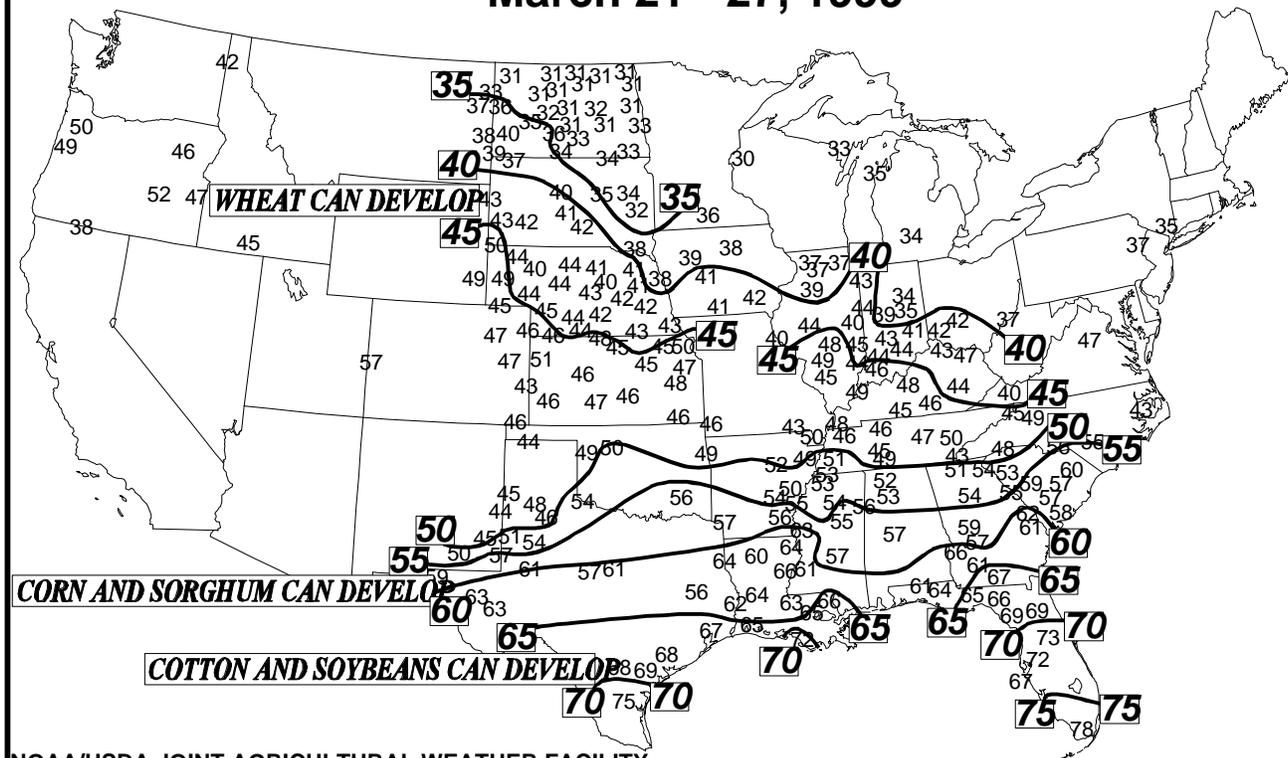
March 22 - 28, 1999

HIGHLIGHTS

Cool, cloudy weather prevailed in the Southeast, lower Mississippi Valley, and parts of adjacent areas in the southern Plains, Corn Belt, and Atlantic Coast States. Improved soil moisture aided emergence of recently planted crops in parts of Texas, but development was slow due to cool weather. Rain aided development of small grains in northern and central areas of the State, where many wheat fields were heading out. Farther south, where wheat was turning color, rains were less beneficial. Planting was hindered by wet soils in the Blacklands and Central regions, but continued without delay in the Coastal Bend. In the central Plains, fieldwork and planting were aided by dry weather. Winter wheat remained in good condition due to mild temperatures, adequate soil moisture,

and light insect and disease pressures. Fieldwork gained momentum in the Corn Belt, northern Great Plains, and Great Lakes States. Some small grains were seeded, but air and soil temperatures remained too cold for planting row crops. Coastal areas of the Pacific Northwest and California remained in a rainy pattern. In inland areas of California, where drier conditions prevailed, field preparations and planting were active. Gradual warming promoted growth of small grains and sugarbeets. A few cotton fields were planted, but warmer soil temperatures were needed. In southern areas of the State, small grains were irrigated to sustain growth. In the Imperial and San Joaquin Valleys, winter wheat was heading and cotton was developing squares.

**Average Soil Temperature (°F 4-Inch Bare)
March 21 - 27, 1999**



NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary data

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 Weather and Crop Bulletins published each Monday by NASS State Statistical Offices in cooperation with the National Weather Service. The crop weather reports are also available on the Internet through the NASS Home Page on the World Wide Web at <http://www.usda.gov/nass/> or from JAWF at <http://www.usda.gov/oc/waob/jawf>.

ALABAMA: March rainfall amounted to 60% to 107% of normal across the State. Most areas experienced a surge of precipitation between the 13th and 15th. Conditions have been mostly dry since then. Dry weather has allowed wheat to progress ahead of normal. Field preparation in most areas is ahead of schedule. Widespread peach bloom activity reported in the past week.

ARIZONA: Pasture conditions declined throughout the State last month. Relatively mild weather has moderated the effects on livestock. Pastures throughout the State were primarily in fair to poor condition. Livestock were reported in fair condition. Both stockwater, soil moisture were short. The dry winter is causing ranchers to begin to express concerns for the future. All areas report the need for rain. Insect damage was light. Overall, northern grazing conditions were fair to poor in March. High, low elevation pastures were in mainly fair to poor condition, while mid-elevation pastures were in poor to fair condition. Cattle were reported in poor to fair condition. Stock water supplies, soil moisture were both short. Lack of snow pack is causing concerns for the future. Feed is very short. Most ranchers are supplemental feeding. Some ranchers are expressing concern over the number of elk. Insect damage was light. Central areas pasture conditions were in good to fair condition. Conditions were good to fair at all elevation pastures. Livestock conditions were fair, both stock water and soil moisture were short. Ranchers expressed concern about how dry the winter was. No insect damage was reported. Southern pasture conditions were mainly in fair condition at all elevations. Livestock conditions were fair. Both stock water and soil moisture were short. Mild weather has taken some of the edge off of the dry weather, ranchers are concerned for the future. No insect damage was reported. Cotton planting is behind schedule. As of March 28, 6% of the cotton was planted. This compares with 10% 1998, 15% avg. Small grains rapidly progressed last week. As of March 28, 31% durum wheat, 29% of other wheat, 32% barley, 1% other small grains had headed. Alfalfa harvest activity was reported as 58% not being harvested, 9% light, 13% moderate, 20% active. Some fields are being green chopped. Sheepling off of alfalfa fields held steady last week but is almost finished for the year. Alfalfa condition was reported as 6% poor, 26% fair, 60% good, 8% excellent. central producers shipped artichokes, broccoli, cabbage, chinese cabbage, green onions, kale, leeks, mixed greens, napa, parsley, spinach, turnips last week. Lettuce shipments included head lettuce, red, green leaf, romaine. A light volume of beets, bok choy, cauliflower, cilantro, dandelion, dill, endive, escarole, flowering kale, kohlrabi, parsley, strawberries, swiss chard were also shipped by central producers. Eastern producers shipped greenhouse tomatoes. Western producers harvested anise, bok choy, broccoflower, broccoli, cabbage, cauliflower, celery, endive, escarole, flowering kale, kale, mixed greens, napa, radicchio, salad savoy, specialty leaf, spinach, swiss chard. Lettuce shipments included boston, head, leaf, romaine. Central, western area groves shipped grapefruit, lemons, valencia oranges, tangelos last week.

