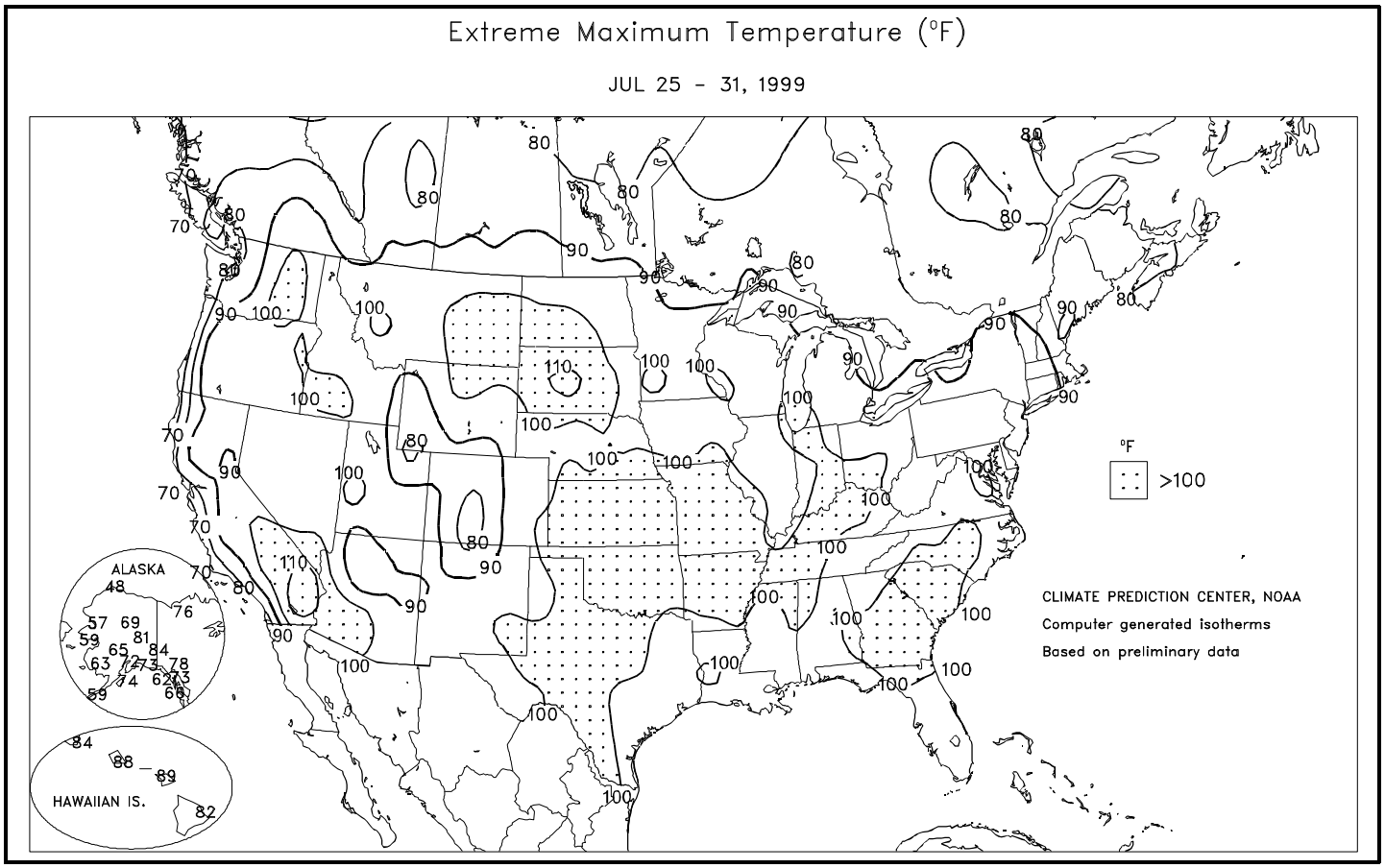
Volume 86, No. 31 **August 3, 1999**

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

July 25 - 31, 1999

The expansive ridge responsible for the **Plains-to-East Coast** heat wave shrank late in the week as a strong cold front swept southeastward. The heat wave ended after 12 days in the **central Plains** and **southwestern Corn Belt**, but persisted through week's end across the **South**. In the remainder of the **Corn Belt**, reproductive corn and soybeans were only briefly subjected to stressful levels of heat (high temperatures at or above 95°F). Before cooler air swept across the **northern Plains** late in the week, however, highs soared above 100°F across much of **eastern Montana** and the **Dakotas**, pushing small grains toward maturity. In the **Southeast**, extreme late-week heat (highs from 100 to 105°F) accelerated crop development, but

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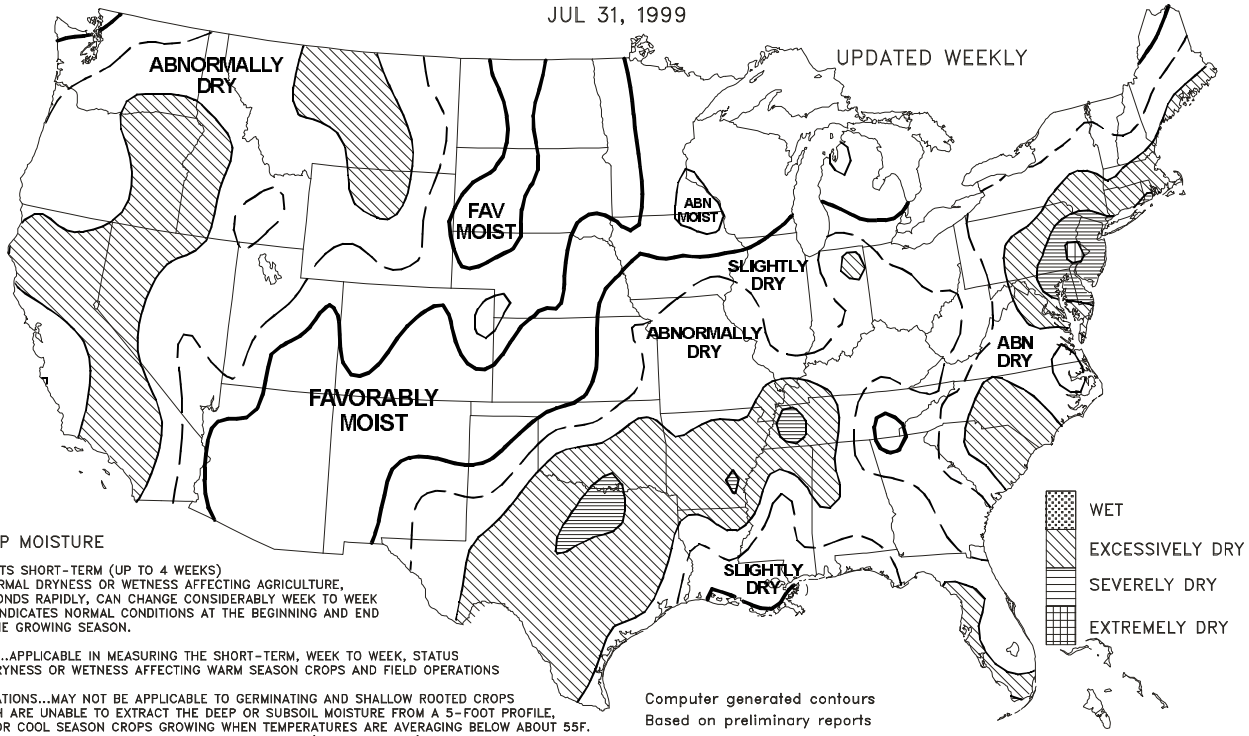
Contents

Crop Moisture

SHORT TERM, CROP NEED VS. AVAILABLE WATER IN 5-FT. SOIL PROFILE

JUL 31, 1999

UPDATED WEEKLY



CROP MOISTURE

DEPICTS SHORT-TERM (UP TO 4 WEEKS) ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE, RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK AND INDICATES NORMAL CONDITIONS AT THE BEGINNING AND END OF THE GROWING SEASON.

USES...APPLICABLE IN MEASURING THE SHORT-TERM, WEEK TO WEEK, STATUS OF DRYNESS OR WETNESS AFFECTING WARM SEASON CROPS AND FIELD OPERATIONS

LIMITATIONS...MAY NOT BE APPLICABLE TO GERMINATING AND SHALLOW ROOTED CROPS WHICH ARE UNABLE TO EXTRACT THE DEEP OR SUBSOIL MOISTURE FROM A 5-FOOT PROFILE, OR FOR COOL SEASON CROPS GROWING WHEN TEMPERATURES ARE AVERAGING BELOW ABOUT 55F. IT IS NOT GENERALLY INDICATIVE OF THE LONG-TERM (MONTHS, YEARS) DROUGHT OR WET SPELLS WHICH ARE DEPICTED BY THE DROUGHT SEVERITY INDEX.

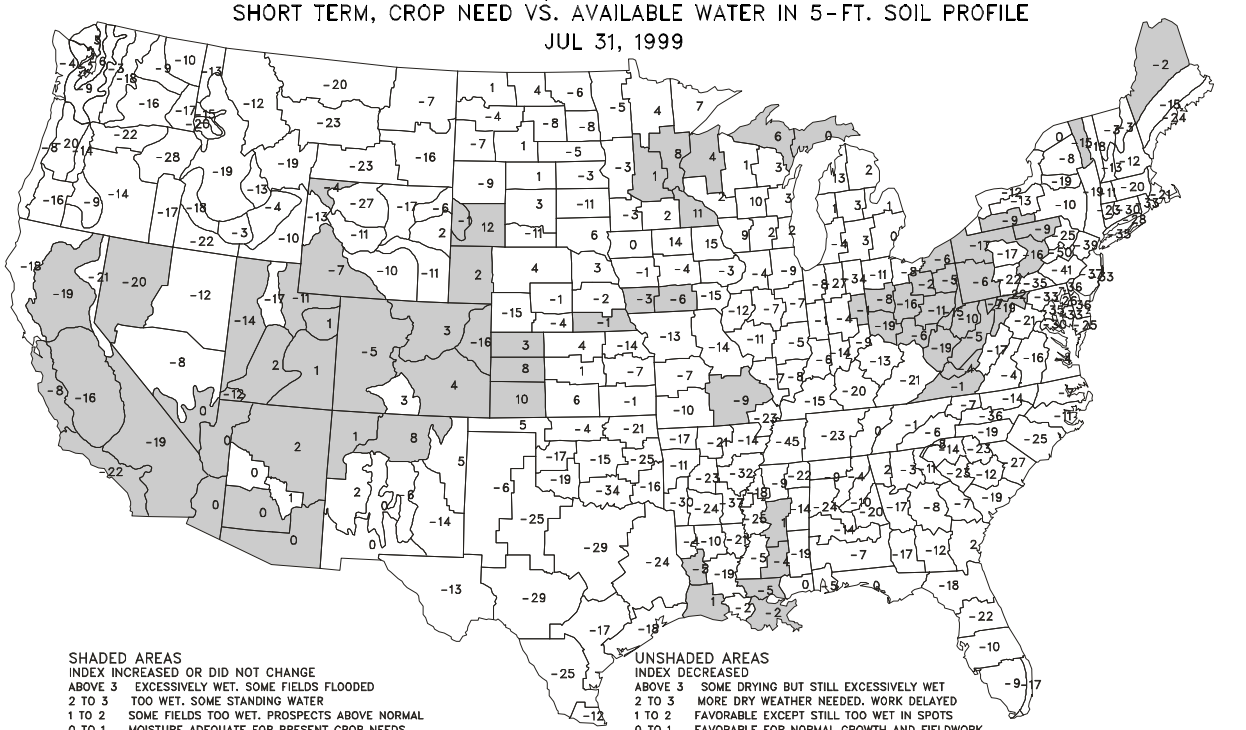
Computer generated contours
Based on preliminary reports

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Crop Moisture Index

SHORT TERM, CROP NEED VS. AVAILABLE WATER IN 5-FT. SOIL PROFILE

JUL 31, 1999



SHADED AREAS
INDEX INCREASED OR DID NOT CHANGE
ABOVE 3 EXCESSIVELY WET. SOME FIELDS FLOODED
2 TO 3 TOO WET. SOME STANDING WATER
1 TO 2 SOME FIELDS TOO WET. PROSPECTS ABOVE NORMAL
0 TO 1 MOISTURE ADEQUATE FOR PRESENT CROP NEEDS
0 TO -1 PROSPECTS IMPROVED BUT RAIN STILL NEEDED
-1 TO -2 SOME IMPROVEMENT BUT STILL ABNORMALLY DRY
-2 TO -3 DRYNESS EASED BUT FIELDS STILL EXCESSIVELY DRY
-3 TO -4 SEVERE DRYNESS CONTINUES. MORE RAIN URGENTLY NEEDED
BELOW -4 NOT ENOUGH RAIN. STILL EXTREMELY DRY

UNSHADED AREAS
INDEX DECREASED
ABOVE 3 SOME DRYING BUT STILL EXCESSIVELY WET
2 TO 3 MORE DRY WEATHER NEEDED. WORK DELAYED
1 TO 2 FAVORABLE EXCEPT STILL TOO WET IN SPOTS
0 TO 1 FAVORABLE FOR NORMAL GROWTH AND FIELDWORK
0 TO -1 TOPSOIL MOISTURE SHORT. GERMINATION SLOW
-1 TO -2 ABNORMALLY DRY. PROSPECTS DETERIORATING
-2 TO -3 EXCESSIVELY DRY. YIELD PROSPECTS REDUCED
-3 TO -4 POTENTIAL YIELDS SEVERELY CUT BY DRYNESS
BELOW -4 EXTREMELY DRY. MOST CROPS RUINED

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY BASED ON PRELIMINARY DATA

Weather Data for Selected Locations in the Delta

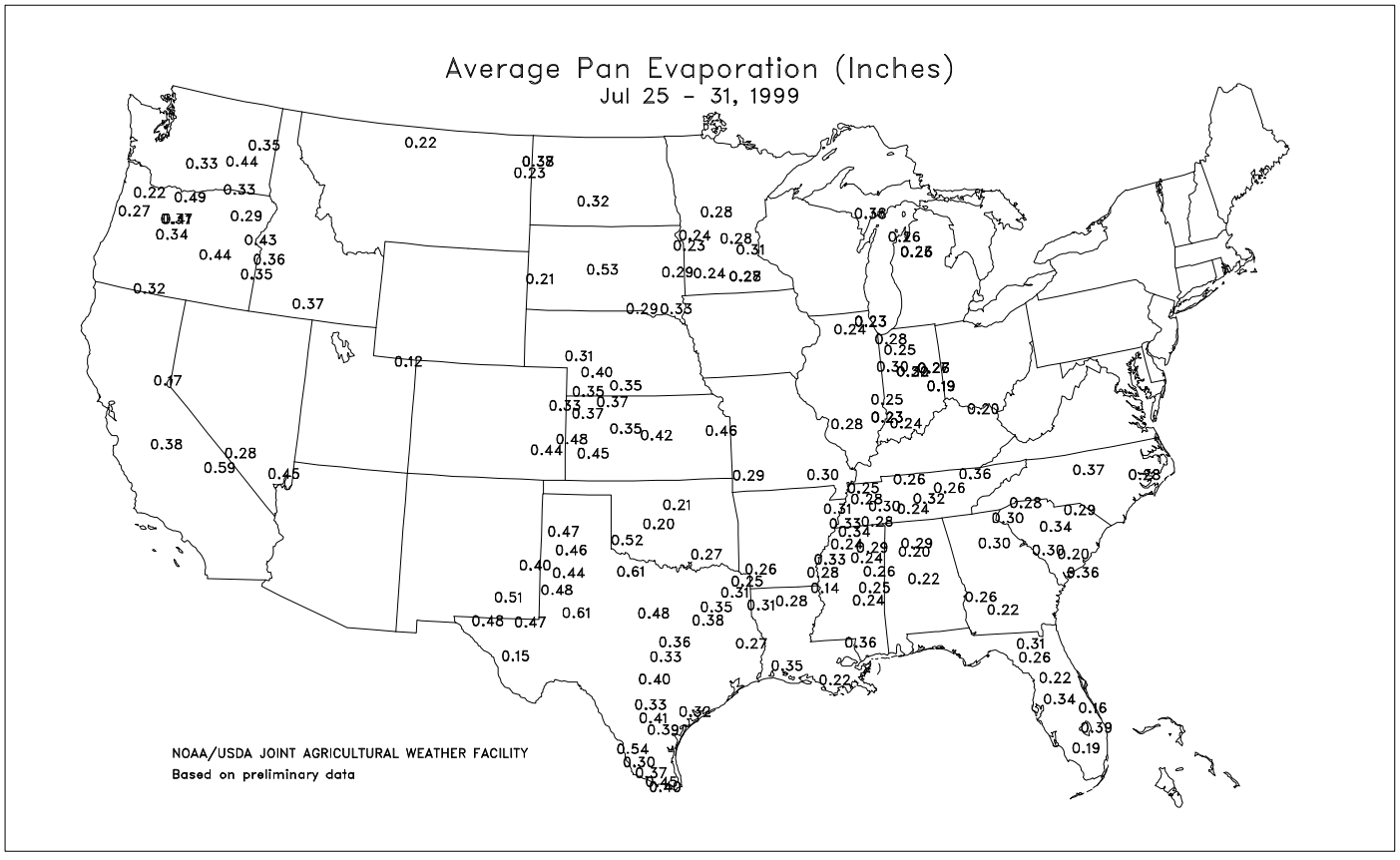
Weather Data for the Week Ending July 31, 1999

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			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Jun 1	PCT. NORMAL SINCE Jun 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
MS	BATESVILLE	96	75	97	72	86	7	0.00	-0.96	0.00	--	--	--	--	--	--	7	0	0	0
	BELZONI	100	75	102	73	88	7	0.00	-1.04	0.00	--	--	--	--	--	--	7	0	0	0
	CLARKSDALE	97	78	98	76	88	7	0.00	-0.98	0.00	--	--	--	--	--	--	7	0	0	0
	CLEVELAND	97	77	99	75	87	6	0.00	-0.74	0.00	--	--	--	--	--	--	7	0	0	0
	GREENVILLE	98	78	100	76	88	6	0.00	-0.81	0.00	--	--	--	--	--	--	7	0	0	0
	GREENWOOD	95	75	97	73	85	4	0.25	-0.79	0.17	--	--	--	--	--	--	7	0	2	0
	INDIANOLA 1S	98	77	100	76	88	--	0.00	--	0.00	4.61	–	31.98	--	92	85	7	0	0	0
	INVERNESS 5E	97	77	99	76	87	--	0.36	--	0.36	5.40	--	30.52	--	88	82	7	0	1	0
	LYON	98	77	100	74	88	--	0.01	--	0.01	6.49	--	--	--	--	--	7	0	1	0
	MOORHEAD	99	79	101	78	89	7	0.00	-1.08	0.00	--	--	--	--	--	--	7	0	0	0
	ONWARD	96	76	97	75	86	--	2.63	--	2.62	10.64	--	38.80	--	84	82	7	0	2	1
	ROLLING FORK	98	75	100	74	87	6	0.00	-0.81	0.00	--	--	--	--	--	--	7	0	0	0
	SIDON	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	TUNICA	97	77	101	75	87	6	0.13	-0.70	0.13	--	--	--	--	--	--	7	0	1	0
	VICKSBURG	94	78	96	77	86	5	0.03	-0.80	0.03	--	--	--	--	--	--	7	0	1	0
	YAZOO CITY	95	75	96	73	85	4	1.57	-0.99	0.84	--	--	--	--	--	--	7	0	2	2
	STONEVILLE *	99	76	100	74	88	7	0.00	-0.75	0.00	3.94	54	35.04	108	102	88	7	0	0	0

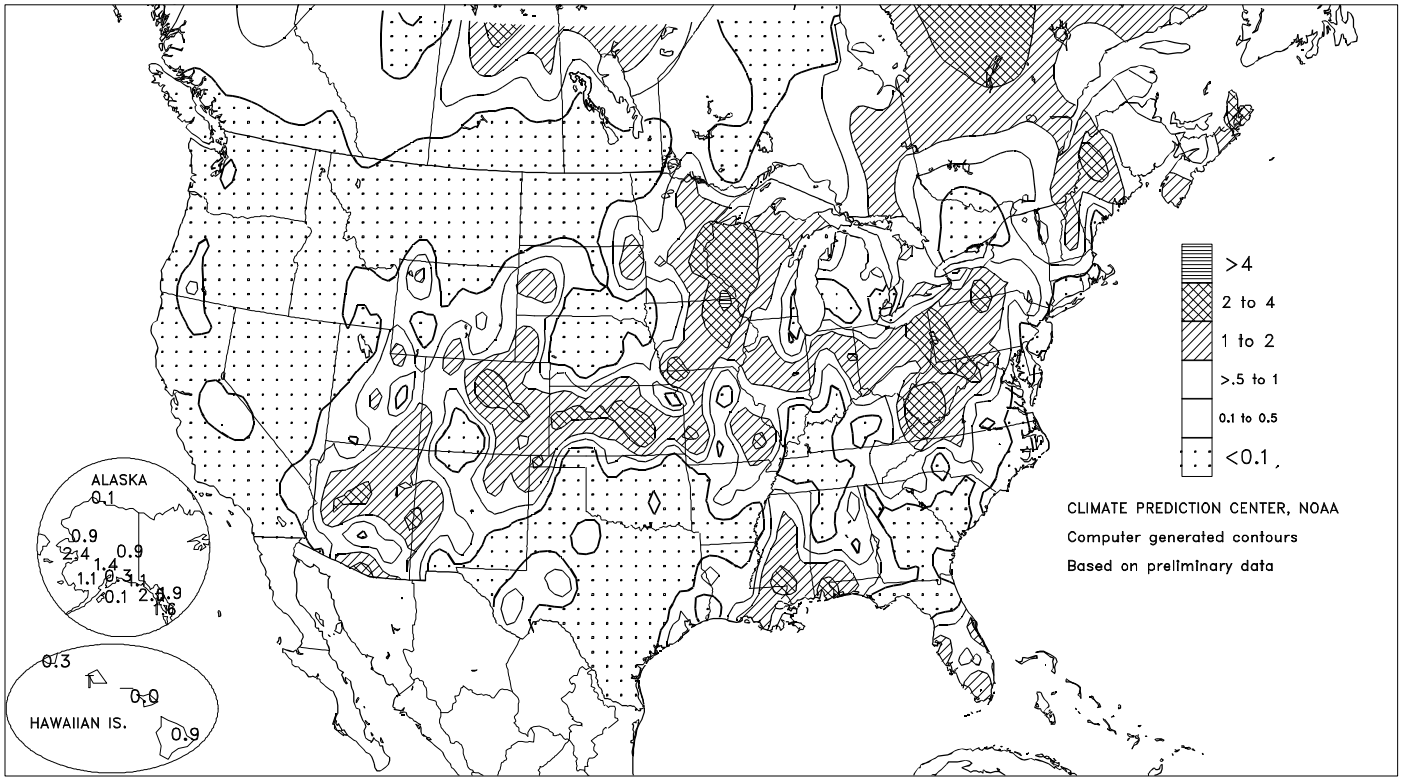
*** Based on 1964-93 normals.**

Delta Weather and Crop Summary: Record-breaking heat dominated the region and precipitation was sparse. Despite a few isolated afternoon showers and thunderstorms, most locations became extremely dry. Excessive solar radiation was detrimental to crops, and the lack of precipitation forced farmers to irrigate where possible.



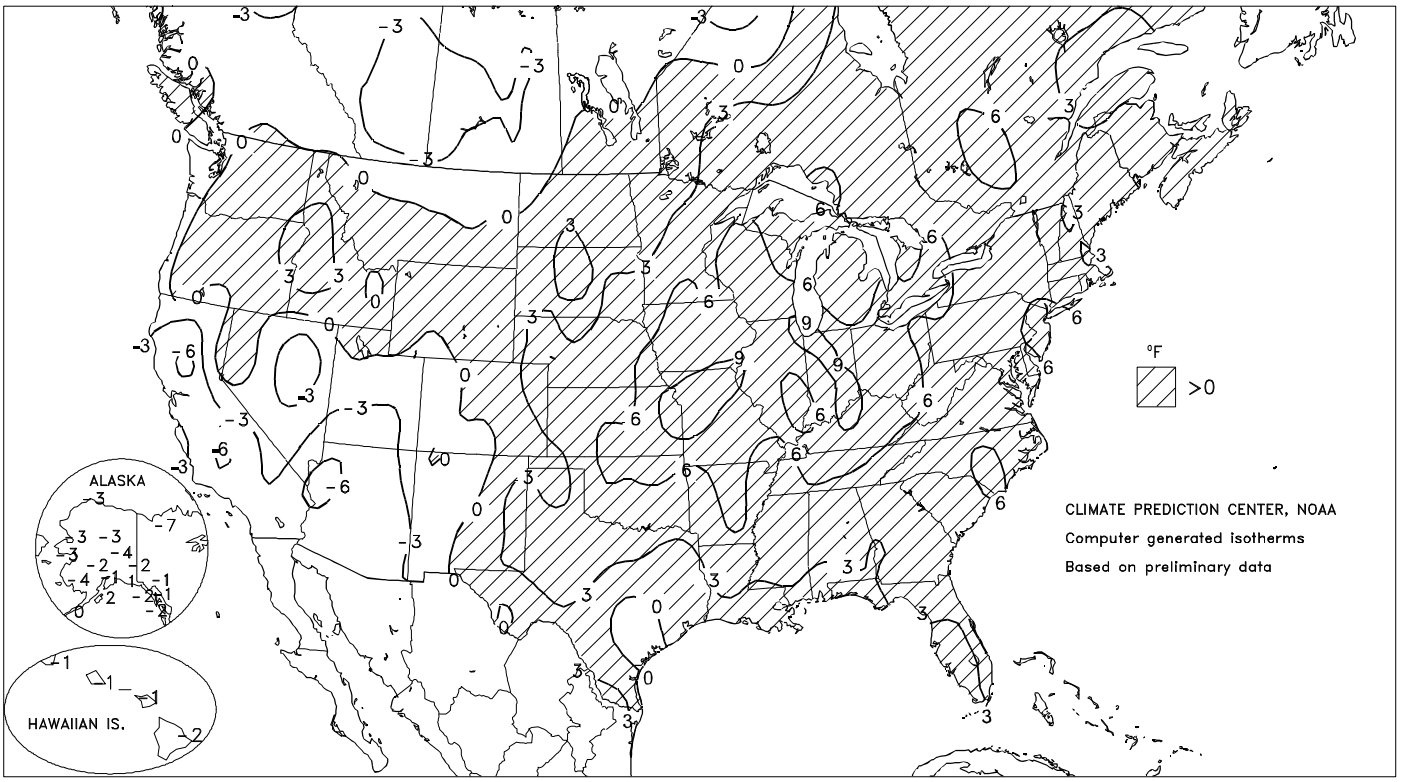
Total Precipitation (Inches)

JUL 25 - 31, 1999



Departure of Average Temperature from Normal (°F)

JUL 25 - 31, 1999



Selected Heat Wave Records

Highest Temperature (ºF) Since...

Location	High/Date	Hottest Since...
Louisville, KY	104 on July 30	104 on September 6, 1954
Billings, MT	105 on July 24	105 on August 5, 1961
Lexington, KY	103 on July 30	103 on July 9, 1988
Ft. Wayne, IN	100 on July 30	100 on July 15, 1988
Bismarck, ND	106 on July 28	106 on July 27, 1988
South Bend, IN	102 on July 30	103 on August 1, 1988
Kansas City, MO	100 on July 26*	101 on August 2, 1991
St. Louis, MO	102 on July 26*	102 on August 3, 1991
Paducah, KY	101 on July 30	101 on July 27, 1993
Minneapolis, MN	99 on July 25	101 on July 13, 1995
Omaha, NE	100 on July 29	100 on August 13, 1995
Sioux Falls, SD	95 on July 29	96 on June 28, 1997
Indianapolis, IN	99 on July 30	99 on July 27, 1997

First 100ºF Reading Since...

Location	High/Date	Date of Previous Occurrence
Columbus, OH	100 on July 30	July 15, 1988
Ft. Wayne, IN	100 on July 30	July 15, 1988
Cincinnati, OH	101 on July 30	August 16, 1988
Kansas City, MO	100 on July 26	August 2, 1991
Bismarck, ND	106 on July 28	August 28, 1991
Des Moines, IA	100 on July 29	July 13, 1995
Omaha, NE	100 on July 29	August 13, 1995
Greenville, SC	101 on July 30	August 15, 1995
College Stn., TX	100 on July 27	September 3, 1998

Most Days With High Temperatures At or Above 100ºF

Location	Number of Days	Former Record/Year
Raleigh-Durham, NC	9	8 days in 1952

July Record-High Temperatures (ºF)

Location	High/Date	Former Record/Date
Greenville, SC	104 on July 31	104 on July 29, 1952
South Bend, IN	102 on July 30	101 on July 29, 1941 and July 22, 1991
London, KY	101 on July 30, 31	101 on July 9, 1988

All-Time-Record High Temperatures (ºF)

Location	High/Date	Former Record/Date
Charleston, SC	105 on August 1	104 on July 20, 1986
Greenville, SC	104 on July 31	104 on July 29, 1952 and June 27, 1954
London, KY	101 on July 30, 31	101 on July 9, 1988

*At both Kansas City and St. Louis, high temperatures reached 103ºF on July 29 and 30.

Note: The information in the table above pertains to the recent heat wave and is updated through Sunday, August 1, 1999.

(Continued from front cover)
depleted topsoil moisture and severely stressed pastures, livestock, and immature summer crops. Weekly temperatures averaged 4 to 10ºF above normal across the **east-central Plains** and the **Corn Belt**, and generally 3 to 7ºF above normal in the **East**. In the **Northwest**, warm (temperature departures up to +4ºF), dry weather favored winter wheat harvesting but further stressed immature summer crops. Although dry weather prevailed in **California**, temperatures averaged as much as 7ºF below normal. Clouds and showers suppressed temperatures (as much as 5ºF below normal) in the **Southwest**. Meanwhile, locally heavy rainfall continued along the ridge's northern edge, including **northeastern Iowa**. Mid- to late-week rainfall provided relief to heat-stressed crops in the **central Plains** and to drought-stressed areas from the **eastern Corn Belt** and **middle Ohio Valley** into the **Mid-Atlantic region**.

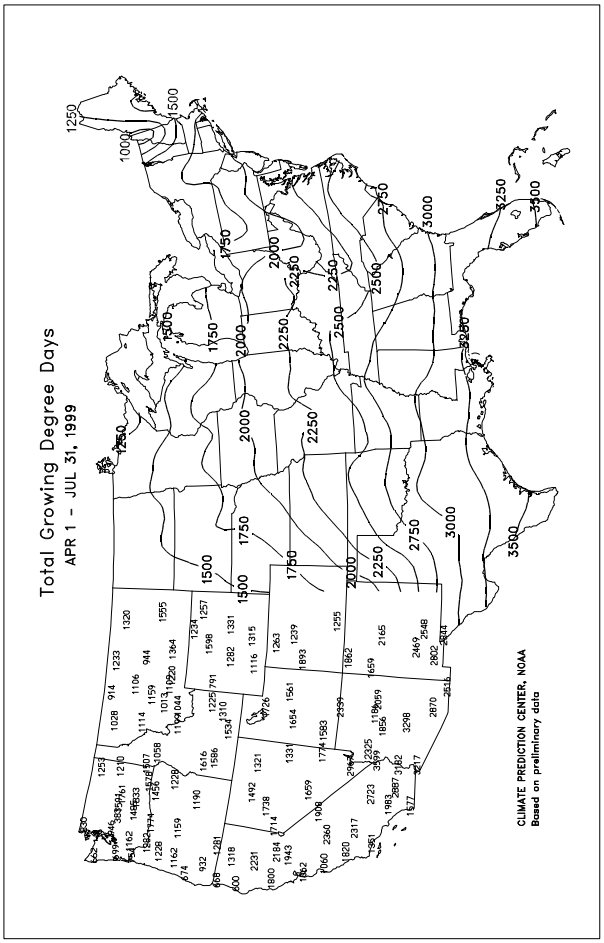
The fairly short-lived but intense heat wave resulted in more than 100 daily-record highs and produced the hottest weather in 4 to 11 years at many locations across the northern Plains and Midwest southward to the Ohio and middle Mississippi River Valleys. Highs soared to 111ºF on consecutive days (July 28 and 29) in Pierre, SD, matching or exceeding daily records set in 1933. Miles City, MT posted a high of 108ºF on Wednesday, tying a daily record set on July 28, 1947. On the same day, Bismarck, ND notched a high of 106ºF, their first triple-digit heat since August 28, 1991. During Bismarck's 126-year period of record, the previous longest period without 100ºF heat stretched 5 years, from July 3, 1881, to July 4, 1886.

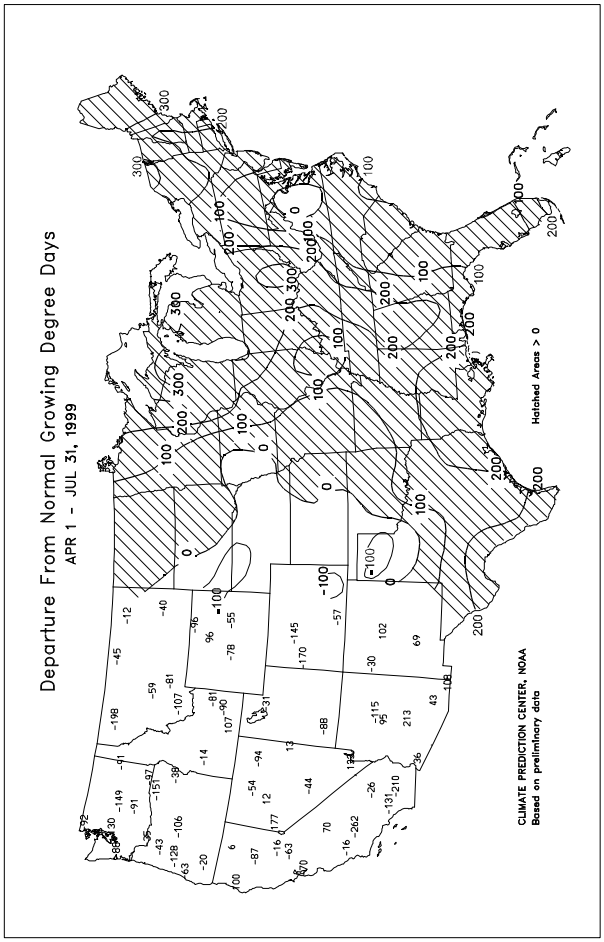
Meanwhile in Missouri, both Kansas City (100ºF on July 26) and St. Louis (102ºF on July 26) experienced their first triple-digit heat since August 1991. Heat further intensified toward week's end in advance of a strong cold front crossing the upper Midwest. Both Kansas City and St. Louis recorded highs of 103ºF on July 29 and 30. On the 30th, the hottest weather since 1988 affected locations such as Lexington, KY (103ºF) and Ft. Wayne, IN (100ºF). A July record-high temperature of 102ºF was reported in South Bend, IN. All-time records were tied in London, KY (101ºF on July 30 and 31) and Greenville-Spartanburg, SC (104ºF on July 31). During the week, Raleigh-Durham, NC, recorded highs of 100ºF on July 28, 100ºF on July 30, and 104ºF on July 31, their sixth, seventh, and eighth days of triple-digit heat this year. Their previous record, also 8 days, was set in 1952. July average temperatures were the highest on record in New York's Central Park (81.4ºF, breaking a 1955 record) and Columbus, OH (80.2ºF, tying a 1934 standard).

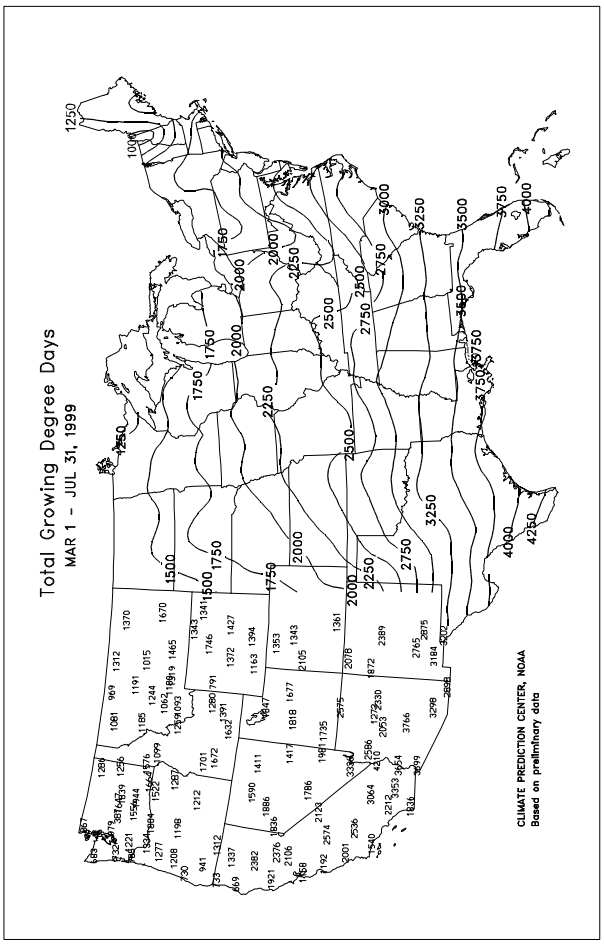
On Saturday, high temperatures reached or exceeded 90ºF for the 17th consecutive day in St. Louis and 16th day in a row in Louisville, KY. St. Louis last had a longer streak (18 days) from July 4-21, 1980. Farther west, however, a 13-day streak of 90-degree heat came to an end in Grand Island, NE on Saturday with a high of 87ºF. Grand Island's most recent longer hot spell was a 16-day heat wave in August-September 1990. Elsewhere, Saturday's high temperatures of 61ºF in Rapid City, SD and 63ºF in Havre, MT represented drops of 42ºF in 3 days and 39ºF in 2 days, respectively. A few daily-record lows were set in the West during the week, including 42ºF (on Monday) in Boise, ID and 49ºF (on Saturday) in San Luis Obispo, CA.

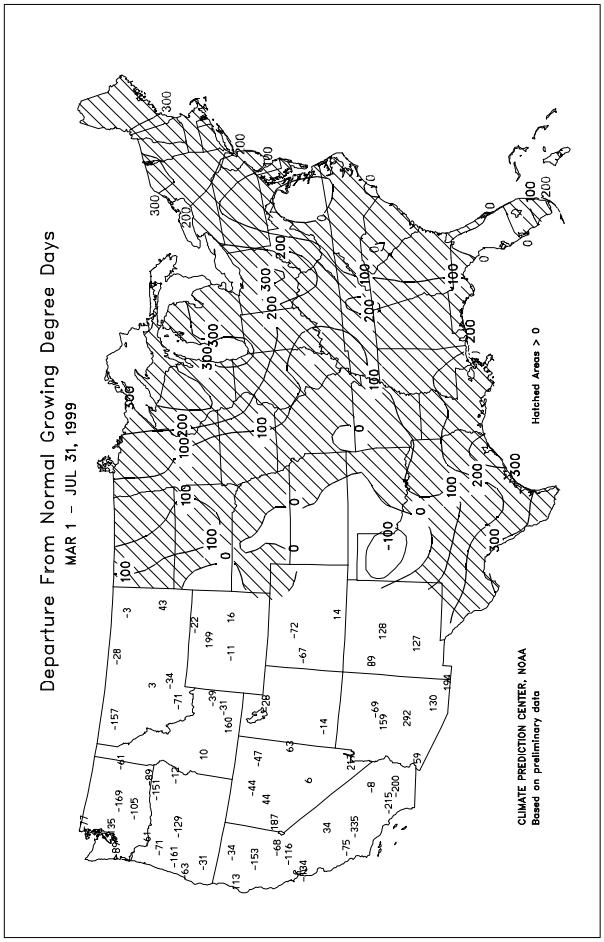
In Tucson, AZ, highs were below 100ºF on the last 25 days of the month, breaking their July record of 22 consecutive days, set in 1965 and 1976. July rainfall totaled 4.15 inches in Tucson, their wettest July since 1990, and 2.96 inches in Phoenix, AZ, their wettest July since 1984. High temperatures reached or exceeded the 100-degree mark only 15 times during the month in Las Vegas, NV (normal is 26 days), breaking their July 1984 record of 18 days.

Moisture continued to wrap around the western and northern fringes of the ridge, maintaining wet conditions in the Southwest and across the northern Corn Belt. Under the ridge's influence, however, several locations experienced their driest July on record, including New York's Central Park (0.44 inch), Allentown, PA (0.33 inch), and Paducah, KY (0.28 inch). Limited relief from the drought occurred in the interior Northeast, where Pittsburgh, PA received their heaviest single-day rainfall on record in July (3.48 inches on the 28th). Meanwhile, Waterloo, IA concluded their wettest July on record (12.97 inches, or 269 percent of normal), while Austin (Bergstrom), TX had their wettest July (5.31 inches, or 275 percent) since 1979.


Total Growing Degree Days
APR 1 - JUL 31, 1999
CLIMATE PREDICTION CENTER, NOAA
Based on preliminary data


Departure From Normal Growing Degree Days
APR 1 - JUL 31, 1999
Hatched Areas > 0
CLIMATE PREDICTION CENTER, NOAA
Based on preliminary data


Total Growing Degree Days
MAR 1 - JUL 31, 1999
CLIMATE PREDICTION CENTER, NOAA
Based on preliminary data


Departure From Normal Growing Degree Days
MAR 1 - JUL 31, 1999
Hatched Areas > 0
CLIMATE PREDICTION CENTER, NOAA
Based on preliminary data