ARKANSAS: Temperatures were above normal for the first week of March, precipitation was below normal with a cold front, severe weather coming later in the week. Reversing the recent trend, the second week of the month brought below-normal temperatures, below-normal temperatures, with some areas in northwest areas receiving up to 16 in. of snow. Third week of March, last week of winter had near normal temperatures, below-normal rainfall with scattered below freezing temperatures in the northern portions of the State. The month ended with cooler, drier-than-normal conditions, with some areas of north areas dipping below freezing.

CALIFORNIA: March temperatures were slightly cooler than normal. Throughout the month, several low pressure systems pushed showers across the State. These systems were generally followed by cool, dry weather. Field activities made good progress in most areas. As spring approached, gradually warming temperatures were favorable for the growth of small grains, winter forages, new alfalfa and sugarbeets. Wheat head development continued throughout the month in the Imperial, San Joaquin

Valleys. Near month's end irrigation was necessary in many wheat, barley and oat fields as precipitation amounts were insufficient to sustain growth. As April approached aerial fertilization, broadleaf weed treatments were beginning to wind down in small grains, forage crops. Throughout the month safflower planting increased, corn planting slowly gained momentum in the Sacramento, San Joaquin Valleys. A few cotton fields had been planted in Kings County by the end of March, although most growers were waiting for warmer soil temperatures before planting. As April began, some Imperial Valley cotton fields were developing squares. General ground preparation for planting corn, cotton, dry beans, rice was in full swing in March. Established alfalfa was sprayed for weeds, weevils in the Imperial and Central Valleys. Cutting of small grains for greenchop began mid-month in central counties. Alfalfa, winter forages were cut for hay or greenchopped in the San Joaquin Valley. Fruit growers were irrigating vineyards, orchards. Some were applying fungicides as the light rains contributed to fungal disease opportunities. By month's end, most early season stone fruit varieties were leafing out, while mid-season varieties were still in full bloom. Late-season stone fruit trees were beginning to blossom. Prune tree bloom was advancing. As April approached, almond trees finished blooming, began to leaf out. Fig trees, kiwi fruit vines were also leafing out. Grape growers worked on controlling weeds. Citrus growers in the San Joaquin Valley continued salvage efforts throughout the month, picking activity was declining. Citrus was picked in southern areas, new crop valencia oranges were picked in the desert areas. Strawberry harvest continued; with good quality but relatively slow maturity. Cool weather throughout the month in central, coastal vegetable-producing regions slowed the growth of vegetable plants. By April, fresh market tomatoes were being planted in the Sacramento, northern San Joaquin Valleys. Asparagus harvest was in full swing by month's end in the San Joaquin Valley. As spring neared, the harvest of winter vegetables in the Imperial Valley slowed substantially. The end of March saw rangeland pastures in good condition in northern counties, fair to good in the central counties. Conditions along the central coast were improved by late-month rainfall. Central foothill ranges were awaiting more rain. As April approached, some supplemental feeding was still ongoing in the southern San Joaquin Valley. As State bid farewell to another winter, Imperial Valley sheep were being moved to spring.

COLORADO: March was generally warm, dry, and windy, with periodic light snow storms. The mountains received additional snowfall. The Eastern Plains and Front Range received 2 inches of snow during the middle of the month. Also, this same storm in the San Luis Valley produced almost 10 inches of snow. The heaviest snow and moisture at the end of the month was in the southeast corner of the State, which received 16 inches of snow accompanied by additional rain. The unusually warm weather during March have resulted in a rapid greening of the winter wheat crop. There is some concern about the possibility of subsequent freeze damage in April. If temperatures remain warm, the crop will need additional moisture soon to maintain favorable development, especially in east-central and northeastern areas. Planting of spring grains, onions, sugar beets have progressed favorably. Farmers were able to average 5.3 days of fieldwork each week for the month of March. Calving and lambing is progressing near the normal pace. Pasture, range feed condition is rated mostly good to fair throughout the State. summer pastures.

DELAWARE: All three counties have received adequate precipitation for the month. Precipitation appears to have spread out from the beginning of month to end of the month. On average, the State has received a total of 5 inches of precipitation, with the departure from normal at 1.70 in. above. Weather for the early part of March was cold, with much-needed precipitation. Farmers making their first applications of fertilizer or manure to small grains and corn ground for the first part of March. Also, cabbage, potato and pea planting began on the eastern shore. As a whole, small grains appear to be in good condition, no signs of disease reported yet, however, problems with geese continue to be a concern. Hay supplies are okay due to the mild winter. Calving was about over for most beef

producers.

FLORIDA: Topsoil moisture throughout Panhandle adequate to short. Peninsula moisture very short to short, with scattered areas adequate moisture. Dry weather persisted. West Palm Beach received, 0.32 in. Most stations received from none to only traces. Temperatures 1 to 5°F below normal. Daytime highs 70's, 80's degrees Fahrenheit; nighttime lows 40's, 50's, 60's degrees Fahrenheit. Jacksonville, Tallahassee both recorded at least 1 low in 30's degrees Fahrenheit. Growers planting tobacco. Corn planting active. Spring planted crop land preparations active. Sugarcane harvest season winding down. Irrigation very active to provide adequate moisture supplies to vegetables. Watermelon harvesting getting underway around Immokalee. Major vegetables shipped: Snap beans, cabbage, cucumbers, sweet corn, eggplant, endive, escarole, lettuce, parsley, peppers, pickles, radishes, squash, strawberries, tomatoes. Very little rain, irrigation continues, bloom in all types of fruit. Valencia harvest very active. Grapefruit movement both fresh, processing. Most temples going to processor while honey tangerines being picked for fresh markets. Caretakers cutting cover crops, spraying, cutting out dead, unthrifty trees. Pasture feed; poor 75%, fair 25%. Condition of cattle; poor 20%, fair 65%, good 15%. Pastures Panhandle greened after some rain late in the week. However, pasture in rest of State poor to fair condition due to drought. Cooler weather held back grass growth some but low soil moisture stopped most growth. Cattle, calves mostly in fair condition.