National Weather Data for Selected Cities

Weather Data for the Week Ending July 31, 1999

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

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Jun 1	PCT. NORMAL SINCE Jun 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	50 INCH OR MORE
AL	BIRMINGHAM	96	74	98	72	85	5	0.62	-0.53	0.62	12.14	135	37.16	107	95	49	7	0	1	1
	HUNTSVILLE	95	72	97	71	83	4	0.00	-1.04	0.00	8.15	91	35.30	99	99	49	7	0	0	0
	MOBILE	93	74	95	71	83	1	0.73	-0.92	0.43	11.96	101	32.48	84	99	69	7	0	5	0
	MONTGOMERY	96	73	99	71	85	3	0.18	-0.95	0.18	13.79	152	31.48	93	98	51	7	0	1	0
AK	ANCHORAGE	63	52	72	45	57	-1	0.32	-0.13	0.15	3.09	108	5.61	86	93	56	0	0	6	0
	BARROW	42	33	48	31	37	-3	0.10	-0.15	0.05	1.06	87	1.52	78	97	80	0	4	2	0
	FAIRBANKS	65	51	81	43	58	-4	0.92	0.47	0.38	3.50	108	4.70	86	97	63	0	0	5	0
	JUNEAU	62	50	73	46	56	-1	1.86	0.82	0.81	6.82	93	33.28	133	100	70	0	0	5	1
	KODIAK	63	51	74	47	57	2	0.12	-0.75	0.12	12.06	142	34.70	98	90	62	0	0	1	0
	NOME	53	44	59	42	49	-3	2.39	1.82	0.93	5.47	167	8.84	135	99	81	0	0	7	2
AZ	FLAGSTAFF	74	52	80	49	63	-4	0.42	-0.32	0.29	4.26	134	9.04	75	96	48	0	0	6	0
	PHOENIX	98	81	106	78	89	-4	0.12	-0.10	0.12	2.96	312	4.39	124	67	33	6	0	1	0
	TUCSON	93	71	97	68	82	-4	0.84	0.23	0.48	4.41	168	5.75	107	82	34	5	0	4	0
	YUMA	102	81	108	74	92	-3	0.05	-0.04	0.05	2.49	889	4.26	344	68	27	7	0	1	0
AR	FORT SMITH	99	74	102	72	87	5	0.00	-0.66	0.00	7.84	123	30.05	125	94	39	7	0	0	0
	LITTLE ROCK	99	78	101	76	89	6	0.21	-0.59	0.19	5.13	71	27.71	93	89	44	7	0	2	0
CA	BAKERSFIELD	92	63	94	60	77	-8	0.00	0.00	0.00	0.00	0	5.42	142	66	25	6	0	0	0
	EUREKA	60	51	62	51	56	-1	0.00	-0.04	0.00	0.18	28	27.22	129	91	79	0	0	0	0
	FRESNO	94	62	97	60	78	-4	0.00	0.00	0.00	0.20	286	5.96	86	69	21	7	0	0	0
	LOS ANGELES	74	64	76	63	69	-1	0.00	0.00	0.00	0.98	999	7.18	93	88	65	0	0	0	0
	REDDING	95	60	97	57	78	-4	0.00	-0.04	0.00	0.41	57	16.93	89	65	17	7	0	0	0
	SACRAMENTO	85	54	89	53	70	-6	0.00	0.00	0.00	0.03	20	9.91	92	91	31	0	0	0	0
	SAN DIEGO	71	63	74	62	67	-5	0.00	0.00	0.00	0.04	44	5.08	82	90	71	0	0	0	0
	SAN FRANCISCO	67	55	69	55	61	-2	0.00	0.00	0.00	0.70	583	13.39	109	86	60	0	0	0	0
CO	ALAMOSA	80	49	83	46	65	-1	0.04	-0.24	0.03	0.63	34	3.13	80	94	33	0	0	2	0
	CO SPRINGS	85	58	90	56	72	1	2.13	1.43	0.51	5.44	106	17.09	169	83	33	1	0	3	2
	DENVER	87	62	92	60	74	0	2.55	2.14	1.56	6.46	174	15.48	153	88	32	3	0	4	1
	GRAND JUNCTION	89	64	93	62	77	-3	0.05	-0.12	0.05	1.14	98	4.28	91	74	29	4	0	1	0
	PUEBLO	95	62	99	60	79	1	1.04	0.52	0.63	2.04	61	9.85	144	86	26	6	0	2	1
CT	BRIDGEPORT	88	72	94	68	80	5	0.00	-0.84	0.00	1.74	24	21.02	84	87	45	3	0	0	0
	HARTFORD	91	66	94	60	79	4	0.03	-0.69	0.03	3.32	48	20.70	82	90	37	5	0	1	0
DC	WASHINGTON	96	73	101	69	85	4	0.04	-0.84	0.02	3.29	46	18.49	84	84	35	7	0	2	0
DE	WILMINGTON	94	70	96	67	82	5	0.00	-0.93	0.00	2.51	32	22.35	92	88	40	7	0	0	0
FL	DAYTONA BEACH	96	76	98	74	86	4	0.09	-1.13	0.09	12.59	110	23.19	90	96	49	7	0	1	0
	JACKSONVILLE	98	75	102	73	87	5	0.00	-1.40	0.00	10.75	95	20.21	71	96	45	7	0	0	0
	KEY WEST	91	81	92	80	86	1	0.63	-0.20	0.40	7.25	83	16.26	84	86	62	7	0	3	0
	MIAMI	94	80	96	79	87	4	0.20	-1.04	0.20	14.72	98	24.44	80	84	48	7	0	1	0
	ORLANDO	94	75	97	74	85	2	0.88	-0.70	0.71	19.05	131	30.70	108	96	49	7	0	3	1
	PENSACOLA	91	75	95	74	83	1	1.20	-0.51	0.53	14.17	103	31.71	85	98	65	5	0	3	1
	TALLAHASSEE	96	74	101	72	85	4	0.88	-1.11	0.43	14.44	92	31.40	77	98	49	7	0	4	0
	TAMPA	92	80	93	78	86	3	0.06	-1.53	0.03	8.56	71	14.53	60	85	62	6	0	2	0
	WEST PALM BEACH	93	77	95	74	85	3	0.17	-1.09	0.12	14.21	100	25.90	80	93	55	7	0	3	0
GA	ATHENS	98	72	103	70	85	5	0.01	-1.06	0.01	10.45	119	25.01	79	95	39	7	0	1	0
	ATLANTA	94	73	99	71	84	5	0.00	-1.11	0.00	9.32	109	25.52	79	90	44	7	0	0	0
	AUGUSTA	99	71	102	68	85	4	0.00	-0.99	0.00	10.15	121	24.17	85	98	39	7	0	0	0
	COLUMBUS	98	76	101	74	87	5	0.04	-1.16	0.04	5.26	55	17.86	54	90	37	7	0	1	0
	MACON	97	72	100	70	84	3	0.01	-0.95	0.01	10.28	130	23.20	80	99	47	7	0	1	0
	SAVANNAH	98	76	101	74	87	5	0.00	-1.56	0.00	21.44	178	34.99	118	92	44	7	0	0	0
HI	HILO	81	67	82	63	74	-2	0.88	-1.46	0.51	5.10	32	72.58	97	93	63	0	0	7	1
	HONOLULU	87	73	88	71	80	-1	0.03	-0.11	0.03	0.70	62	6.95	59	80	46	0	0	1	0
	KAHULUI	87	68	89	64	78	-1	0.00	-0.11	0.00	0.13	20	6.59	51	84	46	0	0	0	0
	LIHUE	83	73	84	71	78	-1	0.28	-0.20	0.12	4.05	106	18.15	76	88	62	0	0	6	0
ID	BOISE	96	63	102	55	79	4	0.00	-0.06	0.00	0.47	41	6.29	87	47	14	6	0	0	0
	LEWISTON	94	61	103	54	78	2	0.00	-0.14	0.00	1.70	88	6.63	87	56	16	5	0	0	0
	POCATELLO	91	52	95	42	71	0	0.00	-0.14	0.00	1.23	74	8.42	113	74	17	4	0	0	0
IL	CHICAGO/O'HARE	93	73	101	69	83	9	0.08	-0.78	0.08	8.75	118	28.56	143	93	47	4	0	1	0
	MOLINE	93	73	99	69	83	8	0.26	-0.84	0.16	7.18	78	22.12	96	93	58	5	0	3	0
	PEORIA	91	73	96	69	82	6	1.49	0.61	1.43	7.56	92	21.96	102	94	63	4	0	3	1
	ROCKFORD	90	72	97	69	81	8	0.84	-0.07	0.41	9.26	107	25.79	124	98	59	3	0	4	0
	SPRINGFIELD	93	71	97	65	82	6	1.58	0.79	0.95	5.11	74	17.68	85	93	58	5	0	4	2
IN	EVANSVILLE	94	74	98	70	84	5	0.02	-0.87	0.01	8.43	112	30.05	112	95	53	7	0	2	0
	FORT WAYNE	95	71	100	67	83	9	0.34	-0.43	0.20	2.00	28	18.81	92	96	41	6	0	4	0
	INDIANAPOLIS	93	73	99	69	83	8	0.16	-0.85	0.13	5.54	70	25.02	103	98	53	5	0	2	0
	SOUTH BEND	94	71	102	68	83	10	0.05	-0.78	0.05	4.72	60	19.72	89	93	41	6	0	1	0
IA	BURLINGTON	96	76	101	72	86	10	0.73	-0.21	0.43	10.14	122	25.42	122	87	54	6	0	3	0
	CEDAR RAPIDS	90	70	98	66	80	6	0.90	-0.01	0.38	9.92	114	24.62	124	98	63	4	0	5	0
	DES MOINES	94	74	100	70	84	7	1.65	0.80	0.84	6.07	74	19.74	101	91	49	5	0	4	1
	DUBUQUE	89	71	94	68	80	7	1.53	0.58	0.94	12.04	148	27.14	126	99	62	3	0	6	1
	SIOUX CITY	91	71	96	64	81	5	0.05	-0.65	0.05	11.30	162	23.20	143	96	62	4	0	1	0
	WATERLOO	89	71	95	63	80	7	3.64	2.61	1.27	18.43	198	33.99	163	95	64	4	0	7	4
KS	CONCORDIA	95	73	101	71	84	4	0.11	-0.68	0.10	4.72	58	20.21	111	82	36	5	0	2	0
	DODGE CITY	101	72	105	70	86	5	0.45	-0.26	0.28	5.02	79	15.17	108	71	24	7	0	2	0
	GOODLAND	95	66	100	63	80	4	0.75	0.18	0.21	7.00	116	14.31	112	84	31	6	0	5	0
	TOPEKA	100	77	105	73	88	10	0.26	-0.48	0.22	6.81	75	24.91	118	81	34	6	0	2	0

Based on 1961-90 normals

Weather Data for the Week Ending July 31, 1999

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS TEMP. °F		NUMBER OF DAYS PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Jun 1	PCT. NORMAL SINCE Jun 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	WICHITA	101	75	105	73	88	6	0.20	-0.44	0.20	11.05	149	27.87	156	77	30	7	0	1	0
KY	JACKSON	93	71	97	68	82	7	0.15	-0.98	0.11	5.42	58	24.12	79	93	50	7	0	2	0
	LEXINGTON	95	71	103	68	83	7	0.09	-1.04	0.08	7.65	88	23.52	86	92	44	7	0	2	0
	LOUISVILLE	100	77	106	74	89	11	0.01	-1.00	0.01	8.39	105	29.37	106	85	40	7	0	1	0
	PADUCAH	97	74	101	70	86	7	0.00	-0.90	0.00	9.27	113	31.04	103	94	45	7	0	0	0
LA	BATON ROUGE	93	75	93	72	84	2	0.43	-1.15	0.43	12.65	113	31.14	85	98	56	7	0	1	0
	LAKE CHARLES	93	77	94	74	85	2	0.09	-1.10	0.09	13.75	135	28.68	94	97	55	7	0	1	0
	NEW ORLEANS	93	76	95	73	84	2	0.07	-1.33	0.03	16.37	137	28.76	78	95	58	7	0	1	0
	SHREVEPORT	95	76	96	75	86	3	0.28	-0.44	0.28	10.85	136	41.17	145	92	48	7	0	1	0
ME	CARIBOU	80	61	87	55	70	5	0.68	-0.28	0.38	6.13	89	17.26	90	99	55	0	0	4	0
	PORTLAND	81	65	89	63	73	3	0.01	-0.66	0.01	2.61	40	22.41	90	96	53	0	0	1	0
MD	BALTIMORE	94	68	99	66	81	4	0.31	-0.54	0.16	4.15	56	18.96	80	89	39	7	0	4	0
MA	BOSTON	82	68	90	64	75	1	0.72	0.06	0.72	3.54	60	18.80	79	94	57	1	0	1	1
	WORCESTER	85	66	87	63	75	5	0.03	-0.83	0.03	3.81	49	21.02	77	90	47	0	0	1	0
MI	ALPENA	85	60	95	56	73	5	0.00	-0.69	0.00	5.44	91	12.88	80	95	46	1	0	0	0
	GRAND RAPIDS	90	65	97	58	78	6	0.09	-0.63	0.09	6.73	98	21.87	113	92	46	4	0	1	0
	HOUGHTON LAKE	84	58	90	51	71	3	0.16	-0.45	0.09	10.88	194	18.53	123	99	51	1	0	4	0
	LANSING	88	60	94	54	74	3	0.18	-0.38	0.17	8.16	131	19.85	118	98	61	2	0	2	0
	MARQUETTE	84	57	95	48	70	5	0.68	0.03	0.36	7.48	118	24.55	131	87	38	1	0	6	0
	MUSKEGON	87	64	96	58	76	5	0.01	-0.53	0.01	6.58	148	19.99	123	94	52	1	0	1	0
MN	DULUTH	82	60	92	55	71	5	1.71	0.88	1.68	12.75	172	21.79	131	93	44	1	0	2	1
	INT'L FALLS	79	55	87	49	67	0	1.13	0.37	0.68	9.69	129	19.82	140	96	49	0	0	4	1
	MINNEAPOLIS	91	69	99	64	80	6	2.96	2.18	2.17	8.34	110	23.27	136	90	38	4	0	4	1
	ROCHESTER	86	67	93	60	77	6	1.54	0.59	0.84	10.16	128	25.83	149	97	53	3	0	5	2
	ST. CLOUD	89	62	98	55	76	6	2.13	1.44	1.22	7.90	103	16.76	105	95	42	3	0	5	2
MS	JACKSON	96	74	97	72	85	3	1.57	0.53	1.31	8.83	115	28.75	84	95	54	7	0	3	1
	MERIDIAN	97	73	101	70	85	4	0.03	-1.10	0.03	6.36	72	25.50	71	98	50	7	0	1	0
	TUPELO	97	76	100	74	87	6	0.12	-0.80	0.12	9.37	115	42.19	121	93	46	7	0	1	0
MO	COLUMBIA	98	74	104	73	86	8	0.02	-0.76	0.02	5.19	65	20.30	87	85	39	7	0	1	0
	KANSAS CITY	99	76	103	74	88	9	0.12	-0.83	0.12	9.20	101	28.79	131	86	41	7	0	1	0
	SAINT LOUIS	98	79	103	77	88	8	0.01	-0.80	0.01	9.50	125	26.44	117	77	39	7	0	1	0
	SPRINGFIELD	98	73	101	70	85	7	0.00	-0.59	0.00	5.09	64	27.73	114	90	39	7	0	0	0
MT	BILLINGS	92	61	102	53	77	3	0.00	-0.17	0.00	2.39	82	7.54	76	47	14	5	0	0	0
	BUTTE	88	44	96	36	66	3	0.00	-0.25	0.00	2.12	62	7.58	96	71	14	3	0	0	0
	GLASGOW	87	55	100	47	71	-1	0.00	-0.35	0.00	4.84	126	11.11	152	75	21	3	0	0	0
	GREAT FALLS	87	51	99	42	69	0	0.00	-0.25	0.00	2.59	71	7.50	74	60	16	3	0	0	0
	KALISPELL	84	47	96	39	65	1	0.00	-0.22	0.00	2.84	86	8.47	85	87	21	3	0	0	0
	MILES CITY	94	60	108	52	77	2	0.00	-0.27	0.00	4.36	101	9.31	97	50	15	6	0	0	0
	MISSOULA	89	48	99	43	69	1	0.00	-0.19	0.00	2.96	110	6.44	76	68	15	3	0	0	0
NE	GRAND ISLAND	95	71	103	66	83	6	0.17	-0.42	0.17	7.96	118	18.74	116	91	46	6	0	1	0
	LINCOLN	97	74	104	70	85	7	0.45	-0.27	0.42	7.90	111	21.23	124	88	45	5	0	3	0
	NORFOLK	91	70	97	65	81	5	1.30	0.67	1.24	9.54	124	20.66	123	92	59	4	0	3	1
	NORTH PLATTE	94	65	101	62	79	5	0.00	-0.60	0.00	6.25	97	12.24	88	93	41	6	0	0	0
	OMAHA	94	75	100	70	84	7	0.43	-0.33	0.30	6.86	93	23.13	128	91	52	5	0	2	0
	SCOTTSBLUFF	91	62	97	57	76	2	1.07	0.69	0.78	5.45	116	11.70	106	86	31	6	0	3	1
	VALENTINE	90	65	99	59	77	2	0.05	-0.60	0.05	8.19	138	15.17	122	90	39	3	0	1	0
NV	ELY	84	51	90	38	68	-1	0.00	-0.17	0.00	2.05	127	4.47	73	59	17	1	0	0	0
	LAS VEGAS	99	78	103	76	89	-3	0.00	-0.11	0.00	2.37	504	3.18	138	47	20	7	0	0	0
	RENO	92	56	95	52	74	2	0.12	0.06	0.12	0.18	25	3.07	67	55	16	6	0	1	0
	WINNEMUCCA	95	48	98	41	71	-2	0.00	-0.06	0.00	1.22	106	4.57	92	47	17	7	0	0	0
NH	CONCORD	85	63	89	59	74	4	0.91	0.17	0.41	6.33	99	20.99	104	99	53	0	0	4	0
NJ	NEWARK	94	76	99	72	85	7	0.01	-1.03	0.01	1.46	19	21.18	81	73	37	6	0	1	0
NM	ALBUQUERQUE	90	67	93	63	78	0	0.11	-0.25	0.11	2.07	106	4.42	101	67	23	6	0	1	0
NY	ALBANY	89	63	92	60	76	4	0.06	-0.66	0.04	4.37	64	18.26	88	92	41	4	0	3	0
	BINGHAMTON	85	62	89	60	74	4	0.67	-0.10	0.41	5.76	81	18.69	88	93	45	0	0	3	0
	BUFFALO	87	68	90	64	77	6	0.23	-0.51	0.12	3.00	45	17.33	85	87	44	2	0	3	0
	ROCHESTER	88	64	93	59	76	6	0.69	0.04	0.35	4.33	75	17.01	97	91	39	1	0	3	0
	SYRACUSE	89	65	95	63	77	6	0.15	-0.68	0.14	4.37	57	17.49	81	88	38	2	0	2	0
NC	ASHEVILLE	90	65	95	61	77	4	0.28	-0.77	0.28	8.33	95	25.80	91	98	46	2	0	1	0
	CHARLOTTE	94	71	100	68	83	3	0.03	-0.88	0.03	7.43	102	20.55	80	93	44	7	0	1	0
	GREENSBORO	92	72	97	70	82	5	0.99	-0.02	0.91	8.46	101	22.69	89	88	46	6	0	2	1
	HATTERAS	89	78	93	73	83	4	1.09	-0.14	1.07	6.30	69	27.53	91	93	66	1	0	2	1
	RALEIGH	98	71	104	68	84	6	0.08	-0.86	0.08	4.19	54	19.72	78	94	37	7	0	1	0
	WILMINGTON	96	77	100	74	86	6	0.00	-1.85	0.00	8.02	57	30.65	93	91	46	7	0	0	0
ND	BISMARCK	91	59	106	55	75	4	0.00	-0.43	0.00	6.19	128	16.53	159	86	28	3	0	0	0
	DICKINSON	90	57	104	51	73	2	0.00	-0.37	0.00	3.49	66	10.99	98	78	21	4	0	0	0
	FARGO	84	59	95	55	72	0	0.44	-0.15	0.32	4.04	73	11.73	98	94	47	2	0	2	0
	GRAND FORKS	84	56	93	52	70	0	0.05	-0.53	0.04	5.14	92	14.31	129	92	44	2	0	2	0
	JAMESTOWN	85	57	99	55	71	0	0.06	-0.51	0.04	5.50	95	15.20	137	94	41	2	0	2	0
	WILLISTON	87	53	101	49	70	-2	0.00	-0.41	0.00	5.80	133	12.10	130	86	25	2	0	0	0
OH	AKRON-CANTON	88	67	94	63	78	5	2.46	1.54	1.26	7.05	97	21.68	99	97	57	2	0	4	3
	CINCINNATI	94	72	101	68	83	8	1.68	0.75	1.30	6.46	80	21.64	85	94	46	5	0	3	1
	CLEVELAND	88	68	95	64	78	6	1.46	0.69	1.16	6.09	85	18.88	90	95	53	2	0	3	1
	COLUMBUS	94	73	100	68	84	10	1.39	0.44	0.92	3.67	44	17.63	76	90	41	7	0	3	1
	DAYTON	93	72	98	69	82	8	0.56	-0.21	0.31	6.67	91	21.69	97	93	47	5	0	2	0
	MANSFIELD	87	67	93	59	77	5	1.65	0.71	1.29	7.19	90	23.10	99	96	53	2	0	4	1

Based on 1961-90 normals

Weather Data for the Week Ending July 31, 1999

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS TEMP. °F		NUMBER OF DAYS PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Jun 1	PCT. NORMAL SINCE Jun 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	TOLEDO	90	69	95	63	80	7	0.01	-0.71	0.01	4.03	58	20.09	106	94	50	4	0	1	0
	YOUNGSTOWN	87	64	95	62	75	5	3.78	2.91	2.97	8.36	104	25.32	116	92	46	2	0	3	2
OK	OKLAHOMA CITY	100	73	104	71	87	4	0.00	-0.52	0.00	10.57	153	27.05	133	80	35	7	0	0	0
	TULSA	101	80	104	76	90	7	0.00	-0.63	0.00	5.35	71	29.92	126	69	35	7	0	0	0
OR	ASTORIA	66	53	70	46	59	-1	0.00	-0.22	0.00	4.39	123	54.24	151	96	69	0	0	0	0
	BURNS	90	47	95	40	68	1	0.00	-0.09	0.00	0.31	25	5.36	96	58	12	4	0	0	0
	EUGENE	84	52	92	45	68	0	0.00	-0.11	0.00	0.94	48	27.27	104	91	34	1	0	0	0
	MEDFORD	94	57	98	53	76	2	0.00	-0.06	0.00	0.08	10	9.96	105	71	18	7	0	0	0
	PENDLETON	93	59	102	50	76	2	0.00	-0.08	0.00	0.51	51	5.06	73	54	19	4	0	0	0
	PORTLAND	83	58	88	54	70	1	0.00	-0.14	0.00	2.26	107	25.16	130	86	38	0	0	0	0
	SALEM	85	53	90	50	69	2	0.00	-0.11	0.00	1.63	85	30.95	149	92	33	1	0	0	0
PA	ALLENTOWN	95	65	99	62	80	5	0.00	-0.96	0.00	1.43	18	17.27	69	87	30	7	0	0	0
	ERIE	86	69	98	67	78	6	0.34	-0.44	0.29	3.70	49	19.65	91	90	53	1	0	2	0
	MIDDLETOWN	96	71	99	69	83	7	0.38	-0.40	0.38	5.00	67	18.97	79	83	34	7	0	1	0
	PHILADELPHIA	95	74	99	72	84	7	0.00	-0.96	0.00	4.41	55	23.28	94	83	38	7	0	0	0
	PITTSBURGH	90	67	95	63	78	6	4.40	3.59	3.46	7.94	107	24.76	110	87	39	4	0	2	2
	WILKES-BARRE	90	62	95	61	76	4	0.09	-0.72	0.08	4.57	59	18.35	87	95	35	4	0	2	0
	WILLIAMSPORT	88	66	92	64	77	4	1.43	0.59	1.00	6.68	80	21.63	90	92	55	2	0	4	1
RI	PROVIDENCE	88	69	91	64	79	5	0.00	-0.74	0.00	1.18	18	22.50	87	89	47	3	0	0	0
SC	BEAUFORT	97	77	100	74	87	5	0.12	-1.44	0.12	18.20	146	31.06	102	92	44	7	0	1	0
	CHARLESTON	97	77	101	75	87	5	0.00	-1.59	0.00	6.37	48	19.76	64	93	44	7	0	0	0
	COLUMBIA	99	74	103	72	86	5	0.00	-1.32	0.00	7.22	70	20.87	68	90	39	7	0	0	0
	GREENVILLE	99	72	104	70	86	7	0.20	-0.79	0.16	6.84	73	21.17	67	85	34	7	0	2	0
SD	ABERDEEN	87	63	95	59	75	1	0.25	-0.31	0.16	8.07	137	14.55	117	96	51	3	0	3	0
	HURON	93	65	104	60	79	4	0.33	-0.20	0.31	4.46	74	11.46	84	96	43	5	0	3	0
	RAPID CITY	89	63	103	54	76	3	1.54	1.15	1.51	8.43	165	15.75	136	80	30	4	0	2	1
	SIOUX FALLS	88	68	95	59	78	4	0.16	-0.42	0.16	7.60	125	19.90	138	91	55	3	0	1	0
TN	BRISTOL	89	68	94	65	78	4	0.34	-0.60	0.31	10.16	129	25.31	100	98	58	2	0	3	0
	CHATTANOOGA	97	73	99	72	85	6	0.01	-1.06	0.01	9.81	117	36.58	111	96	45	7	0	1	0
	KNOXVILLE	91	71	95	66	81	4	0.83	-0.16	0.83	18.33	212	41.04	138	95	53	5	0	1	1
	MEMPHIS	96	78	98	74	87	4	0.59	-0.26	0.59	6.04	82	34.59	111	86	51	7	0	1	1
	NASHVILLE	98	74	101	72	86	6	0.08	-0.81	0.08	6.77	90	28.88	99	91	39	7	0	1	0
TX	ABILENE	100	76	103	74	88	4	0.00	-0.48	0.00	4.66	94	12.77	96	67	23	7	0	0	0
	AMARILLO	94	67	97	66	81	2	0.13	-0.46	0.13	6.51	103	21.13	178	72	30	7	0	1	0
	AUSTIN	96	71	98	67	84	-2	0.00	-0.39	0.00	9.75	169	21.94	116	99	40	7	0	0	0
	BEAUMONT	94	75	95	74	84	1	0.00	-1.19	0.00	11.68	106	23.52	74	100	57	7	0	0	0
	BROWNSVILLE	95	76	96	75	86	1	0.00	-0.42	0.00	4.19	90	12.69	103	94	50	7	0	0	0
	CORPUS CHRISTI	94	74	95	73	84	-1	0.14	-0.40	0.12	9.18	159	15.27	99	99	58	7	0	3	0
	DEL RIO	99	77	102	73	88	3	0.00	-0.37	0.00	7.10	179	12.50	122	82	32	7	0	0	0
	EL PASO	94	72	96	69	83	1	0.00	-0.39	0.00	3.45	155	3.61	95	68	30	7	0	0	0
	FORT WORTH	101	79	102	78	90	4	0.00	-0.50	0.00	1.79	34	16.20	79	74	30	7	0	0	0
	GALVESTON	89	80	92	78	85	1	0.31	-0.57	0.22	9.66	115	18.77	85	87	66	1	0	2	0
	HOUSTON	95	74	97	72	85	2	0.03	-0.71	0.03	10.44	122	21.99	84	97	50	7	0	1	0
	LUBBOCK	97	73	101	69	85	5	0.01	-0.51	0.01	5.32	104	14.65	142	58	26	7	0	1	0
	MIDLAND	99	73	103	69	86	4	0.59	0.20	0.59	3.50	107	6.33	82	59	20	7	0	1	1
	SAN ANGELO	100	73	103	69	86	3	0.04	-0.19	0.04	5.39	159	11.73	108	77	26	7	0	1	0
	SAN ANTONIO	97	74	99	73	86	0	0.00	-0.44	0.00	5.34	89	12.60	71	92	36	7	0	0	0
	VICTORIA	93	73	94	72	83	-1	0.17	-0.48	0.17	7.06	86	19.80	95	100	54	7	0	1	0
	WACO	99	77	101	76	88	2	0.00	-0.37	0.00	3.39	64	14.10	74	89	35	7	0	0	0
	WICHITA FALLS	105	78	108	74	91	6	0.00	-0.35	0.00	4.62	88	22.11	130	65	25	7	0	0	0
UT	SALT LAKE CITY	91	67	96	59	79	0	0.22	0.03	0.22	1.07	60	9.73	98	60	22	3	0	1	0
VT	BURLINGTON	88	64	96	62	76	5	0.12	-0.74	0.12	3.82	54	13.81	74	93	41	3	0	1	0
VA	LYNCHBURG	94	66	97	63	80	4	0.68	-0.26	0.56	5.99	79	19.17	80	94	38	7	0	3	1
	NORFOLK	92	75	96	73	84	5	0.16	-1.03	0.16	9.79	110	26.43	99	88	47	6	0	1	0
	RICHMOND	95	70	100	67	83	4	0.03	-1.14	0.03	9.09	105	24.65	97	92	40	7	0	1	0
	ROANOKE	93	70	96	67	81	5	0.63	-0.31	0.39	6.55	92	20.14	86	85	39	6	0	2	0
	WASH/DULLES	94	64	98	63	79	3	0.73	-0.07	0.35	5.62	76	21.97	95	97	37	7	0	4	0
WA	OLYMPIA	79	47	86	42	63	-1	0.01	-0.16	0.01	2.47	101	38.97	147	97	36	0	0	1	0
	QUILLAYUTE	67	47	72	40	57	-3	0.03	-0.52	0.01	6.80	120	73.20	128	99	66	0	0	3	0
	SEATTLE-TACOMA	75	54	83	50	64	-2	0.00	-0.17	0.00	3.33	146	24.28	126	90	40	0	0	0	0
	SPOKANE	88	57	97	49	72	2	0.00	-0.14	0.00	1.51	78	8.52	90	63	19	3	0	0	0
	YAKIMA	91	51	99	43	71	1	0.00	-0.03	0.00	0.82	119	4.08	95	81	19	4	0	0	0
WV	BECKLEY	85	66	90	63	75	5	1.19	0.17	0.59	5.31	62	21.66	86	99	55	1	0	4	2
	CHARLESTON	93	69	97	64	81	6	4.04	2.91	3.46	6.75	79	21.86	86	98	44	7	0	3	2
	ELKINS	87	60	93	53	73	4	0.48	-0.54	0.28	3.22	36	22.24	83	99	45	1	0	3	0
	HUNTINGTON	97	70	101	65	84	9	1.03	-0.03	0.76	3.49	43	17.88	71	94	37	7	0	4	1
WI	EAU CLAIRE	92	65	101	57	79	7	0.93	0.01	0.32	8.10	99	22.61	124	92	39	3	0	4	0
	GREEN BAY	88	63	96	58	75	6	0.40	-0.31	0.20	9.73	150	18.24	115	95	51	2	0	3	0
	LACROSSE	92	70	100	65	81	7	1.85	1.00	0.91	8.57	111	23.34	132	97	50	4	0	5	2
	MADISON	90	67	97	63	79	7	0.99	0.19	0.71	10.13	144	24.23	140	96	55	3	0	4	1
	MILWAUKEE	89	71	99	70	80	8	0.19	-0.61	0.16	12.57	187	29.16	155	90	48	3	0	2	0
WY	CASPER	90	58	97	51	74	2	0.13	-0.11	0.12	2.04	75	6.83	80	65	13	5	0	2	0
	CHEYENNE	83	59	90	52	71	2	0.91	0.46	0.73	4.63	111	12.63	130	83	33	1	0	5	1
	LANDER	87	58	93	55	73	1	0.06	-0.08	0.06	1.19	52	10.05	113	55	21	3	0	1	0
	SHERIDAN	91	55	104	49	73	2	0.04	-0.10	0.02	1.75	56	8.60	90	67	17	5	0	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

July 19-25, 1999

HIGHLIGHTS

Crop conditions deteriorated in many areas east of the Rocky Mountains due to increasing moisture shortages. Several days of record and near-record high temperatures contributed to the stressful conditions in many areas, except along the northern Corn Belt where daily storms provided ample moisture for crop development. Some crops were damaged by isolated flooding in northern Iowa. The heat quickly dried ripening small grains in the Corn Belt and northern Great Plains, and dry weather in most areas aided wheat, barley, and oat harvest progress. Seasonally mild temperatures in the southern Great Plains benefited crops, but more heat is still needed in the Southwest.

Corn: Acreage silking or beyond was at 75 percent, slightly behind last year's 77-percent pace, but well ahead of the 57-percent average. Hot weather promoted rapid development in the western Corn Belt, as over half of the acreage entered the silking stage in Iowa, Nebraska, and Minnesota. Corn in the dough stage or beyond was at 11 percent, equal to last year's pace and slightly ahead of the 5-year average. Progress was most advanced in the Southeast and southern Great Plains, especially in Georgia where nearly all of the acreage was at the dough stage or beyond. Acreage in the dough stage accelerated in the southern and eastern Corn Belt, and was ahead of normal in Illinois, Indiana, Kentucky, Ohio, and Pennsylvania. Conditions continued to deteriorate in many areas due to moisture shortages and several days of excessive heat. Fields in Kentucky, Missouri, and southern Illinois suffered most, while rain aided many fields in Iowa, Minnesota, and Wisconsin. Scattered rains relieved excessive dryness in parts of Illinois, Indiana, and Ohio, but moisture shortages persisted in most areas. Isolated flooding damaged some fields in northern Iowa, while southern areas of the State were too dry.

Soybeans: Seventy-four percent of the acreage was blooming, ahead of last year's 72-percent progress and 14 percentage points ahead of the average. Above-normal temperatures promoted rapid blooming in the western Corn Belt, but development lagged in Kansas, Minnesota, and Missouri, and to a lesser extent in Iowa and Nebraska. Soybeans setting pods advanced to 27 percent, slightly behind last year, but ahead of the normal for this date. Progress was most advanced in the lower Mississippi Valley, especially in Mississippi, where three-fourths of the acreage was setting pods. Pod setting was well ahead of normal in the eastern Corn Belt and slightly ahead of the average in most areas of the western Corn Belt. About one-fourth of the acreage began setting pods in Iowa, Michigan, and Kentucky. Heat and dry soils stressed soybeans in many areas of the Corn Belt, especially southern areas near the Ohio and Missouri Valleys. Some fields were flooded by heavy rains in Iowa.

Cotton: Ninety-three percent of the acreage was at the squaring stage or beyond, compared with 92 percent last year and the average of 94 percent. Squaring progress accelerated in Oklahoma due to warmer weather, but remained well behind last year and the average. Fields steadily advanced to the squaring stage in the Atlantic Coastal Plains, while virtually all cotton was squaring in the Mississippi Delta States. Sixty-one percent of the acreage was setting bolls, 10 percentage points behind last year, but only 4 percentage points behind the average. Progress was substantially behind normal in South Carolina, and lagged in the Southwest due to cool weather. Increasing dryness stressed fields in Missouri and Tennessee.

All Wheat: Spring wheat was 88 percent headed, well behind last year's 98-percent pace, but just 5 percentage points behind the 5-year average. Warm weather accelerated ripening in North Dakota and eastern Idaho. One percent of the acreage was harvested, equal to the normal pace, but slightly behind last year. Dry weather allowed the harvest season to begin in South Dakota, but late crop development delayed the opening of the harvest season in Minnesota. Hot, dry weather stressed ripening fields in the northern Great Plains, especially in Montana. The winter wheat harvest advanced to 86 percent complete, equal to a year ago, but 4 percentage points ahead of the 5-year average. Aided by dry weather, growers rapidly harvested winter wheat in the central and northern Great Plains. The harvest pace accelerated in the Pacific Northwest, but lagged behind the 5-year average in Washington.

Other small grains: The barley crop was 90 percent headed, behind last year's 97-percent pace and the 94-percent average for this date. Crop development lagged in North Dakota, despite above-normal temperatures that quickly ripened fields. One percent of the acreage was harvested, compared with 3 percent last year and 2 percent normally harvested by this date. Ripening fields were stressed by hot weather and dry soils in the northern Great Plains. Oats headed reached 95 percent, behind last year and the average, while harvest progress advanced to 20 percent, 6 percentage points behind last year, but ahead of the 5-year average. Hot weather accelerated crop development in the Corn Belt and North Dakota. The harvest rapidly progressed in most of the Corn Belt. Excessive rainfall hindered progress in parts of Iowa and Wisconsin. Late fields were stressed by hot, dry weather in Michigan and Ohio.

Rice: Thirty-eight percent of the rice acreage was headed, equal to the 5-year average, but behind the 43-percent pace a year ago. Development remained ahead of normal along the Gulf Coast, but continued to lag in inland areas of the Mississippi Delta, despite warmer weather in Arkansas and Mississippi. Water supplies rapidly diminished in Mississippi, and cool weather hindered crop progress in California.

Other crops: Sorghum was 33 percent headed, and 19 percent of the acreage was turning color. Development lagged behind last year, when 44 percent was headed and 21 percent was turning color. Normally, 41 percent would be headed and 23 percent turning color. Fields rapidly advanced into the heading stage in the Corn Belt and central Great Plains, while fields in the lower Mississippi Valley rapidly turned color. Eighty-seven percent of the peanuts were pegging, slightly ahead of last year's pace and ahead of normal in most peanut-producing States.

Crop Progress and Condition

Week Ending August 1, 1999

Soybeans Percent Blooming

	Aug 1 1999	Prev Week	Prev Year	5-Yr Avg
AL	38	36	63	55
AR	67	48	68	56
GA	72	65	64	64
IL	94	82	81	74
IN	95	92	76	73
IA	95	87	94	89
KS	66	48	87	72
KY	69	59	45	45
LA	96	91	95	87
MI	90	77	86	65
MN	92	81	98	91
MS	97	93	97	83
MO	63	46	71	59
NE	84	73	89	82
NC	35	23	44	39
OH	95	88	88	78
SC	38	22	45	42
SD	82	58	84	72
TN	65	49	51	49
19 Sts	85	74	83	75

These 19 States planted 93% of last year's soybean acreage.

Soybeans Percent Setting Pods

	Aug 1 1999	Prev Week	Prev Year	5-Yr Avg
AL	20	18	44	29
AR	26	15	27	23
GA	36	29	35	36
IL	56	26	37	30
IN	53	38	34	25
IA	64	40	67	52
KS	26	14	41	30
KY	40	33	26	20
LA	70	62	75	59
MI	56	28	59	26
MN	31	16	62	41
MS	85	75	76	53
MO	21	11	32	23
NE	30	15	39	34
NC	15	10	23	17
OH	59	30	40	31
SC	14	6	15	17
SD	35	23	43	35
TN	40	26	26	21
19 Sts	46	27	46	34

These 19 States planted 93% of last year's soybean acreage.

Winter Wheat Percent Harvested

	Aug 1 1999	Prev Week	Prev Year	5-Yr Avg
AR	100	100	100	100
CA	98	97	98	99
CO	97	95	96	94
GA	100	100	100	100
ID	6	1	13	15
IL	100	100	99	99
IN	100	100	100	98
KS	100	100	100	100
MI	100	98	100	84
MO	100	100	100	100
MT	31	*7	54	22
NE	97	93	95	93
NC	100	100	100	99
OH	100	100	100	98
OK	100	100	100	100
OR	48	19	30	39
SD	86	67	91	66
TX	100	99	100	100
WA	18	8	30	33
19 Sts	89	86	90	88

These 19 States planted 92% of last year's winter wheat acreage.

Barley Percent Headed

	Aug 1 1999	Prev Week	Prev Year	5-Yr Avg
ID	100	92	96	98
MN	99	98	99	99
MT	98	95	100	98
ND	91	82	100	97
SD	100	99	100	100
WA	100	100	100	100
6 Sts	96	90	99	98

These 6 States planted 83% of last year's barley acreage.

Barley Percent Harvested

	Aug 1 1999	Prev Week	Prev Year	5-Yr Avg
ID	2	0	5	6
MN	9	0	24	10
MT	5	0	6	2
ND	3	0	22	6
SD	19	4	40	22
WA	6	5	16	21
6 Sts	4	1	15	7

These 6 States planted 84% of last year's barley acreage.

Corn Percent Silking

	Aug 1 1999	Prev Week	Prev Year	5-Yr Avg
CO	67	28	77	57
GA	100	100	100	100
IL	97	86	90	84
IN	98	92	82	73
IA	92	73	93	81
KS	93	77	99	89
KY	97	92	91	82
MI	94	73	80	57
MN	96	80	98	88
MO	90	78	93	81
NE	93	77	93	80
NC	92	88	87	95
OH	95	85	80	63
PA	75	58	72	63
SD	59	27	75	53
TX	93	80	96	95
WI	91	59	88	63
17 Sts	91	75	89	78

These 17 States planted 90% of last year's corn acreage.

Corn Percent Dough

	Aug 1 1999	Prev Week	Prev Year	5-Yr Avg
CO	2	0	9	7
GA	98	94	94	97
IL	44	19	32	21
IN	33	15	22	13
IA	6	0	9	6
KS	35	16	42	37
KY	58	33	29	28
MI	0	0	0	0
MN	1	0	3	1
MO	51	32	54	41
NE	12	4	13	13
NC	60	55	65	76
OH	30	10	14	9
PA	23	17	22	9
SD	15	2	17	8
TX	77	62	81	75
WI	20	0	22	8
17 Sts	24	11	22	16

These 17 States planted 90% of last year's corn acreage.

Crop Progress and Condition

Week Ending August 1, 1999

Cotton Percent Squaring

	Aug 1 1999	Prev Week	Prev Year	5-Yr Avg
AL	97	95	98	97
AZ	100	99	100	100
AR	100	100	100	100
CA	95	90	76	95
GA	98	97	100	100
LA	100	100	100	100
MS	100	100	100	100
MO	100	100	100	100
NM	95	88	99	98
NC	96	85	95	94
OK	78	60	94	95
SC	98	95	99	98
TN	100	100	100	100
TX	95	90	97	96
14 Sts	97	93	97	97

These 14 States planted 98% of last year's cotton acreage.

Cotton Percent Setting Bolls

	Aug 1 1999	Prev Week	Prev Year	5-Yr Avg
AL	76	72	86	79
AZ	86	77	98	94
AR	97	90	97	95
CA	65	40	18	73
GA	85	74	93	93
LA	100	87	100	98
MS	98	96	100	97
MO	100	95	99	92
NM	75	60	78	79
NC	80	60	66	75
OK	55	18	71	55
SC	60	33	80	75
TN	93	87	93	92
TX	66	45	81	66
14 Sts	77	61	82	78

These 14 States planted 98% of last year's cotton acreage.

Peanuts Percent Pegging

	Aug 1 1999	Prev Week	Prev Year	5-Yr Avg
AL	92	88	90	85
FL	93	93	83	NA
GA	97	91	98	99
NC	98	90	84	66
OK	88	*84	93	91
SC	85	73	73	54
TX	82	78	77	NA
VA	98	95	97	57
8 Sts	92	87	89	NA

These 8 States planted 99% of last year's peanut acreage.

Sorghum Percent Headed

	Aug 1 1999	Prev Week	Prev Year	5-Yr Avg
AR	88	79	86	80
CO	7	5	12	13
IL	64	25	23	25
KS	36	18	42	35
LA	97	96	95	91
MS	91	86	98	94
MO	52	30	70	53
NE	28	10	42	32
NM	25	8	2	9
OK	23	*12	19	32
SD	24	20	28	25
TX	66	55	74	78
12 Sts	48	33	54	52

These 12 States planted 99% of last year's sorghum acreage.

Sorghum Percent Coloring

	Aug 1 1999	Prev Week	Prev Year	5-Yr Avg
AR	22	13	24	26
CO	0	0	0	0
IL	9	0	1	3
KS	0	0	2	2
LA	65	38	51	44
MS	48	28	56	49
MO	9	2	7	5
NE	0	0	0	0
NM	0	0	0	0
OK	5	*4	7	9
SD	20	8	3	2
TX	52	48	59	61
12 Sts	22	19	25	25

These 12 States planted 99% of last year's sorghum acreage.

Oats Percent Harvested

	Aug 1 1999	Prev Week	Prev Year	5-Yr Avg
IA	90	58	90	74
MI	45	19	50	24
MN	21	5	53	24
NE	86	63	86	83
ND	4	0	13	4
OH	84	62	56	51
PA	45	33	45	35
SD	48	18	56	34
WI	38	6	59	26
9 Sts	40	20	50	31

These 9 States planted 69% of last year's oat acreage.

Rice Percent Headed

	Aug 1 1999	Prev Week	Prev Year	5-Yr Avg
AR	40	22	49	45
CA	7	5	0	10
LA	87	83	91	78
MS	53	30	72	67
TX	89	84	92	85
5 Sts	50	38	56	52

These 5 States planted 96% of last year's rice acreage.

Rice Percent Harvested

	Aug 1 1999	Prev Week	Prev Year	5-Yr Avg
AR	0	NA	0	0
CA	0	NA	0	0
LA	20	NA	25	17
MS	0	NA	0	0
TX	11	NA	8	9
5 Sts	5	NA	6	4

These 5 States planted 96% of last year's rice acreage.

Spring Wheat Percent Headed

	Aug 1 1999	Prev Week	Prev Year	5-Yr Avg
ID	100	93	95	98
MN	99	96	99	98
MT	97	90	100	99
ND	92	82	100	96
SD	100	99	100	100
5 Sts	96	88	100	98

These 5 States planted 96% of last year's spring wheat acreage.

Spring Wheat Percent Harvested

	Aug 1 1999	Prev Week	Prev Year	5-Yr Avg
ID	1	0	3	3
MN	6	0	15	8
MT	4	0	4	2
ND	3	0	10	3
SD	20	4	33	16
5 Sts	6	1	12	5

These 5 States planted 96% of last year's spring wheat acreage.

Crop Progress and Condition

Week Ending August 1, 1999

Soybeans Crop Condition by Percent

	VP	P	F	G	EX
AL	0	8	31	50	11
AR	2	10	32	45	11
GA	9	18	39	31	3
IL	2	10	35	43	10
IN	5	14	38	34	9
IA	2	5	23	50	20
KS	0	9	30	54	7
KY	5	15	34	42	4
LA	0	5	22	61	12
MI	1	7	21	49	22
MN	3	7	29	49	12
MS	3	9	29	49	10
MO	7	22	46	23	2
NE	1	7	27	53	12
NC	0	3	26	66	5
OH	4	11	29	44	12
SC	1	10	36	51	2
SD	2	4	16	49	29
TN	6	15	31	42	6
19 Sts	3	10	30	45	12
Prev Wk	2	7	26	50	15
Prev Yr	3	8	24	48	17

Sorghum Crop Condition by Percent

	VP	P	F	G	EX
AR	1	9	38	43	9
CO	0	0	6	77	17
IL	1	14	37	47	1
KS	0	4	21	66	9
LA	1	4	25	65	5
MS	0	4	19	60	17
MO	7	20	46	25	2
NE	0	4	30	58	8
NM	0	1	51	47	1
OK	0	4	44	49	3
SD	0	1	11	68	20
TX	0	7	26	50	17
12 Sts	0	6	26	56	12
Prev Wk	1	4	22	61	12
Prev Yr	10	16	23	42	9

Rice Crop Condition by Percent

	VP	P	F	G	EX
AR	0	2	24	50	24
CA	0	0	20	80	0
LA	0	1	24	59	16
MS	1	2	24	51	22
TX	0	0	13	49	38
5 Sts	0	1	22	57	20
Prev Wk	0	2	18	59	21
Prev Yr	1	5	29	55	10

Corn Crop Condition by Percent

	VP	P	F	G	EX
CO	1	2	10	63	24
GA	14	17	29	35	5
IL	3	11	30	46	10
IN	7	19	36	30	8
IA	2	5	23	47	23
KS	1	4	22	61	12
KY	5	14	28	48	5
MI	2	9	21	45	23
MN	1	7	23	50	19
MO	10	18	45	24	3
NE	1	6	24	49	20
NC	1	8	30	51	10
OH	7	13	31	38	11
PA	25	34	24	14	3
SD	2	2	17	50	29
TX	0	2	16	61	21
WI	1	2	10	54	33
17 Sts	3	9	25	46	17
Prev Wk	2	7	21	50	20
Prev Yr	3	7	22	49	19

Cotton Crop Condition by Percent

	VP	P	F	G	EX
AL	0	6	35	50	9
AZ	0	8	37	45	10
AR	0	4	26	51	19
CA	0	0	5	95	0
GA	5	11	32	39	13
LA	0	5	25	56	14
MS	1	7	23	53	16
MO	6	16	39	30	9
NM	3	5	41	40	11
NC	0	3	26	64	7
OK	0	15	42	40	3
SC	1	5	32	56	6
TN	3	15	34	40	8
TX	3	15	37	37	8
14 Sts	2	11	31	46	10
Prev Wk	2	10	28	48	12
Prev Yr	15	18	33	29	5

Spring Wheat Crop Condition by Percent

	VP	P	F	G	EX
ID	0	3	13	68	16
MN	3	16	30	43	8
MT	1	10	31	42	16
ND	1	6	24	56	13
SD	1	3	17	51	28
5 Sts	1	8	25	51	15
Prev Wk	3	8	25	52	12
Prev Yr	1	6	31	49	13

Oats Crop Condition by Percent

	VP	P	F	G	EX
IA	1	4	20	54	21
MI	1	3	21	51	24
MN	1	14	29	48	8
NE	0	0	11	49	40
ND	0	4	26	61	9
OH	1	5	45	44	5
PA	3	21	40	34	2
SD	0	2	10	65	23
WI	0	3	20	58	19
9 Sts	1	6	23	54	16
Prev Wk	1	5	22	56	16
Prev Yr	1	6	29	53	11

Peanuts Crop Condition by Percent

	VP	P	F	G	EX
AL	0	0	22	48	30
FL	0	12	4	66	18
GA	1	6	29	51	13
NC	0	0	11	85	4
OK	1	10	36	43	10
SC	0	6	33	49	12
TX	1	7	24	49	19
VA	0	0	4	70	26
8 Sts	1	5	23	54	17
Prev Wk	0	3	17	58	22
Prev Yr	4	14	26	44	12

Barley Crop Condition by Percent

	VP	P	F	G	EX
ID	0	2	19	57	22
MN	6	19	35	35	5
MT	5	17	47	23	8
ND	1	4	25	56	14
SD	1	2	8	69	20
WA	15	26	40	19	0
6 Sts	4	11	32	41	12
Prev Wk	3	10	28	47	12
Prev Yr	1	5	28	53	13

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

*** - Revised**

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/oce/waob/jawf.