GEORGIA: Temperatures have been above normal, rainfall below normal for March. This is beginning to stress dry land small grains, pastures. Generally, crops were in fair or better condition. Most cereal grains have been topdressed. Corn is being planted, about 25% of the crop in the southern part of the State has emerged. Growers continued transplanting tobacco. Apple, peach trees were blooming. Fruit crops were in fair to good condition. Onion crop is in good condition. Producers continued land preparation for other spring planted crops.

IDAHO: Temperatures during March were above normal in eastern, southwestern areas. Melting snow pack has saturated soils, slowing spring progress. Across the southern half of the State planting of spring wheat, barley, sugar beets, dry peas, oats, onions has begun. Despite muddy conditions calving, lambing are nearly three-quarters complete. In eastern areas, vole damage was to alfalfa, winter wheat. Fruit tree buds are swelling. Activities: Feeding livestock, calving, lambing, preparing taxes, repairing machinery.

ILLINOIS: Topsoil 1% very short, 16% short, 70% adequate, 13% surplus. Wheat 1% very poor, 6% poor, 29% fair, 56% good, 8% excellent. Warm weather has farmers anxious to start fieldwork, including planting. Where soil conditions allowed, applying anhydrous ammonia, spring tillage were the main field activities. Planting oats kept some farmers busy. In the northern districts, warm weather has been beneficial for the wheat crop, farmers are hoping for more rain to promote growth. In the southern districts, the wheat crop is suffering from too much moisture. Other activities included preparing equipment, hauling manure, grain, spreading fertilizer, early planting of corn.

INDIANA: March temperatures will rank in the top 12 coldest months in the last 100 years, with about 20 days of below-normal temperatures. It will also be one of the driest months on record. A major snow storm on March 9th delayed any major field activities for several days. Field activities gained momentum this past week, aided by warmer weather and drier soil conditions. Tillage is underway around the State and fertilizer application has occurred on many fields. Farmers continue to purchase seed and supplies. Cash flow is a major problem for many farmers. New equipment sales are down. Winter wheat and pastures continue to green and grow. Wheat is rated in mostly good condition and survived the winter with little damage. Anhydrous and urea application made good progress last week. Livestock condition is generally good. Calving and lambing underway. Feedlots dried out last week. Hay supplies are adequate to surplus. Activities: preparing equipment, moving grain to market, hauling manure, tillage of soils, cleaning fence rows, ditching, purchasing crop inputs, feeding, caring for livestock.

IOWA: Summary for March 1999. Spring fieldwork has begun across the state, including spring tillage, small grain seeding, chemical applications. Temperatures for northern portions of State were above normal throughout the month, while in the south, temps remained at or below normal. The 1961-90 average temperature for March is 35.7 degrees Fahrenheit, while normal precipitation is 2.19 inches. Precipitation was below normal across the entire State, pastures are in need of moisture. Snowfall for March ranged from 1 to 13 inches, with much of it falling during a winter storm the second week of the month.

KANSAS: Days suitable for fieldwork 4.0. Topsoil 11% short, 74% adequate, 15% surplus. Subsoil moisture 7% short, 81% adequate, 12% surplus. Winter wheat is in mostly good to excellent condition. Late-season snowstorms, cold weather that swept through the State earlier in the month appear to have done little damage to the crop. Wheat 23% excellent, 52% good, 20% fair, 4% poor, 1% very poor. Wheat jointing 15%, 8% 1998, 14% avg. Wheat freeze damage 1% moderate, 7% light, 92% no damage. Wheat wind damage 1% moderate, 7% light, 92% no damage. Spring oats seeding 87%, 50% 1998, 80% avg. Insect infestations are a concern in some areas of the State, with several reports of army cutworms. Disease infestation remains light to moderate, with a few reports of wheat streak mosaic. Major field activities included top-dressing wheat, spraying for army cutworms, alfalfa weevils, tilling fields for spring planting, applying fertilizer, herbicides. Pasture feed 1% very poor, 5% poor, 26% fair, 60% good, 8% excellent. Major livestock activities included calving, lambing, feeding livestock. Cattle continue to be moved from wheat pasture to feedlots, with excellent weight gains reported. Pasture burning has begun in some areas of the State.

KENTUCKY: March began with seasonal temperatures, below-normal precipitation, which allowed farmers to begin spreading lime, fertilizing small grains, mending fences. Cold weather, wet weather returned at mid-month bringing a wintery mix. The northern third of the State received 4 to 6 in. of snow, while the extreme southeastern section had 2 to 4 in., other areas received rain, freezing rain, sleet. Wet cold weather halted fieldwork as farmers tended livestock, prepared machinery for spring planting. Mild, dry weather finished out the month favoring some drying of soils that had been near saturation for the past 2 months. Most areas had limited fertilizing, field preparation for spring planting due to the wet conditions. Pasture, winter wheat growth were stimulated by the favorable conditions, producers worried about cold weather due to the advanced stage of growth of small grains. Cattle remained in fair to good condition. Burley tobacco market held clean-up sales in early March. Gross Kentucky sales totaled 475.3 million pounds, with an average price of \$190.22 per cwt.

LOUISIANA: Days suitable for fieldwork 15. During the beginning of the month, conditions were very good for fieldwork. Fieldwork slowed during the middle of the month because of wet conditions. The beginning of the month started out very dry, with only 0.77 in. of rain across the State. During the middle of the month, the amount increased to 3.09 in. of rain. Month ended with the year-to-date being right at the 20-year norm of 14.11 in. Corn producers finished pre-plant preparations, began planting. Rice producers continue to land level, prepare fields. Sugarcane farmers have been busy with off-barring, weed control, fertilizing. Vegetable producers planted spring vegetables. Strawberry growers harvested, as well as, spraying plants for mites, diseases. Citrus producers fertilized, sprayed fungicides. Cattlemen began spring vaccination, health care practices for new calves. Other activities included repairing equipment, attending producer meeting.

MARYLAND: On average, counties received about 4.7 in. of precipitation. For most of the month, counties received above-normal rainfall for the State. Average departure from normal was at 1.5 in. above. Early part of March saw the initial applications of fertilizer and/or manure to small grains. Also manure spreading was taking place on corn ground, farmers were preparing some fields for hay planting. Mid-March began with pea planting on the eastern shore along with continued field preparations of fertilizer or herbicide applications on small grains. Late March was marked by more of the same. Southern area tobacco farmers are attending the auctions.

MICHIGAN: Mild, dry weather continued from February. Temperatures for the month ranged from near normal in the central Lower Peninsula to 3 degrees Fahrenheit below normal in the south, and up to 6 degrees above normal in the Upper Peninsula. The mild temperatures benefited the fall-planted crops. The second week brought significant snowfall to the southern third of the Lower Peninsula. Otherwise, low lake and stream levels were evidence of low subsoil moisture, resulting from the drier-than-normal season and the moisture deficit from last year. Spring fieldwork has started early as many fields were dry enough for tillage. The mild weather was beneficial to livestock. With the exception of the Upper Peninsula, forage supplies have been adequate to good, with a softening of prices. Lambing season was almost finished in the Upper Peninsula. Calving was in progress throughout the State. Activities included topdressing fertilizer, hauling manure, boiling maple syrup, packing apples, pruning fruit trees, repairing field tile, soil sampling, preparing equipment, supplies for spring planting.

MINNESOTA: The weather during the first week of March was a continuation of the weather experienced during February, with above-normal temperatures and little precipitation. A winter storm occurred during the second week, with much of the State receiving significant snowfall and below-normal temperatures. Above-normal temperatures returned for the rest of the month, helping most of the snow to melt away. Many farmers have begun to prepare tillage and planting equipment in anticipation of an early start due to the mild winter.

MISSISSIPPI: Soil moisture 2% short, 54% adequate, 44% surplus. Wheat 1% very poor, 6% poor, 42% fair, 47% good, 5% excellent. Cattle 2% very poor, 1% poor, 34% fair, 46% good, 7% excellent. Pasture 1% very poor, 18% poor, 28% fair, 40% good, 13% excellent. The first half of the month experienced above-normal precipitation. The last half of the month experienced below-average precipitation. Statewide precipitation was 63 in. below during the last week. Farmers began planting corn during the middle of the month.

MISSOURI: Several southern counties in State reported a foot of snowfall or better during mid-March, with 15 in. of snowfall reported in Webster County, followed by 14 in. Greene. Precipitation for the week ending March 7th avg. 0.57 in., followed by 1.53 in. for week ending 14th, 0.15 in. for week ending the 21st, 0.37 in. for week ending 28th. For the majority of the month, above-normal temperatures prevailed. Spring-like temperatures were prominent, with temperatures rising in the 60's to low 70's degrees Fahrenheit during the first, last weeks of the month across many parts of the State. Farmers were busy with livestock chores, preparation for spring fieldwork. Tillage operations have begun in the Bootheel, farmers in many areas are spreading fertilizer. Hay supplies remain plentiful in most areas. Cattle continued to benefit from winter grazing, mild temperatures. Winter wheat continues in mostly fair to good condition.

MONTANA: The month of March continued to be significantly warmer and drier than normal. Average temperatures ranged from 6 to 13 degrees Fahrenheit above normal, with precipitation slightly below normal for much of the State. Even though there is not much snow cover to protect the winter wheat crop, the condition remains good and is now rated 4% poor, 37% fair, 55% good, and 4% excellent. Wind damage to winter wheat and is rated 12% none, 45% light, 42% moderate, and 1% heavy. Freeze and drought damage to the winter wheat crop is minimal and rated 49% none, 45% light, 5% moderate, and 1% heavy. The mild temperatures have resulted in livestock being in good condition as feed supplies remain adequate. Calving and lambing is making good progress and was reported at 55% complete for calving and 29% complete for lambing. Few problems have occurred with calving and lambing and death losses are down. Even though grazing is predominantly open, producers are continuing to feed livestock as drought last summer and fall reduced winter pastures. At the end of the month, 91% of the cattle, calves, 98% of the sheep and lambs were receiving supplemental feed. Livestock grazing improved significantly as 93% of the grazing was open at the end of the month. At the beginning of March, producers were able to start fieldwork and prepare their fields for planting. By the end of the month, the weather continued to cooperate and some producers were able to plant barley and spring wheat. However, moisture is needed soon to reduce future pesticide problems and help germinate already

planted small grains. Producers are also working to complete their taxes.

NEBRASKA: March weather conditions were mild, with limited precipitation. Winter wheat in good condition. Good season for grass and alfalfa. Calf losses have been minimal. In early-March, temperatures averaged 3-7 degrees Fahrenheit above normals. Precipitation averaged from traces to 0.10 of an inch. In mid-March, temperatures in the west averaged near normal while the eastern half averaged 6 to 10 degrees Fahrenheit below normals. Precipitation ranged from just over a 0.1 of an inch to near 1.5 inches in the east-central part of the State. There was no planting or fertilizing during this time. A wild fire, fanned by high winds, struck parts of northern Nebraska damaging an estimate of 112,000 acres of native grass and killing 200-500 animals. Long-term effects of the fire are still being determined. Late-March weather conditions supported crop development and was easy on livestock. Temperatures in the west averaged 4-8 degrees Fahrenheit above normal. While the east averaged 3 degrees below seasonal normals. Precipitation occurred across State, ranging from traces to 1.30 inches at Brewster. Dry conditions in southern and northwestern parts of the State allowed early fertilizing and tillage.

NEVADA: Temperatures were above normal throughout most of the State, although the northern portion of the state experienced below normal temperatures during the second week of the month. Small storm systems brought only slight amounts of precipitation, with the majority of precipitation falling in the northeastern portion of the State. The above normal temperatures have encouraged new forage growth, which has left the range in good condition. The snow pack is above normal, for adequate irrigation water. Irrigation has begun in the south and central regions of the state. The weather was cooperative for main farm and ranch activities. Ditch burning, field preparation for spring planting, planting of potatoes and onions were well underway. Calving, lambing continued, as well as some shearing.

NEW ENGLAND: Maple sugaring operations active throughout the region. Cool nights and warm days have provided excellent sugaring conditions for this season's maple crop. Farmers stayed busy tending livestock, repairing machinery, and bringing tractors, trucks, and implements out of storage in preparation of the spring planting season. Manure spreading by dairy farmers continues.

NEW JERSEY: Temperatures varied greatly throughout the month with precipitation averaging above normal. Snow fell across the state on the 13th and 14th. North Jersey received the greatest snowfall with localities reporting over 3 to 5 inches. Heavy rains fell on the 21st causing many fields to be flooded and therefore unworkable. Extremes were 74 degrees at Pemberton and Pomona on the 18th and 9 degrees at Charlotteburg on the 8th. The heaviest 24-hour rainfall total was 3.11 inches at Charlotteburg on the 21st to the 22nd. Agricultural activities included: Maintaining machinery and equipment, caring for livestock, attending agricultural seminars and pruning fruit trees. Nurseries were busy digging and shipping plant material. Greenhouse workers are preparing vegetable plants for transplant. In South Jersey, farmers are starting to plow fields where possible.

NEW MEXICO: The first part of March was characterized by the same warm, dry weather that was experienced throughout the winter. Relief came in the middle of the month by two slow moving winter storms that dumped rain and snow across the state. During the month farmers were turning under crop stubble and preparing the land for spring planting. In the south producers finished planting lettuce and onions, with chile planting about one-half done. Ranchers continued to haul water and feed to livestock as pastures began to green up. Calving and lambing proceeded, while most wool producers finished shearing their sheep. Fruit producers continued to closely watch weather patterns, but so far no major freeze damage has been reported.