ALABAMA: Days suitable for fieldwork 6.3. Soil moisture supplies dropped in the wake of a hot, dry week. Topsoil 10% very short, 33% short, 54% adequate, 3% surplus. Corn 79% doughed, 61% dented, 77% 1998, 77% average. Corn mature 30%, 47% 1998, 39% average. Corn 1% harvested, 14% 1998, 7% average. Corn 3% poor, 16% fair, 60% good, 21% excellent. Pasture feed 1% very poor, 8% poor, 24% fair, 54% good, 13% excellent. Livestock 2% poor, 17% fair, 48% good, 33% excellent.

ALASKA: Days suitable for fieldwork 3.1. Another cool, cloudy, damp week hindered progress of the areas hay harvest. Daytime high temperatures were mostly in the sixties with lows mostly in the forties. Topsoil moisture supplies, 15% short, 85% adequate. Subsoil moisture supplies, 25% short, 75% adequate. Oats 55% headed, 45% in dough. Barley, 30% headed, 70% in dough .Barley 10% poor, 30% fair, 40 good, 20% excellent. Hay 80% harvested. Average height of second crop hay, 9" Potato plants 55% bloomed. Wind damage to crops 90% none, 10 light. Major activities included: Harvesting lettuce, greens, radishes, squash, broccoli, peas, beets, Chinese vegetables,weed control, cutting hay, harvesting hay when conditions allowed, grass seed harvest, and machinery repair.

ARIZONA: Pasture conditions steadily improved throughout the state last month with the arrival of the summer monsoons. Pastures throughout the state ranged from fair to excellent condition. Livestock were reported in fair to good condition. Many ranchers are reporting widespread rains and no supplemental feeding. The ranges are greening up, but need more time to bulk. Both stockwater and soil moisture were short to adequate. Insect damage was light. Overall, northern grazing conditions improved in July going from poor in June to good to fair condition. Low elevation pastures were in mainly good to fair condition. Mid elevation pastures were mainly in fair to good condition while high elevation pastures were in good to fair condition. Cattle were reported in fair to good condition. Stock water supplies, soil moisture were both reported as short to adequate. Many ranchers are reporting drought conditions have ended with the arrival of widespread rains. Insect damage was light. Central area pasture conditions were in fair to excellent condition overall. Low elevation pastures were reported as fair to good; mid level elevation were mainly excellent to fair; and high elevation pastures were good to fair. Livestock conditions were fair to good and both stock water, soil moisture were short to adequate. Ranchers reported that the ranges had received heavy rains, grasses were greening up, but need more time to bulk. Insect damage was light. Southern pasture conditions at all elevations were in excellent to fair condition. Ranchers reported that the rains were not as widespread as other regions of the state. Livestock conditions were good to fair with no supplemental feeding reported for the month of July. Both stock water, soil moisture were short to adequate, insect damage was very light. Pasture conditions steadily improved throughout the state. Pastures throughout the state ranged from fair to excellent condition. Livestock were reported in fair to good condition. Both stock water and soil moisture were short to adequate. Insect damage was light. Overall, northern grazing conditions improved in July going from poor in June to good to fair condition. Low elevation pastures were in mainly good to fair condition. Mid elevation pastures were mainly in fair to good condition while high elevation pastures were in good to fair condition. Cattle were reported in fair to good condition. Stock water supplies, soil moisture were both reported as short to adequate. Insect damage was light. Central Areas pasture conditions were in fair to excellent condition overall. Low elevation pastures were reported as fair to good; mid level elevation were mainly excellent to fair; and high elevation pastures were good to fair. Livestock conditions were fair to good and both stock water, soil moisture were short to adequate. Insect damage was light. Southern pasture conditions at all elevations were in excellent to fair condition. Livestock conditions were good to fair with no supplemental feeding reported for the month of July. Both stock water, soil moisture were short to adequate and insect damage was very light. Cotton squaring is equal to both last year, the 5 year average. As of August 1, 100% of the cotton was reported squared. Cotton setting bolls increased to 86%t compared to 98% 1998, the five year average of 94%. Cotton condition is reported as 8% poor, 37% fair, 45% good, 10% excellent. Alfalfa harvest activity was reported as 41% not being harvested, 4% light, 13% moderate, 42% active. Alfalfa condition was reported as 1% poor, 13% fair, 71% good, 15% excellent. Central Areas producers shipped a variety of melons, grapes last week. Grape shipments included beauty, flame seedless, Thompsons. Melon shipments included canary, cantaloupe, honeydew, orange flesh, Santa Claus, watermelons. Eastern Areas producers shipped greenhouse tomatoes. Western producers harvested cantaloupes, honeydew, Thompson seedless grapes.

ARKANSAS: Days suitable for fieldwork 7. The temperatures for this past period were warmer than normal, very dry in most areas of the state. Temperatures reached an upward of 106 in some parts of the state with most areas at or above 100^0 all week. Only a few areas had an excess of 1 in. rain this week. Most crops were reported in good condition. Topsoil moisture 22% very short, 55% short, 23% adequate, 0% surplus. Livestock were reported in good condition, but the hot, humid weather was causing deaths in poultry, livestock. The main farm activities were: Fertilizing cotton, corn, rice, warm season forages, finishing harvesting hay. Other activities: Irrigating corn, soybeans, cotton, sorghum, rice, cultivating cotton, spraying cotton for boll weevils, bullworms, other fields for insects, weeds, putting down lime, scouting for sheath blight in rice, spraying of rice, cotton, soybean fields for weeds, applying mid-season nitrogen applications to rice, tree fruit, small fruit harvesting, dusting ear tagging cattle for external parasites, vaccinating cattle, weaning calves. Cotton 100% squared, 97% setting bolls, 4% poor 26% fair 51% good 19% excellent; Soybeans 67% bloomed, 26% setting pods, 2% very poor 10% poor 32% fair 45% good 11% excellent; Sorghum 88% headed, 22% turning color 1% very poor, 9% poor, 38% fair, 43% good, 9% excellent; Wheat 100% harvested; Oats 100% harvested, Alfalfa n 1% very poor, 6% poor, 32% fair,, 52% good, 9% excellent; Other Hay 2% very poor, 10% poor, 37% fair ,46% good, 5% excellent; Range, pastures 2% very poor, 15% poor, 38% fair, 41% good, 4% excellent.

CALIFORNIA: Field activities progressed normally under ideal conditions in most areas. A few late dryland wheat fields were still being harvested in Fresno, Tulare Counties. Wheat straw was baled, stacked. Rice fields were fertilized ,sprayed for armyworms, water grass. Recent cool temperatures delayed rice head development by 1 to 2 weeks. Cotton was blooming, setting bolls in the San Joaquin, Sacramento Valleys. Imperial Valley cotton had open bolls on nearly half the acreage. The cool weather was beneficial for cotton growth; square shedding was minimal. Cotton growers continued spraying for aphids, armyworms, leafhoppers, lygus. Blackeye beans, seed alfalfa were drying for harvest in the San Joaquin Valley, treatments for aphids, lygus, mites were ongoing. Garbanzo bean, safflower harvests were underway in central, southern counties. Lygus treatments were winding down in safflower fields. Corn silage harvest was active in the southern San Joaquin Valley. Cooler-than-normal weather caused corn grain fields to be developmentally delayed by two weeks in some areas. Old crop sugarbeet harvest continued, new crop fields were thriving. Alfalfa, sudangrass were cut for hay or greenchopped; some fields were sprayed for armyworms. The harvest of grapes for fresh consumption gained momentum in the San Joaquin Valley. Varieties picked included Perlette, Flame Seedless. Other cultural activities in vineyards, orchards included irrigation, extensive weed control. Harvest continued in plums, nectarines, clingstone, freestone peaches. Good stone fruit quality was noted. Apple trees were treated for codling moth. Picking of early variety apples was active. Olive trees were showing a good set, maturing well. Bartlett pear harvest continued in the Sacramento River delta area. Asian pear harvest was active in the San Joaquin Valley. Tree limbs in almond orchards remained supported to bear the heavy nut set. The almond crop was nearing full maturity, with some hull splitting reported. Pistachio trees were sprayed with fungicides. Walnut trees were treated for blight. Valencia oranges, lemons were picked in southern Areas. Strawberry fields were being cultivated, prepared for new plantings. The pace of the processing tomato harvest increased as fields in the San Joaquin Valley were harvested. Some processing and fresh market tomato fields were treated for aphids, loopers and fruit worms, but insect pressure was generally low. Some blight was reported. Fresh tomato harvest was in full swing. The cantaloupe, honeydew, mixed melon harvest continued. Quality was good. Aphid sprays were applied to cantaloupes. Excellent watermelon quality was reported, with little sunburn or internal breakdown. Low demand for eggplant has led to some fields being abandoned. Sweet corn picking continued. Planting of cauliflower sets for winter harvest was underway. Pumpkins were treated to control aphids, white flies. Among the multitude of vegetable crops harvested were basil, chives, broccoli, cauliflower, cucumbers, horseradish, parsley, peppers, radishes, squash. Irrigated pastures remained in good condition. Mild weather was reducing the irrigation requirements of pastures, improving conditions of milk and beef cattle. Livestock were in good condition. Cooler temperatures at higher elevations slowed the maturity of non-irrigated pastures. Most dry foothill pastures remained idle, awaiting the return of cattle or sheep for winter grazing. Fire danger was high. Grasshopper populations were beginning to decline in central areas.

COLORADO: Days suitable for fieldwork 5.7. Topsoil moisture 14% very short, 22% short, 58% adequate, 6% surplus. Subsoil moisture 13% very short, 26% short, 57% adequate, 4% surplus. Seasonal weather patterns continued during the week with warm temperatures, widely scattered

afternoon thundershowers. Locally heavy rains late in the week resulted in some flooding of low lying areas. Spring wheat 68% turning color, 63% 1998, 68% avg.; 19% harvested, 16% 1998, 12% avg.; 9% poor, 18% fair, 53% good, 20% excellent. Spring barley 91% turning color, 80% 1998, 71% avg.; 15% harvested, 16% 1998 , 17% avg.; 5% poor, 14% fair, 51% good, 30% excellent. Oats 76% turning color, 72% 1998, 78% avg.; 40% harvested, 34% 1998, 43% avg.; 3% poor, 20% fair, 63% good, 14% excellent. Dry onions 1% very poor, 2% poor, 14% fair, 54% good, 29% excellent. Sugar beets 4% poor, 12% fair, 51% good, 33% excellent. Dry beans 57% flowered, 66% 1998, 64% avg.; 3% poor, 20% fair, 62% good, 15% excellent. Summer potatoes 1% harvested, 1% 1998, 4% avg.; 2% poor, 8% fair, 65% good, 25% excellent. Fall potatoes 4% poor, 12% fair, 42% good, 42% excellent. Alfalfa 51% 2nd cutting, 57% 1998, 61% avg.; 3% poor, 23% fair, 55% good, 19% excellent. Pasture and range feed in mostly good condition.

DELAWARE: Days suitable for fieldwork 7.0. Topsoil moisture 7% very short, 90% short, 3% adequate. Subsoil moisture 4% very short, 92% short, 4% adequate. Field corn 9% very poor, 25% poor, 33% fair, 25% good, 8% excellent.; 90% silked, 74% 1998, 79% avg.; 24% dough, 25% 1998, 22% avg.; 9% dented, 8% 1998, 4% avg. Soybeans 5% very poor, 17% poor, 29% fair, 49% good, 27% bloomed, 28% 1998, 43% avg.; 14% setting pods, 14% 1998, 12% avg. Sorghum 4% poor, 46% fair, 50% good, 25% headed, 25% 1998, 33% avg; 10% turned, 0% 1998, 0% avg. Sweet corn 45% harvested, 34% 1998, 43% avg. Snap beans 50% harvested, 36% 1998, 42% avg. Cantaloupes 23% harvested, 39% 1998, 39% avg. Watermelons 30% harvested, 25% 1998, 21% avg. Cucumbers 38% harvested, 39% 1998, 50% avg. Lima beans 35% harvested, 28% 1998, 14% avg. Tomatoes 25% harvested, 30% 1998, 29% avg. Potatoes 45% harvested, 30% 1998, 40% avg. Apples 10% harvested, 5% 1998, 3% avg. Peaches 28% harvested, 37% 1998, 37% avg. Clover, other hay 76% 2nd cutting, 98% 1998, 90% avg.; 66% 3rd cutting, 65% 1998, 27% avg. Alfalfa hay 65% 3rd cutting harvested, 39% 1998, 34% avg. Hay supplies 51% short, 49% adequate. Pasture 3% very poor, 63% poor, 22% fair, 12% good. Activities: Maintaining irrigation equipment, continued vegetable harvesting, livestock stressed by extremely hot temperatures.

FLORIDA: Widely scattered showers left many localities dry. Daily showers, some western Panhandle areas. Many Peninsula localities received no rain. Most major stations reported less than 1.00 in. Rainfall ranged from 0.00 in. at Jacksonville to a little over 1.00 in. at Pensacola. Temperatures soared to record highs many locations. Several reported highs in 100s on at least one day. Daily highs, major stations, averaged 90s; lows 70s, 80s. Topsoil moisture mostly adequate to short with few reports very short supplies. Hay making underway. Cotton, soybeans, sugarcane, tobacco condition continues mostly normal. Some corn harvesting underway. Tobacco harvest active. Peanut 12% poor, 4% fair, 66% good, 18% excellent. Growers reported peanuts pegging at 93%. Tomato transplanting, Quincy, 75 to 80% finished; growers expected to wrap up planting over next 2 to 3 weeks. Some Sumter County summer crop vegetables suffering from hot weather. Vegetable planting for fall harvest active in northern parts East Coast region. Dry soils delaying some laying of plastic, southern half of Peninsula. Hot, all citrus areas. Some areas adequate rain, others irrigating. Generally abundant new growth in well cared for groves. New crop fruit sizing well where irrigation being used. Caretakers cutting cover crops to help save moisture. Some spraying, fertilizing, removing dead trees, a few resets being planted where irrigation available. Pasture feed 25% fair, good 75%. Condition of cattle; 5% poor, 10% fair, 85% good. Statewide, condition of range, pasture generally improved. Dry conditions good for haying operations; however, central area pasture beginning to need rain. Cattle, calves mostly in good condition.

GEORGIA: Days suitable for field work 6.5. Soil moisture 13% very short, 46% short, 39% adequate, 2% surplus. Corn 85% dent, 78% 1998, 86% avg.; 56% mature, 51% 1998, 57% avg.; 10% harvested for grain, 6% 1998, 6% avg. Hay 4% very poor, 12% poor, 38% fair, 42% good, 4% excellent. Sorghum 6% very poor, 13% poor, 37% fair, 37% good, 7% excellent. Tobacco 7% very poor, 18% poor, 41% fair, 33% good, 1% excellent; 52% harvested, 35% 1998, 58% avg. Watermelons 93% harvested, 95% 1998, 93% avg. Apples 23% fair, 50% good, 27% excellent; 3% harvested, 2% 1998, 3% avg. Peaches 93% harvested, 90% 1998, 95% avg. Pecans 3% very poor, 6% poor, 32% fair, 48% good, 11% excellent. Last week's hot temperatures stressed soil moisture, crops. The heat brought maximum temperatures over 100^0 in many areas of the state. The high temperatures dried out soils. Grain condition slipped last week. Corn matured near the five year average pace while harvesting occurred ahead of the average pace. Soybean condition deteriorated. Blooming continued ahead of the five year average pace. The dry weather wilted cotton in some areas. Spraying for bollworms occurred in isolated areas. Overall condition declined. Tobacco harvest continued behind the 5-year average pace. Tomato Spotted Wilt Virus affected peanuts in some areas. Overall peanut condition declined. Hay, pasture condition deteriorated last week due to the hot, dry weather. Insect control continued on pecan orchards last week while condition fell. Apple condition remained in fair to excellent condition as harvesting continued. Watermelon, peach harvests neared completion. Other activities included: Irrigating crops, cutting hay, the routine care of livestock.

HAWAII: Variable weather conditions were fair for crops. Unseasonally strong trade winds brought much needed rain to windward areas. Leeward areas remained dry, in need of rain. The gusty trade winds also hampered some forms of irrigation, spraying. Most banana orchards in good condition. Warm temperatures, adequate rainfall benefitting fruit development. Harvesting will be steady. Papaya orchards were in good to fair condition. Recent showers have benefitted orchards. Overall harvesting will be steady. Head cabbage plantings remain in mostly good condition. Insect pressure is higher due to warmer temperatures, however, close monitoring has limited damage.

IDAHO: Days suitable for fieldwork 6.8. Topsoil, 8% very short, 38% short, 54%, adequate. Continued hot, dry. Irrigation supply 64% excellent, 27% good, 9% fair. Alfalfa hay 2nd cutting 64%, 61% 1998, 55% avg.; 3rd cutting 8%, 3% 1998,2% avg. Oats 98% headed, 2% harvested, 2% 1998, 8% avg. Mint 11% harvested,13% 1998 , 34% avg. Peaches 12% harvested,3% 1998,20% avg. Dry Peas 17% harvested, 28% 1998,21% avg. Lentils 6% harvested, 6% 1998, 8% avg. Onions 1% harvested. Potatoes 12" high 99%, 97% 1998, 98% avg.;95% closing middles, 87% 1998, 91% avg. Barley 100% headed, 96% 1998, 98% avg.; 61% turning color. Spring wheat 100% headed, 95% 1998, 98% avg.; 58% turning color. Winter wheat 6% harvested, 13% 1998, 15% avg; 93% turning color. Activities: Irrigating, spraying weeds, monitoring for disease, harvesting small grains, fruit, mint, dry peas, lentils, hay.

ILLINOIS: Days suitable for fieldwork 6.0. Topsoil moisture 26% very short, 42% short, 30% adequate, 2% surplus. The heat wave continued across most of the state last week, though scattered showers were a relief. Areas that were missed by the rains, crops planted in lighter, sandy soils are deteriorating very quickly. The percentage of corn rated good or excellent dropped another nine points between July 23, July 30, has dropped 27 points since July 9th. Similarly, the soybean condition has declined from 76% good to excellent on July 9, to 53% on July 30. The sorghum crop is developing quickly in the heat. Other activities for last week included: Grain hauling, baling hay, straw, mowing ,caring for heat stressed livestock. Corn dented 7%, 4% 1998, 2% avg. Oats ripe 94%, 97% 1998, 85% avg. Oats 85% harvested, 65% 1998, 59% avg. Alfalfa 2nd cut 96%, 94% 1998, 88% avg. Alfalfa 3rd cut 24%, 19% 1998, 16% avg.

INDIANA: Days suitable for fieldwork 6.8. Topsoil 40% very short, 39% short, 21% adequate, 0% surplus. Subsoil 32% very short, 42% short, 26% adequate, 0% surplus. Extreme heat kept major crops, livestock under stress. Several mid 90^o days. Very little precipitation around the state. Corn, soybean condition declined. Very dry soil conditions, most areas. Pastures, hay crops deteriorating rapidly. Livestock under severe stress. Feeding hay some areas. Third cutting alfalfa, 30% complete. Activities: Irrigating crops, spraying, topping tobacco, selling grain, mowing roads, pastures, baling hay, straw, harvesting vegetables, repairing equipment, monitoring fields for insects, attending fairs, caring for livestock.

IOWA: Days suitable for field work 6.1. Topsoil moisture 9% very short, 26% short, 53% adequate, 12% surplus. Subsoil moisture 6% very short, 19% short, 62% adequate, 13% surplus. Flood clean-up continued in north-central Area, soils still saturated, crops across northern 3rd of State that were not damaged by excess moisture made good progress this week. Rest of State in need of rain, some crops beginning to show signs of heat stress. Some deterioration of corn crop in south-central, southeastern districts. Producers expressed concern about extreme heat on corn during pollination. Weeds a problem in soybean fields, respraying has occurred. Potato leaf hoppers remain a problem for alfalfa in north-central, east-central. Corn 97% tasseled, 98% 1998, 91% avg.; 92% silked, 93% 1998, 81% avg.; 42% milk stage, 47% 1998, 25% avg.; 6% dough stage, 9% 1998, 6% avg. Corn 2% very poor, 5% poor , 23% fair, 47 good%, 23% excellent. Soybeans 95% blooming, 94% 1998, 89% avg.; 64% setting pods, 67% 1998 ,52% avg. Soybean 2% very poor, 5% poor, 23% fair, 50% good, 20% excellent. Oats 90% harvested, 90% 1998, 74% avg. Oat 1% very poor, 4% poor, 20% fair, 54% good, 21% excellent. Winter wheat 99% harvested, 94% 1998, 94% avg. High heat, humidity continued to stress area livestock, in some cases severely. In lower 3rd of State some cattle loss due to the heat. Incidents of pinkeye reported in south-central, southeast Areas. Range, pasture 4% very poor, 13% poor, 31% fair, 42% good, 10% excellent Second cutting of alfalfa 84%, 86% 1998, 80% avg. Second cutting of clover hay 64%, 53% 1998, 45% avg. Hay 3%very poor, 7% poor, 25% fair, 48% good, 17% excellent.