NEW YORK: Weather conditions very good for sap flows as maple syrup season got underway. Producers gathered and boiled sap. Growers preparing machinery for upcoming season. Livestock producers tending animals, spreading manure. Fruit growers cleaning orchards, pruning where needed.

NORTH CAROLINA: variety of weather in March including temperatures from below freezing for lows to 80's for highs, depending on the area of the State. Weekly fronts have moved through the State bringing with them not only a change in temperatures but also precipitation. Snowfall in the Mountains and rainfall for the rest of the State with some severe thunderstorms toward the latter part of March. The mild weather the first and third weeks of the month allowed farmers to continue to make good progress in Irish potato and cabbage plantings and both are currently ahead of the five year average. Conditions for small grains are mostly fair to good as breaks in the weather allowed fertilizer applications to proceed. Soil moisture is presently rated 0% very short, 8% short, 82% adequate, and 10% surplus. Indoor activities including tobacco seedings, tax preparation and equipment repair dominated March. On average, around 4.5 days per week have been suitable for fieldwork. Additional activities included tending livestock and pasture maintenance. Small grain freeze damage was reported in some areas during the last cold front that moved through around the 20th.

NORTH DAKOTA: Above normal temperatures along with strong winds melted most of the snow cover across the state. Several reports continued to indicate high levels of insect infestation in stored grain. Grain marketing was slow due mostly to depressed grain prices and soft roads. On average Statewide, there were 0.4 inches of snow cover. Livestock feed and hay supplies remain adequate this winter as mild conditions have kept usage at a minimum. Ninety-four percent of the cattle and 99 percent of sheep received supplemental feed. Calving was 43 percent complete while lambing was 51 and shearing 57 percent complete. Cattle condition: 1% poor, 20% fair, 71% good, 8% excellent; calf condition: 1% poor, 18% fair, 71% good, 10% excellent; sheep condition: 1% poor, 15% fair, 70% good, 14% excellent; lamb condition: 1% poor, 14% fair, 67% good, 18% excellent.

OHIO: Weather in early March was characterized by cold, wet conditions kept field activities to a minimum. No winter injury has been reported although temperatures dipped and snow fell throughout much of the state during the second week of March. Livestock conditions are mostly good as cold weather has not been a factor. However, some cattle are stressed from standing in mud and lack of pasture. Drier weather during the last two weeks of the month has been favorable for fertilizer application, top dressing of wheat, no-till grass seeding, manure spreading, and plowing. Vegetable producers in the north are early in planting sweet corn and peas. Carrots, oats, and some field corn has been planted on well drained, warmer soils. Fruit growers are preparing for summer by trimming and pruning trees. No winter injury has been reported on fruit trees. Tobacco farmers in the south have seeded about 20-30 percent of their beds with some beds having plants up. Greenhouse operators and nurserymen are busy with bedding annuals and other plants. The winter wheat crop is in good condition and greening up along with pastures and grasses. Producers are expected to get an early start on field preparation and planting as warm, sunny conditions prevail during the end of the month.

OKLAHOMA: Days suitable for fieldwork 3.2. Subsoil moisture 1% very short, 10% short, 82% adequate, 7% surplus. Topsoil moisture 4% short, 86% adequate, 10% surplus. Precipitation during March, warming temperatures improved grass, wheat pasture, livestock conditions. Corn, sorghum progress behind normal; soybean, peanuts, cotton ahead. Wheat 12% fair, 78% good, 10% excellent; 75% jointing, 58% 1998, 48% avg; Corn 41% seedbed prepared, 25% 1998, 60% avg; 2% planted, 0% 1998, 8% avg; Sorghum 17% seedbed prepared, 17% 1998, 21% avg; Soybeans 30% seedbed prepared, 21% 1998, 21% avg; Oats 27% jointing, 25% 1998, 22% avg; Peanuts 32% seedbed prepared, 12% 1998, 26% avg; Cotton 50% seedbed prepared, 19% 1998, 34% avg. Pastures 2% very poor, 15% poor, 38% fair, 43% good, 2% excellent. Livestock 1% very poor, 5% poor, 22% fair, 69% good, 3% excellent. Cattle marketings average, feeder steer prices down \$2.50 per cwt. from last month.

OREGON: Rain continued throughout the month. Above average rain fall statewide. Need more sun and warmer weather. In the Willamette Valley farmers fertilizing perennials & fall planted seed crops. Crops retarded on the west side due to cool, wet weather. In the Mid-Columbia area early tillage underway. Potatoes being planted in the Northeast. Grain, sugarbeets, and

onions being planted in Malheur County. Nurseries & greenhouses bareroot digging nearing end & balled & burlapped digging & shipping heavy. Caneberry crops budding in the Willamette Valley. In the Rogue River Valley peaches & cherries starting to bloom, apples & pears starting to bud. Spring spraying underway. Cherry buds swelling & growers completing pruning in the Mid-Columbia basin. Calving & lambing winding down. Some producers started branding calves.

PENNSYLVANIA: For March, total precipitation was above normal in 55 of the 67 counties. The other 12 counties, which are in the western part of the State, had below normal precipitation. By mid-March the Governor lifted the drought emergency for 14 counties under drought emergency and the 50 counties under drought warning. Precipitation in the last few months provided enough moisture to alter the state drought conditions. But, stream levels still remain below normal, so a drought watch was put into effect for all counties. By the end of March, late winter snows and heavy rain caused the soil to be too wet to plow or plant in several areas. So for most of the State, field work has just begun. Major activities for March were hauling and spreading manure, machinery maintenance, fixing fences, caring for livestock, plowing, preparing income taxes, pruning fruit trees, and planning for the 1999 crop season.

SOUTH CAROLINA: Winter, Spring battled each other during the first part of this month. Statewide temperatures were below normal during mid-month. Temperatures as low as the 30's and 40's were reported. Currently it appears as though peaches and other fruit crops are in fair condition. Field crop planting is in progress while rainfall deficits continue. Wheat field conditions are fair providing favorable conditions for nitrogen applications. Statewide temperatures as high as the 80's were observed during the last part of the month.

SOUTH DAKOTA: Mild weather patterns of the previous month. A couple early month snow storms around the state reminded producers that winter was still here. By month's end, moderate temperatures and little precipitation dominated the region. Many producers took advantage of the mild temperatures to start fieldwork, seeding, discing, spreading fertilizer and hauling grain. Producers report the average date fieldwork will start is March 29 if the spring weather continues. Winter wheat condition 15% excellent, 69% good, 15% fair, 1% poor. Winter rye 7% excellent, 53% good, 40% fair. Snow cover protection for alfalfa 1% excellent, 5% adequate, 94% poor. Snow cover for winter wheat 2% adequate, 98% poor. Winter rye snow cover 3% adequate, 97% poor. There have been isolated reports of some winter wheat and alfalfa loss due to the lack of snow cover. Cattle and sheep remain in good to excellent condition. Calving and lambing season is well underway, with 44 percent lambing completed and 25 percent calving completed. During March, calf death losses 31 percent below normal, 68% normal, and 1 percent above normal. Cattle death losses 34% below normal, 65% normal, and 1 percent above normal. Sheep and lamb death losses 25% below normal, 74% normal, 1% above normal. Hay and roughage supplies 4% short, 70% adequate, 26% surplus. Stock water supplies 2% short, 80% adequate, 18% surplus.