KANSAS: Days suitable for fieldwork 6.5. Topsoil 10% very short, 49% short, and 41% adequate. Subsoil 3% very short, 27% short, 69% adequate, 1% surplus. Fall crops, particularly dryland crops, are showing signs of stress as the heatwave maintained its grip on the State for most of last week. Temperatures exceeded 100^0, with very little rainfall, for most of the week. Over the weekend, cooler temperatures moved into the State, with many areas receiving some much-needed precipitation. Sunflower 1% very poor, 2% poor, 22% fair, 64% good, 11% excellent. Sunflowers 38% blooming, 50% 1998, NA average. Third cutting alfalfa 53%, 52% 1998,

51% average. Insect pressure continues to increase in crops across the State. Insect infestation 1% severe, 10% moderate, 34% light, 55% no infestation. Insects reported include corn borers, grasshoppers, greenbugs, aphids, leaf hoppers, alfalfa weevils. Sunflower moths are also showing up in some counties. Disease infestation remains at mostly light to none. Major field activities: Irrigating, cultivating row crops, spraying for insects, working wheat stubble, putting up alfalfa, prairie hay. Hay, forage supplies 2% short, 86% adequate, 12% surplus. Pastures in some areas are starting to turn brown due to the extreme heat, lack of moisture. Producers continue pasture rotation on full-season pastures, removing cattle from short-season pastures. Stock water supplies are mostly adequate.

KENTUCKY: Days suitable for fieldwork 5.8. Topsoil 52% very short, 37% short, 11% adequate. Subsoil moisture 54% very short, 32% short, 14% adequate. Record high temperatures, below normal rainfall continued to reduce soil moisture supplies. Dry weather stressed corn, soybean, tobacco crops, while halting the spread of blue mold in tobacco. Burley tobacco blooming or beyond 67%, 41% topped. Dark tobacco 84% topped. Tobacco 10% very poor, 18% poor, 37% fair, 29% good, 6% excellent. Black shank remains leading problematic disease in tobacco, with reports of soreshin increasing. Pastures 22% very poor, 31% poor, 32% fair, 14% good, 1% excellent. Farmers continue to feed hay to livestock because of poor pasture conditions. Hay crop 19% very poor, 29% poor, 32% fair, 17% good, 3% excellent.

LOUISIANA: Days suitable for fieldwork 5.9. Soil 9% very short, 29% short, 49% adequate, 13% surplus. Corn 3% poor, 19% fair, 67% good, 11% excellent; 100% dough stage, 100% 1998, 100% avg.; 71% mature, 88% 1998, 68% avg.; 7% harvested , 20% 1998, 10% avg. Small amounts of aflatoxin were found in corn that has been harvested. Cotton 5% open bolls, 8% 1998, 2% avg. Cotton producers were scouting, spraying for boll weevils. Hay 33% final cutting, 28% 1998, 42% avg. Rice 46% ripe, 47% 1998, 30% avg. Rice producers were spraying for stink bugs. Sorghum 11% ripe, 15% 1998, 10% avg. Sweet potatoes 5% harvested, 2% 1998, 2% avg. Sugarcane 1% poor, 13% fair, 47% good, 39% excellent. Sugarcane producers were spraying for borers, preparing for planting. Livestock 1% poor, 27% fair, 56% good, 16% excellent. Vegetables 3% very poor, 15% poor, 32% fair, 46% good, 4% excellent.

MARYLAND: Days suitable for fieldwork 6.5. Subsoil 51% very short, 41% short, 8% adequate. Topsoil 46% very short, 41% short, 13% adequate. Corn 10% very poor, 26% poor, 42% fair, 20% good, 2% excellent; 86% silked, 79% 1998, 74% avg.; 35% dough, 32% 1998, 22% avg.; 5% dent, 8% 1998, 4% avg. Soybeans 3% very poor, 14% poor, 50% fair, 31% good, 2% excellent; 54% bloomed, 45% 1998, 42% avg.; 21% setting pods, 27% 1998, 14% avg. Sorghum 19% poor, 54% fair, 27% good; 40% headed, 72% 1998, 37% avg. Tobacco 6% very poor, 18% poor, 47% fair, 29% good; 59% bloomed, 58% 1998, 62% avg.; 21% topped. Snap beans 47% harvested, 54% 1998, 51% avg. Cucumbers 57% harvested, 59% 1998, 59% avg. Potatoes 72% harvested, 100% 1998, 73% avg. Sweet Corn 55% harvested, 69% 1998, 50% avg. Tomatoes 41% harvested, 44% 1998, 36% avg. Cantaloupes 47% harvested, 61% 1998, 50% avg. Lima beans 12% harvested, 18% 1998, 8% avg. Watermelons 24% harvested, 41% 1998, 37% avg. Peaches 2% poor, 38% fair, 52% good, 8% excellent; 30% harvested, 40% 1998, 32% avg. Apples 3% poor, 22% fair, 64% good, 11% excellent. Clover, other hays 80% 2nd cutting harvested, 80% 1998, 70% avg; 36% 3rd cutting, 49% 1998, 19% avg. Alfalfa 45% 3rd cutting harvested, 36% 1998, 39% avg. Pasture feed 31% very poor, 37% poor, 27% fair, 5% good. Hay 9% very short, 45% short, 46% adequate. Activities: Irrigation due to drought stress, vegetable harvest continued, small grains harvesting finished.

MICHIGAN: Days suitable for fieldwork 6.0. Topsoil 13% very short, 22% short, 61% adequate, 4% surplus; subsoil 11% very short, 27% short, 59% adequate, 3% surplus. Hay 0% very poor, 4% poor, 19% fair, 49% good, 28% excellent. Dry beans 1% very poor, 7% poor, 14% fair, 53% good, 25% excellent. Hay 2nd cutting 72%, 88% 1998, 67% avg. Corn Height 79", 70" 1998, 66" avg. Dry beans 79% blooming, 65% 1998, 54% avg. Dry beans setting pods 28%, 30% 1998, 13% avg. Oats 95% turning yellow, 95% 1998, 81% avg.; Record highs through State with temperatures in nineties. Combination of being hot, dry is starting to wear on crops. Even after heavy showers from weekend, reporters saying most crops need rain. Almost all areas except for southern tier counties have had sufficient rain to move crops along. Most areas seeing the best corn growth in recent memory. Some soybean fields sprayed to control white mold brought on by continued high humidity. Central area of Lower Peninsula had some dry bean fields suffering from root rot and mold due to excess moisture. High humidity was also causing a problem with Cercospora leaf spot on sugar beets. Potatoes sizing tubers in most fields as earliest fields maturing and latest fields completing blossom. Hay harvest slowed considerably as rain, high humidity prevented curing. Cantaloupe harvest continued. Carrot harvest began. Hand-harvest of cucumbers for pickles in full swing. Melon harvest continued. Pea harvest ended. Pepper harvest began with good sized fruit reported. Snap beans developing rapidly with good yields expected. Squash yields excellent. Sweet corn harvest in full swing. Market tomato harvest continued and quality was good. Tart cherry harvest in Northwest was nearly complete. Apples continued to size extremely well. Harvest of summer apples was nearly complete. Peach harvest for early varieties was underway in the South. Japanese plum harvest continued. Harvest of early European varieties expected to start this week. The blueberry harvest continued. Bluecrop harvest slowed down, Jersey harvest began.

MINNESOTA: Days suitable for fieldwork 5.0. Topsoil 2% very short, 15% short, 71% adequate, 12% surplus. Corn 22% milking, 48% 1998, 21% avg. Spring Wheat 79% turning ripe, 93% 1998, 67% avg. Oats 91% turning ripe, 97% 1998, 88% avg. Barley 81% turning ripe, 96% 1998, 69% avg. Rye 41% harvested, 74% 1998, 48% avg. Sweet corn 4% harvested, 20% 1998, 8% avg. Pasture feed 2% very poor, 7% poor, 28% fair, 53% good, 10% excellent. Sugar beets 1% very poor, 5% poor, 22% fair, 60% good, 12% excellent. Sunflowers 3% very poor, 17% poor, 28% fair, 45% good, 7% excellent. Dry beans 3% very poor, 12% poor, 37% fair, 38% good, 10% excellent. Crops continued to grow well where recent rainfall has been sufficient. Flooded areas in fields, which followed heavy rains the previous week, receded quickly with the heat. Rainfall amounts have been highly variable, even within counties, particularly in central areas. Corn, soybeans in the drier spots are thought to have suffered some damage from scorching heat during their pollination stages.

MISSISSIPPI: Days suitable for fieldwork 6.4. Soil moisture, 15% very short, 42% short, 41% adequate, 2% surplus. Corn 98% dough, 98% 1998, 91% avg.; 85% dent, 83% 1998, 66% avg.; 24% mature, 45% 1998, 22% avg.; 36% silage harvested, 59% 1998, 40% avg.; 1% very poor, 4% poor, 28% fair, 50% good, 17% excellent. Cotton 98% setting bolls, 100% 1998, 97% avg.; 1% very poor, 7% poor, 23% fair, 53% good, 16% excellent. Rice 53% heading, 72% 1998, 67% avg.; 1% very poor, 2% poor, 24% fair, 51% good, 22% excellent. Sorghum 91% heading, 98% 1998, 94% avg.; 48% turning color, 56% 1998, 49% avg.; 7% mature, 4% 1998, 3% avg.; 4% poor, 19% fair, 60% good, 17% excellent. Soybeans 97% blooming, 97% 1998, 83% avg.; 85% setting pods, 76% 1998, 53% avg.; 3% very poor, 9% poor, 29% fair, 49% good, 10% excellent. Sweet potatoes 1% harvested, NA 1998, NA avg.; 16% fair, 84% good. Hay (warm-season) 72% harvested, 69% 1998, 72% avg. Watermelons 75% harvested, 77% 1998, 78% avg. Cattle 1% very poor, 6% poor, 21% fair, 60% good, 12% excellent. Pasture 3% very poor, 10% poor, 26% fair, 53% good, 8% excellent. Most areas of the State continue to suffer under hot, dry conditions. Some reporters indicate a slight increase in insect pressure.

MISSOURI: Days suitable for fieldwork 6.8. Topsoil 49% very short, 36% short, 15% adequate. Row crops remain in mostly fair to good condition although stress from lack of moisture is taking its toll. Soybeans 63% blooming, 21% setting pods. Sorghum 52% headed, 9% coloring, 18% coloring in Bootheel. 2nd crop alfalfa cut 97%, 94% 1998, 92% avg. 3rd crop alfalfa cut 26%, 30% 1998, 26% avg. Other hay 92% cut, same as year ago, avg. Pasture 18% very poor, 29% poor, 37% fair, 16% good. Precipitation for week ending August 1, 1999 avg. 0.68 in.

MONTANA: Days suitable for fieldwork 6.9. Majority of the State did not receive precipitation. Topsoil 35% very short, 53% short, 12% adequate. Subsoil 29% very short, 46% short, 25% adequate. Sugar beets 17% fair, 48% good, 35% excellent. Winter wheat 97% turning, 98% 1998, 98% avg.; 67% ripe, 80% 1998, 53% avg.; 1% very poor, 4% poor, 50% fair, 35% good, 10% excellent. Spring wheat turning 80%, 93% 1998, 70% avg. Spring wheat 12% ripe, 27% 1998, 10% avg. Barley 71% turning, 90% 1998, 66% avg.; 12% ripe, 28% 1998, 13% avg. Oats 70% turning, 85% 1998, 67% avg.; 22% ripe, 45% 1998, 17% avg.; 2% very poor, 7% poor, 16% fair, 55% good, 20% excellent. Corn 1% very poor, 3% poor, 17% fair, 57% good, 22% excellent. Potatoes 2% very poor, 7% poor, 30% fair, 34% good, 27% excellent. Dry beans 3% poor, 14% fair, 50% good, 33% excellent. Alfalfa 99% 1st cutting, 97% 1998, 97% avg. Alfalfa 25% 2nd cutting 25%, 23% 1998, 18% avg. Other hay 88% harvested, 78% 1998, 80% avg.

NEBRASKA: Days suitable for fieldwork 6.8. Temperatures 3 to 6° above normals. Topsoil 12% very short, 44% short, 43% adequate, 1% surplus. Subsoil 8% very short, 30% short, 62% adequate. Precipitation three hundredths in the north central district. Corn 1% very poor, 6% poor, 24% fair, 49% good, 20% excellent. Irrigated corn 71%, dryland corn 65% good or excellent; corn silk 93%, 93% 1998, 80% avg. Soybeans blooming was 84%, 89% 1998, 82% avg.; 30% setting pods, 39% 1998, 34% avg.; 1% very poor, 7% poor, 27% fair, 53% good, 12% excellent. Sorghum 28% headed, 42% 1998, 32% avg. Sorghum 4% poor, 30% fair, 58% good, 8% excellent. Dry beans 4% poor, 27% fair, 63% good, 6% excellent; blooming 73%,63% 1998, 72% avg. Wheat 97% harvest, 95% 1998, 93% avg. Oats 86% harvested, 86% 1998, 86% avg. Second cutting 96% alfalfa, 92% 1998, 89% avg.; 5% 3rd cut, 3% 1998, 6% avg.; 2% very poor, 3% poor, 23% fair, 61% good, 11% excellent. Range, pasture feed 2% very poor, 7% poor, 29% fair, 50% good, 12% excellent. Wild hay 3% poor, 18% fair, 58% good, and 21% excellent. Pastures, as well as other dryland crops, were under some stress due to hot temperatures. Producer activities; irrigating, haying, moving grain to market, caring for heat stressed livestock, tilling summer fallow, mowing, shredding roadsides, soil preparation for fall seeded wheat.

NEVADA: Weather in the Silver State dry, temperatures were slightly below normal. No precipitation was reported. In spite of this, irrigation water supply remains adequate in most parts of the State. Slightly cooler than normal temperatures were beneficial to pasture, range, hay, row crops. Majority of pasture and range was reported to be in good condition. Second cutting of alfalfa is nearing completion throughout the State. Dry weather has left the hay crop in good condition. Garlic harvest began in Douglas County. Over half of the grain crop had begun turning color, also in good condition. Corn had tasseled and sweet corn was ready for picking. Main farm, ranch activities: irrigating, haying, checking livestock, applying pesticides.

NEW ENGLAND: Days suitable for fieldwork 6.8. Topsoil 43% very short, 45% short, 12% adequate. Subsoil 40% very short, 42% short, 18% adequate. Pasture feed 12% very poor, 38% poor, 36% fair, 12% good, 2% excellent. Maine potatoes 5% harvested; condition good to excellent. Massachusetts potatoes 15% harvested, 5% 1998, 5% avg.; condition good to fair. Rhode Island potatoes 10% harvested, <5% avg.; condition fair. Oats in Maine <5% harvested; condition good. Barley in Maine condition good. Field corn condition good to excellent. Sweet corn 35% harvested, 25% 1998, 20% avg.; condition good to fair. Shade tobacco 40% harvested, 70% 1998, 40% avg.; condition good. Broadleaf tobacco 25% harvested, 30% 1998, 15% avg.; condition good. First cut hay 95% harvested, 95% 1998, 95% avg.; condition good to fair. Second cut hay 45% harvested, 40% 1998, 40% avg.; condition good to fair. Third cut hay 5% harvested, <5% avg.; condition fair. Apples <5% harvested, <5% 1998, <5% avg.; set average, size average, condition good to fair. Peaches 40% harvested; set average, size average to below average, condition fair. Pears set average to below average, size below average to average, condition fair to poor. Cranberries set average, size average, condition good to excellent. Highbush blueberries 60% harvested, 60% 1998, 40% avg.; set average, size average, condition good to fair. Wild Blueberries 20% harvested, <5% 1998, <5% avg.; set average, size average, condition good. Major farm activities included: Harvesting summer vegetables, potatoes, picking fruit including apples, peaches, blueberries. Irrigating where available. Monitoring for pest, applying pesticides where required. Mowing weeds, hoeing fields, marketing produce at roadside stands and farmer's markets.

NEW JERSEY: Days suitable for fieldwork 7. Temperatures much above normal. Extremes 56; 101. Rainfall 0.37 in. north, 0.00 in. central, 0.05 in. south. The heaviest 24 hour total 0.82 in. at Long Valley on the 28th to the 29th. Estimated soil moisture, in percent of field capacity, this past week averaged 58% north, 44% central, 30% south. Four inch soil temperatures averaged 79° north, 76° central, 80° south. Harvest of wheat, barley, rye is virtually complete across the State. Corn condition continues to deteriorate. Its condition is between fair, poor in the south, poor in central, northern areas. Little growth, pollination is occurring. No rain has been received during the critical tassel stage, yields are expected to be reduced significantly. Many fields have already been lost, others are near a complete loss unless rain is received very soon. Single crop soybeans are reported in fair condition while the double crop fields are being severely affected. Like corn, yields are expected to be significantly decreased across the State due to poor pod set. Many fields have been forced into a dormant stage. The condition of the second alfalfa cutting is between fair, poor. Condition of the second other hay crop is in poor condition, no second cutting is expected at all in some areas. Pasture feed is very poor in most of the State. Cattle continue to suffer heat stress, supplemental feeding is occurring extensively. Respiratory problems have been reported, several animals have died. Milk production has been affected. Most irrigated vegetable fields are in good condition, heat stress has begun to affect even irrigated fields. Some sun damage has been reported in tomato, peppers fields. Blossom end rot has also been reported in some tomato fields, production is expected to decrease. Significant damage to the pumpkin crop is expected since the crop is mostly non-irrigated. Good production is expected from early sweet corn plantings, but subsequent plantings are not setting ears. Harvest of tomatoes, squash, sweet corn, peppers, eggplant, potatoes, other minor vegetables continued. Early Cabbage harvest is near completion across the State. Seeding of irrigated fall vegetables has started in southern areas. Fields that are not usually irrigated are being delayed because of the extreme dry conditions. Volume of peaches from southern areas is increasing. Good color, size, flavor have been reported. Condition of peaches in northern area has been rated as good but reduced fruit size, premature fruit drop have been reported. Apples are in good and fair condition, also experiencing a reduced fruit size, premature fruit drop. Blueberry harvest continued in central area.

NEW MEXICO: Days suitable for fieldwork 6.3. Temperatures near normal around most of the State. Coolest areas of the State were west- central, southwest. Precipitation was highest over the northeast part of the State. Least precipitation was recorded over the western, southeastern portions of the State. Farmers continued to irrigate, cultivate fields. Hay harvest was still being impacted by scattered showers with harvest slowed, decreased quality. Warmer weather provided favorable growing conditions for crops, range and pastures. Ranch activities continued to center around maintenance. Adequate stock tank water was reported in most areas. Range, pasture feed 2% very poor, 10% poor, 31% fair, 49% good, 8% excellent. Cattle, sheep stable with both being reported in mostly good condition.

NEW YORK: Days suitable for fieldwork 6.3. Soil moisture 50% very short, 38% short, 12% adequate. Pasture feed 49% very poor, 13% fair, 8% good. Hay 43% poor, 38% fair, 10% good, 9% excellent. Alfalfa second 84% cutting complete, 78% 1998, 65% avg. Third cutting underway. Growth limited due to dryness. Wheat 97% harvested, 97% 1998, 71% avg. Oats 37% harvested, 32% 1998, 22% avg. Corn 9% poor, 55% fair, 32% good, 4% excellent. Vegetable harvest gained momentum. Irrigation needed. Growers prioritizing which fields to water. Orchards, vineyards showing drought stress. Fruit crops in fair condition. Peach harvest active. Early variety apples picked.

NORTH CAROLINA: Days suitable for fieldwork 6, compared with 5.9 last week. Extremely hot weather coupled with high humidity pushed heat indices into the 100's for much of the State. Several areas received needed precipitation, especially the eastern one-third of the State, parts of the Piedmont. Severe weather accompanied some of that rainfall, no damage reports were received. Despite the scattered rains, soil moisture levels continued to slip, 7% very short, 41% short, 49% adequate, 3% surplus. Finishing tobacco topping, continuing tobacco harvest were the major activities conducted last week. Cotton crop is developing on schedule, corn is running about a week behind. Other activities included weed control in all crops, baling hay, harvesting peaches, vegetables, sucker control, crop scouting, tending livestock. Irrigation activities resumed in dry areas not receiving rainfall.

NORTH DAKOTA: Days suitable for fieldwork 7. Topsoil 4% very short, 20% short, 68% adequate, 8% surplus. Subsoil 2% very short, 13% short, 74% adequate, 11% surplus. Above-normal temperatures, dry conditions pushed development of all crops. Harvest of spring wheat, oats, barley, canola has started. Durum wheat 80% heading, 99% 1998, 93% avg.; 42% milk, 87% 1998, 63% avg; 10% turning, 44% 1998, 22% avg. Canola 44% turning, 61% 1998; 7% swathed, 17% 1998. Corn 77% tasseling, 89% 1998, 74% avg; 18% milk, 36% 1998, 22% avg. Dry edible beans 36% podding, 86% 1998, 63% avg.; 7% fully podded, 34% 1998, 13% avg. Flaxseed 90% blooming, 98% 1998, 81% avg.; 12% turning, 35% 1998, 14% avg. Potatoes 88% rows filled, 98% 1998, 86% avg. Soybeans 77% blooming, 95% 1998, 89% avg.; 37% podding, 70% 1998, 61% avg. Sunflowers 12% blooming, 36% 1998, 26% avg. Conditions of all crops, except sugar beets, sunflowers declined due to hot, dry weather. Emerged crop condition: durum 0% very poor, 6% poor, 34% fair, 54% good, 6% excellent; canola 3% poor, 21% fair, 61% good, 15% excellent; corn 1% very poor, 5% poor, 20% fair, 62% good, 12% excellent; dry edible beans 9% poor, 25% fair, 47% good, 19% excellent; flaxseed 4% poor, 23% fair, 60% good, 13% excellent; potatoes 5% poor, 13% fair, 49% good, 33% excellent; soybeans 3% very poor, 10% poor, 25% fair, 53% good, 9% excellent; sugar beets 1% very poor, 5% poor, 13% fair, 49% good, 32% excellent; sunflower 3% poor, 21% fair, 61% good, 15% excellent. Stockwater 2% short, 90% adequate, 8% surplus. Warm, dry weather across most of the State allowed hay harvest to progress. Hay 4% above normal.

OHIO: Days suitable for fieldwork 6.1. Topsoil 36% very short, 39% short, 25% adequate. Soybeans 95% blooming, 88% 1998, 78% avg.; 59% setting pods, 40% 1998, 31% avg. Oats 84% harvested, 56% 1998, 49% avg. Alfalfa 96% 2nd cutting, 90% 1998, 80% avg. Alfalfa 27% 3rd cutting, 19% 1998, 9% avg. Other hay 75% 2nd cutting, 72% 1998, 55% avg.; 12% 3rd cutting, 10% 1998, 3% avg. Corn 95% silked, 80% 1998, 63% avg.; 30% in dough, 14% 1998, 9% avg.;1% dented, 0% 1998, avg. Summer apples 54% harvested, peaches 40% harvested. Tobacco 18% topped, 14% 1998. Potatoes 12% harvested, cucumbers 36% harvested. Pasture feed 26% very poor, 27% poor, 29% fair, 16% good, 2% excellent. Corn 7% very poor, 13% poor, 31% fair, 38% good, 11% excellent. Activities include mowing CRP ground; making hay; hauling manure; working on equipment; leveling fields; seeding alfalfa; seeding filter strips; spraying soybeans; chopping grass silage; cultivating vegetables; cleaning up down trees, repairing buildings; irrigating vegetables; mowing weeds; green chopping corn; prepping cattle for county fairs; topping, spraying tobacco. Reported weed pressures include Canadian thistle, morning glory, sourdock, velvetleaf, buttonweed, foxtail, ragweed, hemp dogbane, milkweed, quack grass, poison ivy, broadleaf, chickweed, lambs quarter, Johnson grass. Reported insects include spider mites in soybeans; leaf hoppers in alfalfa; rootworms , earworms in corn; beetles in soybeans, corn, cucumbers, squash. Reported diseases include root rot in soybeans; Stewart's' wilt in popcorn; virus on melons, squash; dry rot on tomatoes; mildew on pumpkins; gray leaf spot on corn; black shank, sore shin, fusarium wilt on tobacco. Much of the fruit, vegetable crops are suffering from low moisture, high temperature. Peaches in the southern part of the state are ripening too quickly, not producing much fruit. A Columbiana reporter mentioned sweet corn is maturing too fast with the heat. Fruits, vegetables in the Northwest are mostly good to excellent while total losses are occurring in parts of the southeastern part of the state. In Geauga county, blackberries, raspberries are being picked while carrots, parsley are being harvested in Henry county. Pasture, grass conditions are improving in the northern part of the State with recent rains. Pasture in parts of the central, east-central, much of the southern half of the State is either barren, dormant, or dried up. This past week was particularly stressful on livestock as many reporters comment on

milk production, feed intake dropping. Milk production is down 25% in some areas. Many producers are liquidating herds after pasture, hay stocks, water sources are all but gone.

OKLAHOMA: Days suitable for fieldwork 6.4. Subsoil 5% very short, 28% short, 67% adequate. Topsoil 20% very short, 53% short, 27% adequate. Most of State remains hot, dry. Topsoil lowest since September, 1998. Wheat 87% plowed, 81% 1998, 87% avg.; 6% seedbed prepared, 8% 1998, 11% avg.; Rain needed to advance seedbed preparation. Oats 90% plowed, 81% 1998, 88% avg.; 1% seedbed prepared, 12% 1998, 5% avg.; corn 1% poor, 6% fair, 90% good, 3% excellent; 99% tasseled, 100% 1998, 94% avg.; 26% milk-to-soft, 70% 1998, 63% avg.; most corn southwest lost because of drought. Soybeans 13% poor, 47% fair, 33% good, 7% excellent; 53% flowering, 68% 1998, 71% avg.; 21% setting pods, 33% 1998, 39% avg. Peanuts 49% setting pods, 53% 1998, 60% avg.; Spider mites beginning to show up in peanuts. Watermelons 100% fruit set, 100% 1998, 95% avg; 45% harvested, 52% 1998, 33% avg.; alfalfa hay 1% very poor, 10% poor, 32% fair, 52% good, 5% excellent; 73% 3rd cutting, 67% 1998, 68% avg.; 6% 4th cutting, 8% 1998, 9% avg.; other hay 93% 1st cutting, 89% 1998, 94% avg.; 33% 2nd cutting, 4% 1998, 39% avg.; Livestock 2% poor, 14% fair, 77% good, 7% excellent. Feeder cattle prices steady to 50 cents per cwt. below last week.

OREGON: Days suitable for fieldwork 6.9. Topsoil 35% very short, 48% short, 17% adequate. Subsoil 30% very short, 53% short, 17% adequate. Barley harvested 21%, 26% 1998, 28% average. Spring wheat harvested 18%, 8% 1998. Winter wheat harvested 48%, 30% 1998, 39% average. Range, pasture feed 4% very poor, 17% poor, 48% fair, 28% good, 3% excellent. Activities: Willamette Valley hay, grass seed harvest continued. Field corn at tassel stage, mint harvest started. Most crimson clover threshed, red clover in full to late bloom. On eastside wheat harvest continued under hot, dry conditions with disappointing yields reported. Northeast grass seed, hay harvest underway with hail, drought, frost damage contributing to low yields. Mid Columbia Basin wheat yields in the twenties, teens. In northeast better than expected wheat test weights in the 58-60 lb. range. Nurseries irrigating, doing summer maintenance, some transplanting, some digging, a little balling of plants. Greenhouses doing clean up, summer maintenance. Iris tubers continued to be harvested. Eastside onions, potatoes looked good with fresh pack potato harvest started. Malheur County some potato vines down, early harvest to begin in a couple of weeks. Northeast sweet corn harvest underway. Willamette Valley green beans, sweet corn growing well; with some green bean harvest underway. Willamette Valley caneberry harvest underway, blueberries at peak. Cherry harvest nearly done, early apples, peaches started to be picked. Hazelnuts sizing. Rogue River Valley tree fruits looked good, sizing well, blueberries harvested. South coast blueberry harvest continued, cranberries sizing, green in color. Northeast cherries, apricots, peaches being harvested. Livestock good to excellent condition statewide. Eastside pastures very dry. Klamath Basin pastures still good. Westside pastures also very dry, some farmers started to feed hay.

PENNSYLVANIA: Days suitable for fieldwork 6.1. Soil moisture 63% very short, 30% short, 7% adequate. Corn 75% silked, 72% 1998, 63% avg.; 23% dough 23% complete, 22% 1998, 9% avg.; height 60 in., 66 in. 1998, 65 in. avg. Soybean 16% very poor, 30% poor, 32% fair, 19% good, 3% excellent. Wheat 96% harvested, 98% 1998, 87% avg. Oats 92% turning yellow, 93% 1998, 91% avg.; 72% ripe, 71% 1998, 62% avg.; 45% harvested, 45% 1998, 35% avg.; 3% very poor, 21% poor, 40% fair, 34% good, 2% excellent. Barley 98% harvested, 100% 1998, 95% avg. Alfalfa 2nd cutting 85% complete, 81% 1998, 71% avg. Alfalfa 3rd cutting 38% complete, 27% 1998, 13% avg. Timothy clover 2nd cutting 33% complete, 38% 1998, 34% avg. Quality of hay made 3% very poor, 17% poor, 31% fair, 36% good, 13% excellent. Apple harvest 9% complete, 8% 1998, 4% avg.; 3% poor, 26% fair, 48% good, 23% excellent. Peach 22% harvest, 40% 1998, 16% avg.; 5% poor, 20% fair, 48% good, 27% excellent. Fall plowing 4% complete, 5% 1998, 2% avg. Activities include: Harvesting oats, fruits and vegetables; topping tobacco; preparing for corn silage harvesting; machinery maintenance; filling silos; hauling manure; spreading fertilizers; applying pesticides; caring for livestock; building and repairing fences; cutting hay; making haylage; baling straw; irrigating crops.

SOUTH CAROLINA: Days suitable for fieldwork 6.4. Soil moisture 6% very short, 51% short, 42% adequate, 1% surplus. Cantalopes 97% harvested, 95% 1998, 91% avg. Corn 6% harvested, 11% 1998, 8% avg.; 6% very poor, 16% poor, 32% fair, 42% good, 4% excellent. Grapes 70% fair, 30% good. Hay 1% very poor, 5% poor, 42% fair, 49% good, 3% excellent. Peaches 73% harvested, 79% 1998, 76% avg.; 6% poor, 30% fair, 35% good, 29% excellent. Snapbeans 99% harvested, 99% 1998, 87% avg. Sorghum 40% turned color, 49% 1998; 1% very poor, 6% poor, 16% fair, 63% good, 14% excellent. Sweet potatoes 3% poor, 28% fair, 68% good, 1% excellent.

SOUTH DAKOTA: Days suitable for fieldwork 5.7. Topsoil 1% very short, 17% short, 72% adequate, 10% surplus. Subsoil 1% very short, 6% short, 76% adequate, 17% surplus. Row crops continued to progress ahead of average spurred by the 100° days. Hot, humid weather has left many areas in desperate need of moisture, with many sites setting record high temperatures before cooler weekend temperatures set in. Winter rye 5% poor, 14% fair, 49% good, 32% excellent. Winter wheat 1% poor, 9% fair, 59% good, 31% excellent. Alfalfa 2% poor, 15% fair, 55% good, 28% excellent. Barley 1% very poor, 2% poor, 8% fair, 69% good, 20% excellent. Sunflower 2% poor, 18% fair, 61% good, 19% excellent. Flaxseed 1% poor, 14% fair, 65% good, 20% excellent. Winter wheat 98% ripe, 100% 1998, 94% avg. Winter rye 97% ripe, 98% 1998, 94% avg.; 49% harvested, 85% 1998, 49% avg. Barley 95% turning color, 99% 1998, 90% avg.; 63% ripe, 81% 1998, 54% avg. Oats 98% turning color, 99% 1998, 90% avg.; 73% ripe, 83% 1998, 62% avg. Spring wheat 95% turning color, 99% 1998, 86% avg.; 70% ripe, 80% 1998, 48% avg. Flaxseed 94% blooming, 89% 1998, 87% avg.; 18% ripe, 84% 1998, 22% avg. Sunflower 22% blooming, 43% 1998, 31% avg. Corn 73 in. height, 73 in. 1998, 61 in. avg.; 98% 2nd cultivation, 100% 1998, 98% avg.; 80% tasseled, 91% 1998, 74% avg. Alfalfa 61% 2nd cutting, 70% 1998, 62% avg.; 13% 3rd cutting, 0% 1998, 0% avg. Other hay 78% harvested, 78% 1998, 74% avg. Cattle 8% fair, 59% good, 33% excellent. Sheep 5% fair, 47% good, 48% excellent. Stock water supplies 21% surplus, 76% adequate, 3% short.

TENNESSEE: Days suitable for fieldwork 7.0. Topsoil 20% very short, 41% short, 35% adequate, 4% surplus. Subsoil 14% very short, 38% short, 44% adequate, 4% surplus. Temperatures averaged about 5 to 7 degrees above normal, with widely scattered thunderstorms and showers providing only temporary relief. The persistent hot, dry weather pattern continued to take a toll on the agricultural industry. For the second straight week, crop, pasture conditions declined, but even with the lack of rain, record high temperatures; all commodities were still rated in good to fair condition. Corn 78% dough, 63% 1998, 64% avg.; 42% dent, 30% 1998, 26% avg.; 4% mature, 2% 1998, 1% avg.; 11% silage harvested, 2% 1998, 3% avg.; 2% very poor, 9% poor, 29% fair, 48% good, 12% excellent. Tobacco 55% topped, 38% 1998, 42% avg.; 3% very poor, 11% poor, 29% fair, 47% good, 10% excellent. Pasture feed 4% very poor, 16% poor, 35% fair, 40% good, 5% excellent. Alfalfa 94% 2nd cutting, 96% 1998, 98% avg.; 6% poor, 34% fair, 49% good, 11% excellent. Cattle 2% very poor, 6% poor, 30% fair, 52% good, 10% excellent. Last week's weather can be summed up with just one word "hot." Main activities: Topping tobacco, applying sucker control, cutting hay.

TEXAS: Temperatures began to get hotter across the State. Hot, dry weather allowed fieldwork, harvesting to continue, was beginning to cause stress to late planted crops. Most dryland crops continue to fair well, but will need rain in the Plains, North Central. Irrigation in most areas of the State was in full swing. Weeds and insects continued to be monitored, sprayed where needed. Livestock continued to be in good shape with some reports of fly problems. Hot, dry weather allowed hay cutting and baling to continue across the State.

Crops: Small Grains: Harvest was completed. Yields were mostly average to above average. Corn: High Plains crop was in good shape with most corn beginning to tassel. Blacklands harvest was beginning with good yields reported so far. Harvest picked up in south central, Coastal Bend with indications of good yields. Most growers are waiting to harvest along the Upper Coast, few fields have been harvested, yields are good to excellent. 55% dented, 62% 1998, 58% avg. 47% mature, 53% 1998, 44% avg. 16% harvested, 36% 1998, 21% avg. Cotton: Plains area made excellent progress, increased in maturity due to hot temperatures. These areas continued to battle insects, irrigation has been required. More fields were squaring, setting bolls. Blacklands needs moisture to boost maturity. Overall the crop was doing well. Central the crop was doing fair, pink bollworms and stink bugs were showing up. Coastal Bend began harvesting. Defoliation was in progress along the Upper Coast. Prospects for yields were good despite rank growth. Rio Grande Valley had many fields defoliated and some harvest activity began. Rice: Harvest began along the Upper Coast with excellent quality, good yields. In other areas the crop had good growth, maturity. Sorghum: Fields were in excellent condition in the Plains, North Central, dryland fields were in need of rain. Irrigation continued heavy. Insect, weed control continued to be a struggle. Majority of the fields were in boot, heading stages. In the Blacklands and Central harvest was in full swing. Hot, dry conditions speeded up maturity. In some areas harvest was complete with reports of good yields. The Upper Coast, Coastal Bend, Rio Grande Valley have nearly completed harvest except for late planted fields. 52% turning color, 59% 1998, 61% avg. 45% mature, 48% 1998, 50% avg. 42% harvested, 43% 1998, 39% avg. Soybeans: Very good progress was made in the Plains but rainfall was needed for plants in reproductive stages. Dry conditions helped the Blacklands operators increase harvest activity. Along the Upper Coast wet fields have dried out and harvesting was in progress. Other Crops: Sunflowers 98% planted, 99% 1998, 99% avg.

Commercial Vegetables: Rio Grande Valley, minimal activity occurred for week. San Antonio-Winter Garden, cantaloup harvest neared completion and other activities were minimal. East, commercial production came to a slow stop. Fall vegetables were being planted. Sweet potatoes looked good as well as the pea crop. High Plains, onion harvest continued with other vegetables continuing to progress. Trans Pecos, vegetable harvest neared completion. Peaches: Harvest in most areas was nearing completion. Pecans: Walnut caterpillars infested trees in some areas and weevils in other areas. Nut crop looks good.

Range and Livestock: Pastures were dry with little plant growth occurring but condition was still holding fair to good. Continued heat will cause some fields to deteriorate without moisture. Dry conditions has allowed cutting, baling hay. Livestock for the most part remained in good condition with minimum stress from heat.

UTAH: Days suitable for fieldwork 6. Topsoil 11% very short, 24% short, 64% adequate, 1% surplus. Subsoil 10% very short, 23% short, 67% adequate. Pasture, range feed 2% very poor, 7% poor, 35% fair, 55% good, 1% excellent. Corn height 58 in., 57 in. 1998, 59 in. avg.; silked 44%, 32% avg. Winter wheat 43% harvested, 28% 1998, 47% avg. Spring wheat 21% harvested, 11% 1998, 28% avg. Barley 33% harvested (grain), 17% 1998, 33% avg. Alfalfa hay 71% 2nd cutting, 59% 1998, 63% avg. Other hay 79% 1st cutting, 70% 1998, 73% avg. Oats 91% headed, 85% 1998, 90% avg. ; 79% harvested for hay or silage, 69% 1998, 70% avg.; 7% harvested for grain. Tart cherries 57% picked, 60%1998, 76% avg. Irrigation water supply 7% very short, 18% short, 75% adequate. Stock water supplies 3% very short, 18% short, 77% adequate, 2% surplus. Many counties reported thundershowers throughout the state. Box Elder, Millard, Tooele counties reported grasshopper problems.

VIRGINIA: Days suitable for fieldwork 6.1. Topsoil 26% very short, 24% short, 49% adequate, 1% surplus. Subsoil 38% very short, 27% short, 35% adequate. Pasture feed 21% very poor, 25% poor, 30% fair, 22% good, 2% excellent. Livestock 2% very poor, 10% poor, 28% fair, 54% good, 6% excellent. Hay, other 27% very poor, 32% poor, 24% fair, 14% good, 3% excellent. Hay, Alfalfa 3% very poor, 24% poor, 50% fair, 19% good, 4% excellent. Corn for Grain 76% silked, 67% 1998, 73% avg.; 30% dough, 30% 1998, 33% avg.; 10% dent, 8% 1998, 11% avg.; 16% very poor, 26% poor, 29% fair, 22% good, 7% excellent. Soybeans 100% planted, 100% 1998, 100% avg.; 98% emerged, 99% 1998; 28% blooming, 41% 1998, 39% avg.; 9% setting pods, 15% 1998, 15% avg.; 7% very poor, 13% poor, 43% fair, 30% good, 7% excellent. Winter wheat 100% harvested, 100% 1998, 99% avg. Barley 100% harvested, 100% 1998, 100% avg. Tobacco, flue cured 5% harvested, 6% 1998, 10% avg.; 6% fair, 70% good, 24% excellent. Tobacco, burley 2% very poor, 4% poor, 15% fair, 40% good, 39% excellent. Tobacco, dark fire cured 1% poor, 13% fair, 67% good, 19% excellent. Tobacco, Sun-cured 30% poor, 30% fair, 40% good. Peanuts 98% pegged, 97% 1998, na% avg; 4% fair, 70% good, 26% excellent. Cotton 99% squaring, 100% 1998; 54% setting bolls, 94% 1998, 91% avg.; 8% fair, 55% good, 37% excellent. Summer potatoes 83% harvested, 82% 1998, 81% avg.; 2% very poor, 5% poor, 15% fair, 59% good, 19% excellent. Apples, summer 11% harvested, 69% 1998, 20% avg. Apples, all 16% poor, 67% fair, 17% good. Peaches 37% harvested, 47% 1998, 37% avg.; 15% very poor, 13% poor, 40% fair, 21% good, 11% excellent. Temperatures averaged five to ten degrees above normal for most areas of the Commonwealth this past week. Heavy rains, thunderstorms continued, however, precipitation totals remained below average for the majority of localities. Rainfall helped green up pastures and improve crop conditions slightly but did little in terms of growth which was limited by the extreme heat. Some isolated fields were slightly damaged by high wind, hail, extremely hard rains. Subsoil moisture levels did not improve with the recent rains. What moisture was received was used up or evaporated before it could replenish the subsoil. Fall forage prospects may not be quite so bleak provided rains continue, the extreme heat subsides. Sixty percent of livestock remain in good or excellent condition. This is directly attributed to producers hauling water to herds, feeding at full supplemental levels. Corn is progressing at normal levels but is in need of additional rain. All soybean acreage is reportedly planted at this time, however, progress has been slow, is currently behind 1998, average. Condition of soybeans decreased slightly from the previous week. Weather fleck and blue mold continues to plague the tobacco crop, however, acreage remains mostly in good to excellent condition. Ninety-six percent of peanut acres remain in good or excellent condition. Producers are busy applying herbicides and fungicides. Cotton acres remain in mostly good to excellent condition as well. Application of growth regulators and foliar nutrients are currently underway. Some cotton producers are reporting that plants are setting bolls slightly later than normal. Fruit conditions diminished slightly this past week. Harvest of summer apples, peaches is currently underway. Vegetable producers are busy harvesting summer crops, preparing land for the fall season.

WASHINGTON: Days suitable for fieldwork 7.0. Topsoil 25% very short, 43% short, 32% adequate. Subsoil 19% very short, 57% short, 24% adequate. Winter wheat harvest continued fairly normally, still lagged behind both 1998 and average. Reported yields were variable depending on location. Cooler temperatures before harvest appeared to be beneficial for quality. Harvest for spring wheat, barley was started, not expected to be in full swing for another week. Late maturity of many of the spring crops caused a higher number of aphids than normal. Winter wheat 18% harvested, 30% 1998, 33% avg. Winter wheat, dryland 8% very poor, 18% poor, 45% fair, 25% good, 4% excellent; irrigated 100% good. Spring wheat, dryland 17% very poor, 28% poor, 44% fair, and 11% good; irrigated 100% good; 4% harvested, 11% 1998, 15% avg. Barley, dryland 11% very poor, 27% poor, 48% fair, 14% good; 100% irrigated good; 6% harvested, 16% 1998, 21% avg. Potatoes 8% harvested, 12% 1998, 9% avg.; fair, 61% good, 34% excellent. Hay, other roughage supplies 5% short, 60% adequate, 35% surplus. Range, pasture feed 15% very poor, 32% poor, 34% fair, 19% good. Alfalfa 3rd cutting well underway. Hot, dry weather dried out pastures, increased the fire danger. Potato harvest was started, growers were busy killing vines. Onions were being harvested, a wide variety of vegetables were being harvested. Sweet corn was being harvested in eastern areas. Apricots, peaches were being harvested, apple orchards were being pruned, hand thinned.

WEST VIRGINIA: Days suitable for fieldwork 5.4. Topsoil 57% very short, 35% short, 8% adequate. Scattered rainfall across the State brought little relief to crop and pasture conditions. Hay 48% very poor, 31% poor, 20% fair, 1% good; 44% 2nd cut, 38% 1998, 37% avg. Corn 32% very poor, 50% poor, 13% fair, 5% good; 59% silked, 58% 1998, 58% avg.; 10% doughing, 14% 1998, 15% avg. Oats 13% very poor, 42% poor, 41% fair, 4% good; 33% harvested, 53% 1998, 51% avg. Soybeans 9% very poor, 25% poor, 66% fair; 64% bloomed, 44% 1998, 71% avg.; 22% setting pods, 19% 1998, 34% avg. Tobacco 42% very poor, 18% poor, 40% fair; 5% topped, 9% 1998, 25% avg. Apples 7% very poor, 19% poor, 59% fair, 15% good. Peaches 8% very poor, 16% poor, 60% fair, 16% good. Cattle 4% very poor, 15% poor, 42% fair, 36% good, 3% excellent. Sheep 1% very poor, 25% poor, 51% fair, 18% good, 5% excellent.

WISCONSIN: Days suitable for fieldwork 5.1. Soil moisture 7% short, 77% adequate, 16% surplus. Recent heat wave has caused the corn to grow like "gang busters", as reported from a Barron County reporter. Heat has also sped up corn maturity, with most of the corn silked, starting to set ears. A Dodge County reporter noted that canners have started sweet corn harvest, which is a little ahead of schedule. Soybean crop was rated mostly good to excellent with rapidly advancing maturity. Soybean 1% very poor, 2% poor, 10% fair, 52% good, 35% excellent; 81% bloomed, 83% 1998; 33% setting pods, 50% 1998. Farmers with small grains are wondering when their fields will be dry enough to harvest. Oats harvest has started to move into full swing, but the excessive rain, heat, humidity, have slowed some of the harvest. Marquette County reporter noted that oat yields are up to 80 bushels per acre, with most fields in the 60-70 bushel range. Winter wheat crop was starting to be harvested, but slow due to poor drying conditions. Winter wheat 93% harvested, 96% 1998, 49 avg. Baling of straw was also hampered due to high humidity, wet weather. Hay harvest has been slowed by the wet and humid weather. High humidity has made it hard to get good quality forage. Many reporters have commented that the third crop is coming along nicely, but leafhoppers are still a problem. Second crop hay 78% harvested, 89% 1998, 66% avg. Pasture feed 1% very poor, 3% poor, 20% fair, 61% good, 15% excellent.