TENNESSEE: The State experienced below normal temperatures during the first part of March with slightly above normal rainfall. During the week ending March 7, a cold front moved through which brought strong thunderstorms to the western part of the State. This same front brought some middle and eastern localities light snow accumulation. Mid-March saw below normal temperatures across the State with rainfall averaging above normal statewide except for the extreme northeastern part of the State which was slightly below normal. For the week ending March 28, an upper level disturbance brought accumulating snow to parts of east Tennessee, while temperatures averaged 5 to 10 degrees below normal across the whole State. In general, temperatures were below normal in March while rainfall amounts were above normal during the first half of the month and below normal during the last half. Producers were busy top dressing and spraying herbicides on wheat fields in between showers. Some producers fell behind in their field activities due to wet weather, but for the most part; they are making good progress. The wheat crop is in mostly good condition with no major insect or disease problems reported. Some counties report that stands are not as tall as normal due to below normal temperatures. Cotton

and corn producers are busy preparing fields for planting. A small amount of no-till corn acreage was planted during the final weekend of March.

TEXAS: The month began under warmer than normal temperatures and dry conditions across much of the state. Planting operations moved ahead without delay during the first week of the month, although soil moisture was short in all areas. The second week saw a strong front push through the state bringing cooler temperatures and much needed rain to most of the state, stalling field activity, however there was much complaining given the dry conditions. Small grain conditions improved with the moisture and previous week's warm temperatures. The third week weather opened up again and field activities again increased. Planting operations moved into North Central areas and land preparations were winding down in the Plains. The month ended under cool, cloudy conditions with scattered rain. Livestock conditions reflected the amount of grazing available. Stockers were being shipped off of wheat fields for grain by the end of the month. Weight gains were good in most areas.

UTAH: Major farm/ranch activities for the month of March included pruning fruit trees, spraying fruits, land preparation, planting small grains, lambing, and calving. Livestock has remained in good condition. Recent range growth has provided good feed.

VIRGINIA: March brought several strong weather patterns to the Commonwealth. Significant precipitation occurred in the form of snow in many localities, particularly in the Southwest, West, and Northern portions of the Commonwealth. The bands of snow were interrupted by periods of unseasonably warm weather. Temperatures in several localities reached into the upper seventies on several occasions. The above normal temperatures caused the snow to melt rather quickly, helping to replenish soil moisture levels. The snow itself, however, caused difficulties for many agricultural producers. Activities of livestock producers in particular were hampered during the peak time for calving and lambing. Several producers reported a high number of calves lost during the first part of the month. Feeding of livestock was also hampered by producers inability to reach some herds in isolated areas. Producers spent March preparing land for Spring crops. Growers began disking land for cotton, as well as, moldboard plowing peanut acres. Seedbed preparation for corn acres also got underway in March. A few producers already have corn in the ground. Small grain producers in some areas reported that their crop is approximately two weeks ahead of normal. Some early planted acres were already showing lush vegetation when nitrogen was applied, therefore, causing slight damage. Isolated instances of freeze damage to wheat were also reported. Tobacco greenhouse seeding is nearly complete with producers reporting that plants are progressing rapidly. Tobacco plantbeds are currently being prepared for transplanting. Fruit tree producers reported early bud swelling in March leaving the potential for frost damage. Other farm activities for the month included overseeding of pasture and hay acres, maple syrup production, application of lime, fertilizer, nitrogen, planting potatoes, peas, pruning fruit trees.

WASHINGTON: Precipitation was still above normal across the state. Most of the fields in western Washington were still saturated which delayed agricultural activities. Olympia has received over 34 inches of precipitation since the beginning of the year. Some winter kill in the winter wheat was been reported through eastern Washington. Producers started spring field work. Onion and Radish planting was in progress and alfalfa weed control was underway. Tree fruit producers were concerned about the early spring causing the stress to come out of dormancy and the cold night temperatures. Also, due to the mild temperatures throughout the winter, tree fruit growers are concerned about pests and disease, early spraying was started.

WEST VIRGINIA: The colder than normal temperatures of early March made field activities and livestock feeding difficult. As the month progressed and mild temperatures returned, less feeding was necessary and field activities increased. Wet soil conditions delayed field preparation for Spring planting in some areas of the State. Topsoil moisture 11% short, 79% adequate, 10% surplus. Feed grain supplies 3% short, 97% adequate. Hay and roughage supplies 10% short, 86% adequate, 4% surplus. Tobacco beds seeded 55%. Wheat condition 7% poor, 59% fair, 34% good. Cattle 3% poor, 20% fair, 73% good, 4% excellent; 70% calved. Sheep 16% fair, 71% good, 13% excellent; 65% lambled.

WISCONSIN: For the first two weeks of March, temperatures averaged around normal. As of mid-March, the state average snow depth was 3.6 inches, frost depth averaged 4.0 inches. For the last two weeks of March, temperatures averaged slightly above normal. As of late March, the state average snow depth was 0.2 inch, State average frost depth was 1.1 inches. At the end of the month, the southern third of the state was essentially frost-free, southern two-thirds are essentially snow-free. Concerning precipitation, March was relatively dry compared to normal. This does not yet appear to be a problem, as melting snow and frost are doing a good job of keeping the soil moist. Aside from normal preparations for the 1999 growing season, the main agricultural activity for March has been maple tree tapping, syrup production.

WYOMING: March temperatures above normal nearly all areas. Precipitation below normal. Topsoil moisture 53% short, 13% 1998, 16% avg; 43% adequate, 72% 1998, 70% avg; 4% surplus, 15% 1998, 14% avg. Subsoil moisture 35% short, 15% 1998, 16% avg; 57% adequate, 78% 1998, 73% avg; 8% surplus, 7% 1998, 11% avg. Winter wheat condition 17% fair, 76% good, 7% excellent. Barley planting 57% complete, 17% 1998, 25% avg. Oats plantings 12% complete, 4% 1998, 4% avg. Spring wheat planting 19% complete, 4% 1998, 6% avg. Calf losses 33% light, 67% normal. Spring calving 54% complete, 53% 1998, 53% avg. Lamb losses 19% light, 81% normal. Farm flock ewes lambled 60% complete, 69% 1998, 66% avg. Farm flock sheep shorn 64% complete, 72% 1998, 70% avg. Range flock lambled 7% complete with range flock sheep shorn 25% complete. Range, pasture condition 14% poor, 47% fair, and 39% good. Stock water supplies 14% short, 85% adequate, 1% surplus.

International Weather and Crop Summary

March 21 - 27, 1999

HIGHLIGHTS

FSU-WESTERN: A warming trend melted snow cover in northern Russia and increased soil temperatures for spring grain planting in Ukraine and southern Russia.

EUROPE: Periodic showers caused some interruptions in spring grain planting in the west but continued to ease drought in Portugal and Spain.

NORTHWESTERN AFRICA: Drier weather returned to winter grain areas in Morocco, Algeria, and Tunisia.

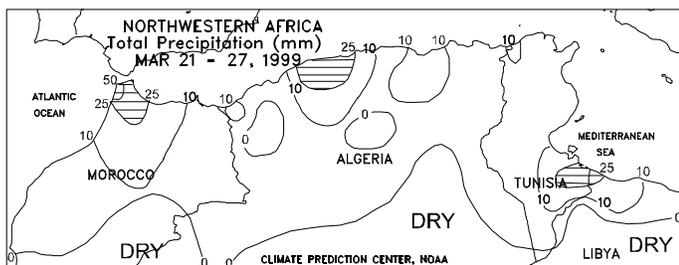
AUSTRALIA: Continuing rain increased moisture levels in some parts of the western and southeastern winter grain belts.

SOUTH AFRICA: Scattered showers and more seasonable temperatures helped to stabilize corn and other summer crops.

SOUTHEAST ASIA: Unseasonable showers favored second-crop rice in Thailand, while drier weather aided main-season rice harvesting in Java, Indonesia.

EASTERN ASIA: Cool weather burned back vegetative winter wheat in the North China Plain, while widespread showers aided early rice transplanting across southern China.

SOUTH AMERICA: Continued dryness stressed filling soybeans in Rio Grande do Sul, Brazil. Showers, sometimes heavy, slowed summer crop harvesting in central Argentina.

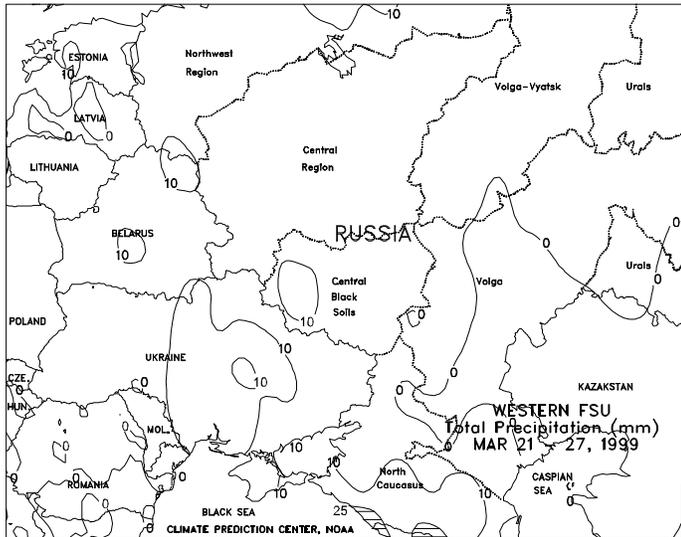


EUROPE

Winter grains were in the early vegetative stage in northern Europe, and in or nearing reproduction in Mediterranean areas. Unseasonably warm weather prevailed over most of the continent, spurring winter grain growth and raising soil temperatures for spring and summer crop planting. Periodic showers (9-25 mm) in England, France, and Germany maintained favorable topsoil moisture levels for winter grains but caused some interruptions in spring planting. Beneficial showers (10-43 mm) in Portugal and southern Spain brought some drought relief, improving conditions for winter grains and newly emerging summer crops. Moderate to heavy rain (27-93 mm) fell in Italy's Po Valley, ending a prolonged period of dry weather that had persisted since last October. Crop areas in central Italy also received generous amounts of moisture, favoring winter grains approaching the heading stage. In eastern Europe, unseasonably warm, dry weather prevailed from Hungary southward to Macedonia, promoting winter grain growth and helping fieldwork. Weekly temperatures averaged 2 to 5 degrees C above normal in northern and eastern Europe and near normal in Mediterranean crop areas.

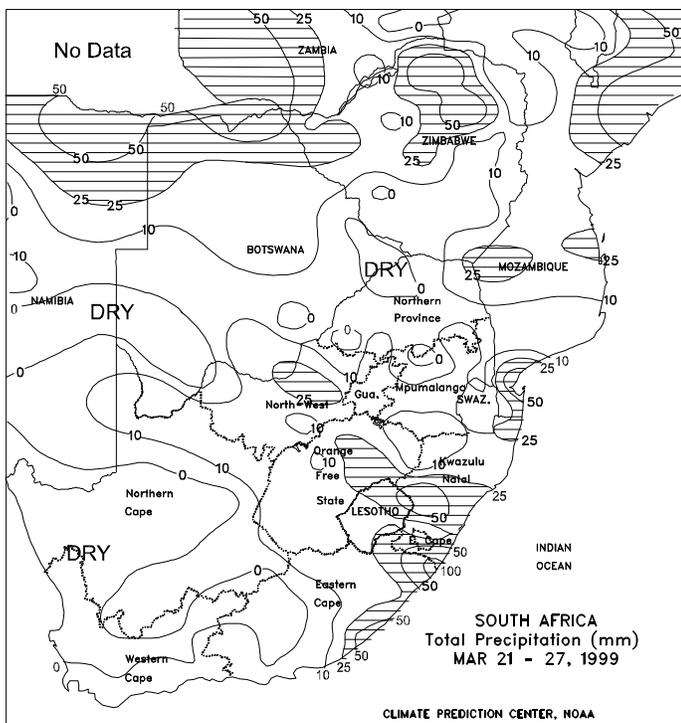
NORTHWESTERN AFRICA

Winter grains were likely entering the reproductive stage of development in Morocco, Algeria, and Tunisia. Earlier planted crops were likely flowering. Drier weather returned to the region, with precipitation amounts ranging from 5 to 17 mm (locally over 25 mm). Although this past week's rains were insufficient to meet the peak moisture demands of winter grains in the reproductive phase, adequate soil moisture reserves prevented the development of crop stress. Weekly temperatures averaged near to slightly above normal in Morocco, Algeria, and Tunisia.



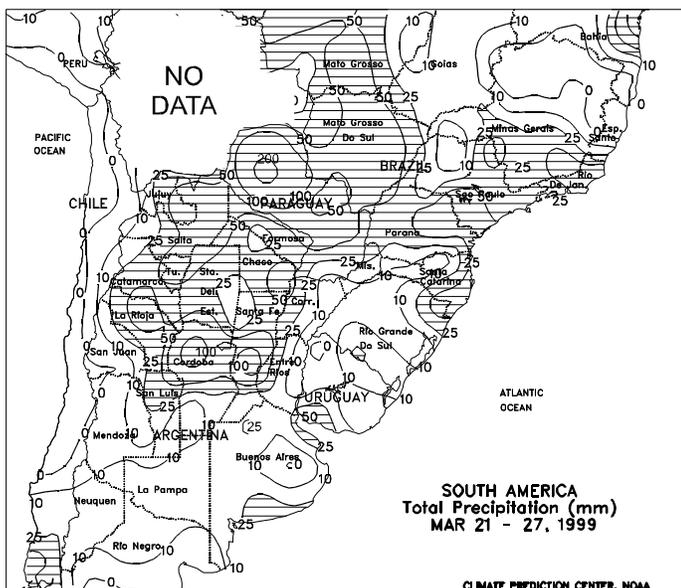
FSU-WESTERN

Widespread, light precipitation (4-14 mm) was observed during the first half of the week in Ukraine, Russia, Belarus, and the Baltics. The precipitation fell as a mixture of rain and snow in southern areas, and snow in the north. A warming trend overspread the region during the latter half of the week, causing some melting of the deep snow cover in northern Russia, and raising soil temperatures for spring grain planting in Ukraine and southern Russia. Winter grains continued to slip out of dormancy in the southern half of Ukraine and the North Caucasus region in Russia. Typically, most winter grains break dormancy in Ukraine and southern Russia in early April. Weekly temperatures averaged 2 to 4 degrees C above normal in Ukraine, most of Russia, Belarus, and the Baltics. The exception was in extreme northeastern winter grain areas of Russia (Volga Vyatsk and upper Volga Valley), where weekly temperatures averaged 2 to 4 degrees C below normal.



SOUTH AFRICA

Scattered showers continued across the eastern half of the country, providing localized drought relief. The heaviest rain (25 mm or greater) fell from northern and central sections of the corn belt (North West and Free State) to the main coastal sugarcane areas (KwaZulu-Natal). While stabilizing immature corn and other summer crops, the moisture came too late in the growth cycle to significantly improve overall yield prospects. In fact, corn harvesting is typically underway by mid-April. Above-average temperatures (highs from the upper 20's to lower 30's degrees C) aided maturation and drydown without placing stress on immature, late-planted grains and oilseeds. Elsewhere, moderate to heavy rain (20-50 mm or more) covered eastern crop areas in Eastern Cape. Dry weather continued over Western Cape, with highs in the middle 30's degrees C, maintaining elevated irrigation requirements in orchards and vineyards.



SOUTH AMERICA

In southern Brazil, continued below-normal rainfall stressed filling soybeans in Rio Grande do Sul. Rainfall averaged 42 percent of normal across the soybean-producing area of that state during the past 4 weeks. Elsewhere in southern Brazil, seasonable showers (25-75 mm) caused some fieldwork delays. In central Argentina, widespread showers (10-40 mm) continued to favor second-crop soybeans, but slowed corn and sunflower harvesting. Isolated heavy showers (100-200 mm) slowed harvesting and possibly caused some crop damage to maturing summer crops. Moderate showers (15-60 mm) slowed cotton harvesting in northern Argentina. According to reports as of March 19, corn was 12 percent harvested, the same as last year, and sunflower was 50 percent harvested, compared with 58 percent last year. Temperatures averaged 2 to 4 degrees C above normal, aiding maturing summer crops across Argentina and Brazil.

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(Continued from front cover)

and West Coasts until week's end, when moisture overspread the **Central States**. Much-needed rain fell in **southern Texas**, encouraging germination of recently planted crops and promoting additional planting. Rain fell across the **western Corn Belt** for the first time in 3 weeks. Soils remained unfavorably dry across **Peninsular Florida**, where numerous wildfires flared, and in much of the **Southwest**.

Early in the week, heavy rain and snow fell across the **Northeast**, accompanied by high winds. On March 21-22, **Albany, NY** received 2.16 inches of precipitation, their third-greatest 24-hour March total. Although snowfall totaled only 1.5 inches in **Albany**, amounts farther north and west in **New York** locally topped 2 feet, including 27 inches at **Old Forge**. Near the **Atlantic Coast**, Monday's wind gusts were clocked to 77 mph in **Milton (Blue Hill Observatory), MA** and 72 mph in **Cape Elizabeth, ME**. Meanwhile, warm weather briefly arrived on the **central and southern Plains** before the return of below-normal temperatures. On Sunday, **Pueblo, CO** notched a daily-record high of 81°F. A day later, **Midland, TX** recorded 88°F.

More impressive warmth overspread the **northern Plains and the Northwest** during the mid- to late-week period, setting more than a dozen daily-record highs. **Pocatello, ID** registered 72°F on Thursday. On March 25-26, **Glasgow, MT** posted consecutive record highs (70 and 75°F). In contrast, cooler air edged into the **Southeast**, resulting in late-week frost. On Saturday, lows dipped to 30°F in **Meridian, MS** and 32°F in **Evergreen, AL**. A day later (March 28) minima in **Florida** included 32°F in **Tallahassee** and 36°F, a daily record, in **Jacksonville**.

Heavy rain fell along the **West Coast** through Thursday, locally exceeding 4 inches in **northwestern California**. On Wednesday, both

Eureka, CA (2.41 inches) and **Brookings, OR** (2.20 inches) netted daily-record rainfall totals. Storminess along the **California coast** shifted eastward into **Texas** by Saturday, resulting in daily-record totals in **Del Rio** (1.64 inches) and **Laredo** (1.97 inches). **Del Rio's** rainfall accounted for 85 percent of their year-to-date total. **San Antonio's** rainfall (1.44 inches on Saturday) was their highest single-day total since October 18, 1998. A day later (March 28), 2.51 inches pelted **Brownsville, TX**, their third-wettest March day on record and greatest single-day rainfall since September 9, 1998. Farther north, 0.22 inch of rain dampened **LaCrosse, WI** on March 28, ending their longest dry spell (18 days) since April 1980.

Rain and snow returned to parts of the **East** at week's end. In the **southern Appalachians**, accumulating snow (up to 4 inches) was reported in **northeastern Georgia**, while as much as 10 inches fell in the **Great Smoky Mountains**. Farther north, locally heavy rain returned to the immediate **northern Atlantic Coast**. Mostly dry weather again prevailed in **Peninsular Florida**, however, fostering the development and spread of numerous wildfires. January 1 - March 28 rainfall stood at 3.91 inches (47 percent of normal) in **Orlando** and 4.05 inches (51 percent) in **Tampa**. Precipitation also bypassed **Arizona**, where year-to-date totals remained at 0.01 inch (less than 1 percent of normal) in **Tucson** and 1.24 inches (19 percent) in **Flagstaff**.

Unusually mild weather (up to 14°F above normal) encompassed **Alaska** until late in the week. On Thursday, daily-record highs were established in locations such as **Nome** (38°F), **McGrath** (48°F), and **Fairbanks** (50°F). Sharply colder air arrived at week's end, however, and by Sunday morning (March 28), lows on the **North Slope** plummeted to daily-record levels in **Umiat** (-47°F) and **Prudhoe Bay** (-43°F).

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