WYOMING: Days suitable for fieldwork 5.9. Topsoil 3% very short, 50% short, 47% adequate. Subsoil 4% very short, 51% short, 45% adequate. Winter wheat 99% mature, 98% 1998, 95% avg.; 82% harvested, 70% 1998, 56% avg. Spring wheat 50% turning color, 95% 1998, 75% avg.; 34% mature, 33% 1998, 32% avg.; 11% harvested, 21% 1998, 8% avg. Barley 79% turning color, 86% 1998, 85% avg.; 66% mature, 39% 1998, 37% avg.; 33% harvested, 8% 1998, 9% avg. Oats 89% headed, 95% 1998, 93% avg.; 40% turning color, 79% 1998, 68% avg.; 16% mature, 40% 1998, 29% avg. Corn 88% tasseled, 90% 1998, 78% avg.; 67% silked, 33% 1998, 40% avg. Dry bean 90% bloom, 96% 1998, 90% avg.; 36% setting pods, 50% 1998, 41% avg. Alfalfa 99% 1st cutting, 95% 1998, 98% avg.; 22% 2nd cutting, 16% 1998, 19% avg. Other hay 57% cut, 66% 1998, 65% avg. Range, pasture feed 1% poor, 12% fair, 77% good, 10% excellent. Crop infestation 25% none, 37% light, 30% moderate, 8% severe. Cattle, sheep in good condition. Stock water supplies 8% short, 92% adequate. Warm weather continuing during most of the week with little precipitation. Weekend was cooler with scattered precipitation.

International Weather and Crop Summary

July 25 - 31, 1999

HIGHLIGHTS

EUROPE: Dry weather favored winter grain harvesting across northern Europe, while showers benefited spring-sown crop development from southern France eastward through the Balkans.

FSU-WESTERN: Oppressive heat adversely affected summer crops in Russia and southern and eastern Ukraine.

FSU-NEW LANDS: Widely scattered showers fell across principal spring wheat-producing areas in Russia and Kazakstan, while unseasonably warm weather accelerated crop development.

EASTERN ASIA: Scattered showers brought localized relief to summer crops in the North China Plain.

SOUTHEAST ASIA: Conditions remained generally favorable for rice and other crops across Indochina and the Philippines, but more rain was needed in Malaysia's oil palm areas.

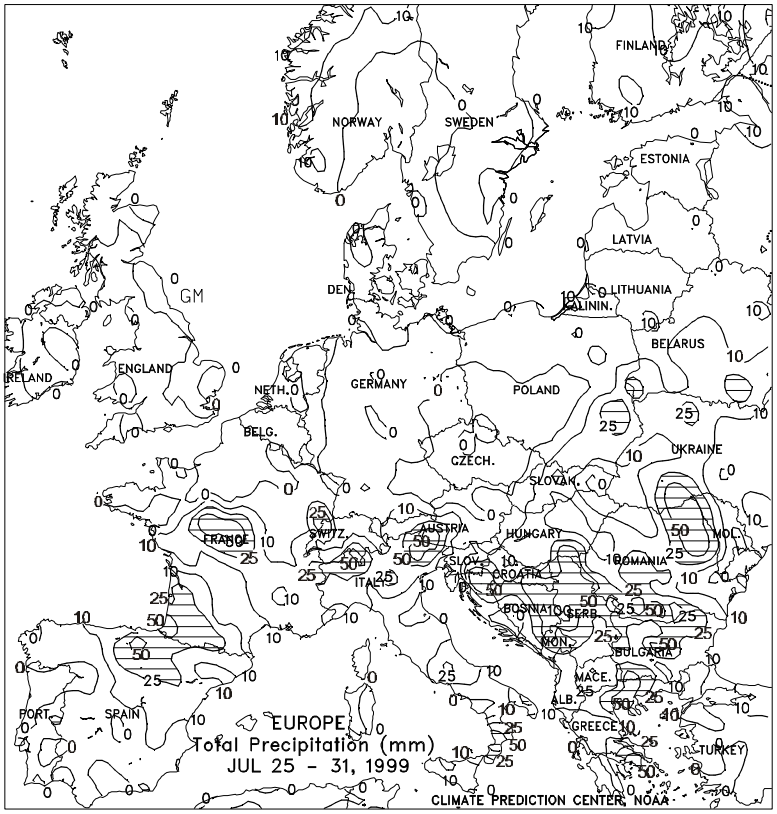
SOUTH ASIA: Monsoon activity diminished over much of the region.

AUSTRALIA: Beneficial rain swept across Western Australia's winter grain belt as crops entered a more active phase of development.

CANADA: Summer heat increased growth rates of Prairie spring crops, but stressed reproductive grains and oilseeds in the southwest. Substantially cooler weather returned toward week's end.

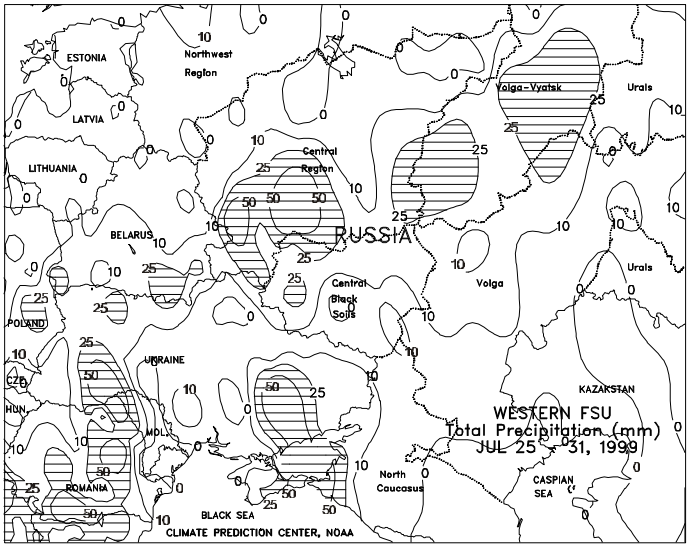
MEXICO: Seasonal showers continued to benefit corn across the Southern Plateau corn belt, but hot, dry weather returned to northeastern areas.

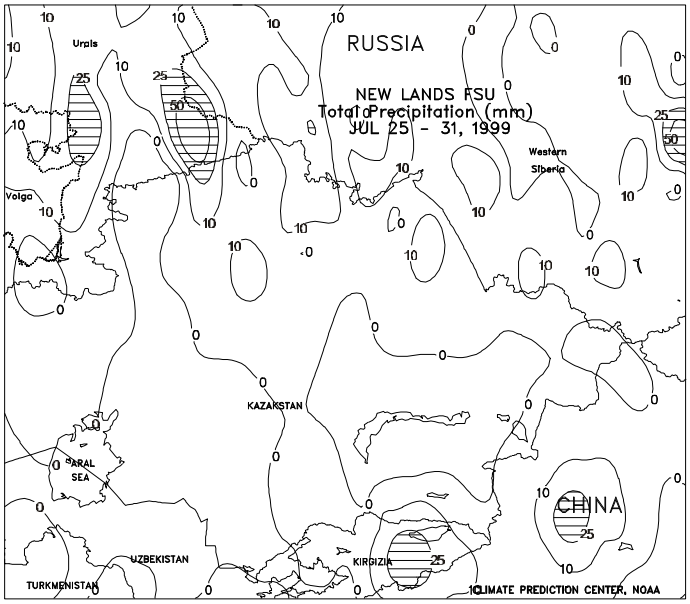
SOUTH AMERICA: Dry weather in most of central Argentina helped final wheat planting. In southern Buenos Aires, rain favored crop emergence and early plant establishment.

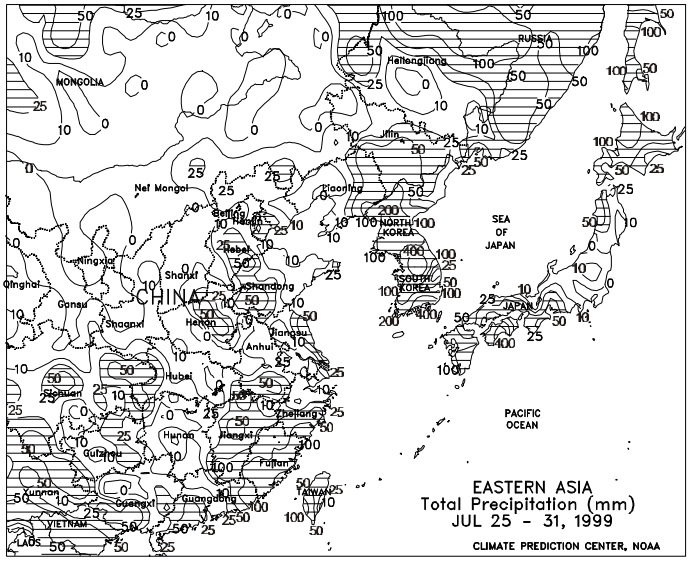


EUROPE

Dry weather dominated northern Europe from England and northern France eastward through most of Poland, promoting uninterrupted winter grain harvesting. Unseasonably warm weather (temperatures 1-3 degrees C above normal, except 3-5 degrees C in northern France) continued over much of this region as well, maintaining accelerated spring-sown crop development. Although crop development is reportedly progressing well across this region, soil moisture reserves are declining given the persistent dryness and warmth in southern England, northwestern France, and eastern Germany. Farther south, scattered showers (10-50 mm, with locally heavier amounts) and unseasonably warm weather (temperatures 1-3 degrees C above normal) in northeastern Spain, central and southern France, and northern and central Italy benefited spring-sown crop development. In contrast, dry weather persisted over the remainder of the Iberian peninsula and Italy, increasing irrigation requirements. Farther east, scattered showers fell across most of eastern Europe from southern Poland southward through Greece. The heaviest rains (25-60 mm, with locally heavier amounts) fell across the Balkans, Bulgaria, and extreme western sections of Romania, providing adequate to excessive moisture for developing crops. Unseasonably cool weather (temperatures 1-2 degrees C below normal) accompanied the heaviest rains, however, slowing crop development.







FSU-WESTERN

In the eastern two-thirds of Ukraine and southern Russia (North Caucasus, lower Volga Valley, and the southern portion of the Central Black Soils Region), oppressive heat persisted in most areas during the week, adversely affecting corn and sunflowers in the filling stages of development. On most days, maximum temperatures ranged from 33 to 40 degrees C, accelerating crop development. A few scattered showers (10-25 mm or more) were accompanied by cooler weather at week's end in Ukraine, bringing some relief to heat-stressed crops. Winter and spring grain harvesting rapidly progressed in Ukraine and southern Russia, helped by the hot, dry weather conditions. In Ukraine, reports as of July 29 indicated that grain, excluding corn, was about 60 percent harvested, compared with 50 percent last year. In Russia, reports as of July 31 indicated that grains and pulses, excluding corn, were about 20 percent harvested. Furthermore, winter wheat advanced to about 40 percent harvested. Elsewhere, wet weather (25-50 mm or more) occurred along a frontal boundary that stretched from southern Belarus northeastward through portions of northern Russia (southern portion of the Central Region and Volga Vyatsk Region), likely causing further delays in winter grain harvesting. Weekly temperatures averaged 4 to 7 degrees C above normal in eastern Ukraine and southern Russia, and 1 to 3 degrees C above normal in western Ukraine, northern Russia, and Belarus.

FSU-NEWLANDS

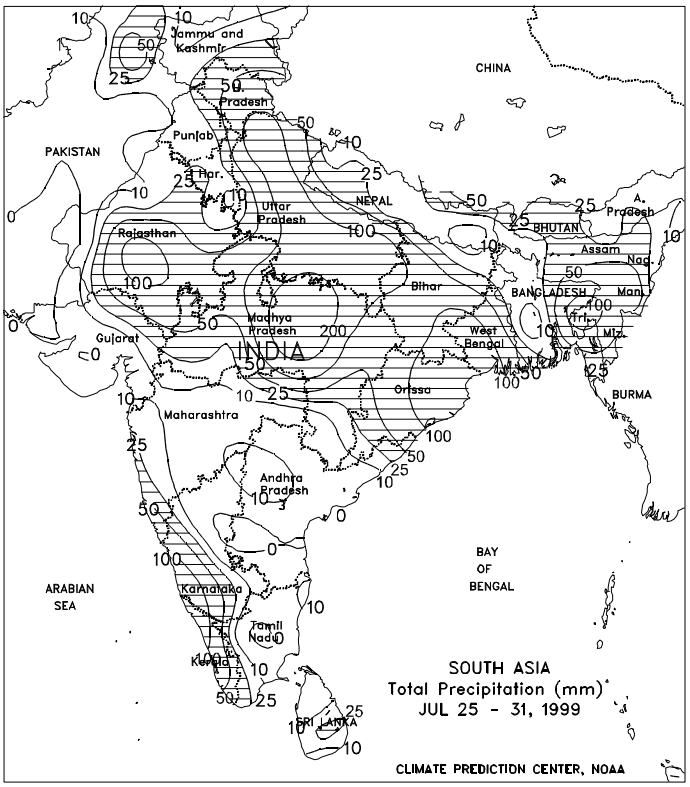
Hot weather from the western former Soviet Union gradually spread eastward across the region during the week, promoting rapid crop development. Extreme heat (35-40 degrees C) was observed in western Kazakstan and adjacent areas in Russia (southern Urals), increasing heat stress on spring grains in the filling stage of development. Farther east, widely scattered showers and thunderstorms were observed over remaining crop areas in Russia (northern Urals, Western Siberia, and Eastern Siberia) and Kazakstan. Greatest amounts of rain fell in the northern Urals, with lesser amounts of precipitation (about 10 mm) falling over remaining areas. By week's end, hot weather overspread most of Russia and Kazakstan, with maximum temperatures ranging from 30 to 33 degrees C. Weekly temperatures averaged 4 to 6 degrees C above normal in extreme western areas and 2 to 4 degrees C above normal in central and eastern areas. In cotton-producing areas of Central Asia, seasonably hot, dry weather promoted cotton development in most areas.

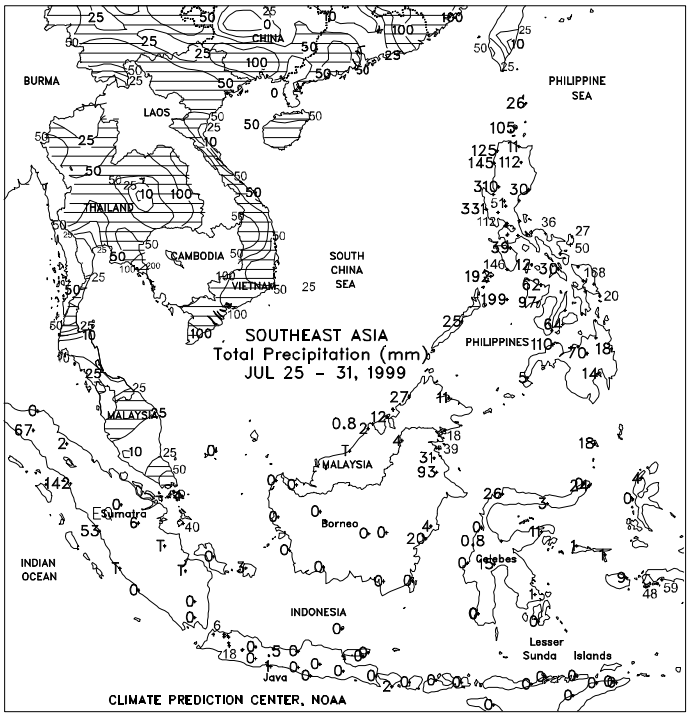
EASTERN ASIA

Beneficial showers (10-50 mm or more) brought some relief to summer crops in parts of the North China Plain (eastern Henan, western Shandong, Anhui, and Jiangsu). Although the moisture in these areas helped stabilize crop conditions for corn, soybeans, and cotton advancing through moisture-sensitive stages of development, more substantial and widespread rain is needed to significantly improve long-term prospects. Furthermore, above-normal temperatures (highs in the middle 30's degrees C) in the North China Plain maintained high crop moisture demands. Farther south, scattered, moderate to heavy showers (25-50 mm or more) continued over sections of Sichuan and along the Yangtze Valley, slowing flood recovery efforts. Heavy rain (100 mm or greater) along the southeastern coast (Guangxi to Zhejiang, with heaviest concentrations in Fujian) hampered transitional fieldwork in the main double-crop rice areas. In the north, warmer, drier weather over Manchuria favored spring wheat development and increased growth rates of vegetative to reproductive corn and soybeans. Drier weather also prevailed in central and northern sections of Honshu Island, Japan, but locally heavy rain covered western Hokkaido. Torrential rains (75-250 mm or more) from Tropical Storm Neil likely caused extensive flooding in southern Japan and the Korean Peninsula.

SOUTH ASIA

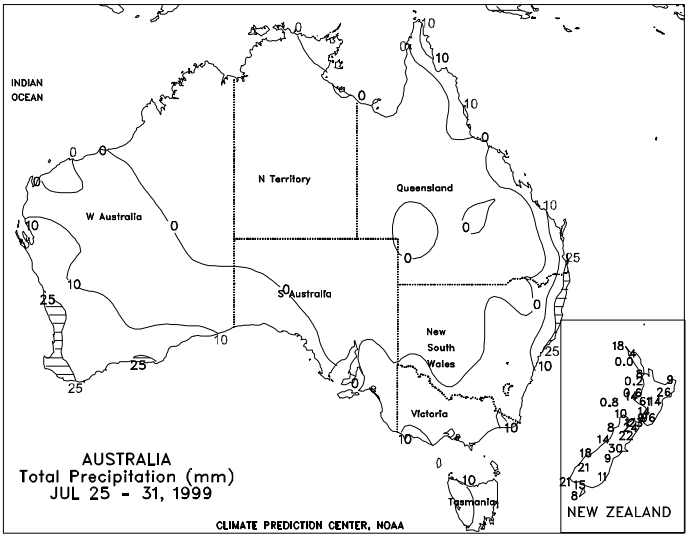
Monsoon activity diminished over southern, northwestern, and eastern sections of the region. As a result, unseasonably dry weather (rainfall totaling 10 mm or less) dominated important oilseed, cotton, grain, and sugarcane areas from Pakistan southward to India's southern tip for most of the week. At week's end, shower activity (25-50 mm or more) increased over western sections of southern India (Karnataka and Kerala), improving moisture conditions for crop development. In Gujarat, emerging groundnuts needed follow-up rains following last week's beneficial showers and may soon be under stress. In the southern interior, above-normal temperatures (highs in the middle 30's degrees C) stressed oilseeds and other summer crops that experienced sporadic rains for the early part of the rainy season. Fortunately, the heart of the soybean belt (western Madhya Pradesh) continued to receive timely, albeit below-normal rainfall (25-50 mm or more). To the east, heavy rain (50-100 mm, locally exceeding 200 mm) was concentrated over rice areas from Uttar Pradesh southeastward through Orissa, increasing moisture reserves for both irrigated and rainfed rice but causing localized flooding. In contrast, mostly dry weather (rainfall totaling 25 mm or less) brought some flood relief to Bangladesh and neighboring areas of India. However, locally heavy rain (50 mm or more) likely kept floodwaters high in rice areas to the northeast of Dacca.





SOUTHEAST ASIA

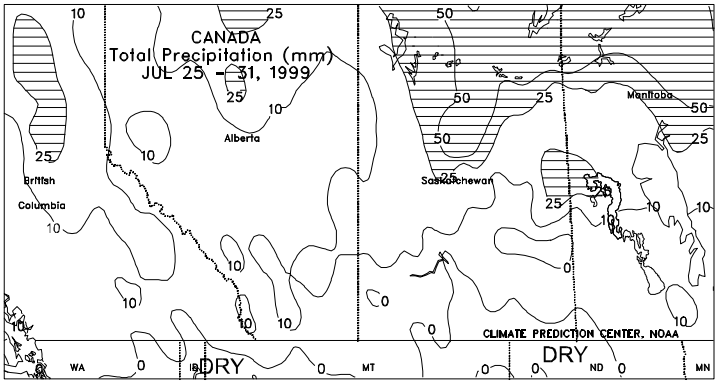
Moderate to locally heavy showers (25-75 mm or more) benefited immature rice and corn across Thailand while boosting local moisture reserves for secondary plantings. The heaviest rain (75-100 mm or more) was concentrated in the northeast along the Mekong River, aiding downstream irrigation reserves. In Vietnam, showers were moderate to locally heavy (35-50 mm or more) in the Red River Valley of the far north and in the Mekong Delta of the south. Temperatures across Indochina averaged near normal in most areas, with highs generally ranging in the lower to middle 30's degrees C. Farther south, mostly dry, warmer-than-normal weather dominated the Malay Peninsula, reducing moisture reserves for oil palm and other crops. The dryness continued over eastern Malaysia (Sarawak) and Indonesia as well. In the Philippines, moderate to heavy rain (25-50 mm or more, greater than 100 mm in western sections of the country) increased moisture reserves for main-season corn, rice, and sugarcane, as well as plantation crops such as copra.



AUSTRALIA

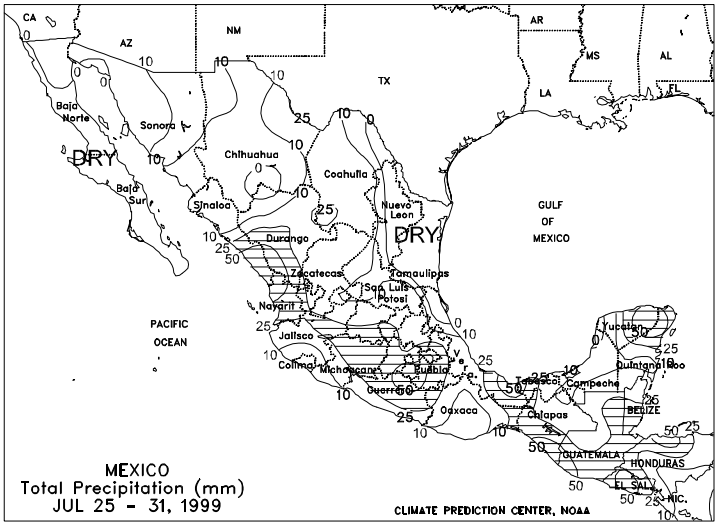
Light to moderate showers (10-25 mm or more) covered primary winter grain areas in Western Australia, providing beneficial moisture for vegetative growth. Near-normal temperatures stimulated early crop development, although patchy frost restricted crop progress in some of the cooler districts. Mostly dry, albeit mild weather dominated the winter crop areas of eastern Australia, but locally heavy rain (25-50 mm or more) persisted over coastal sugarcane areas of northern New South Wales. In New Zealand, light showers (25 mm or less) covered most grain and pasture areas, although a few locations received heavier downpours (25-50 mm or more). During August, seasonal warming is typically underway throughout the main agricultural districts of Australia, prompting winter grains and oilseeds to enter a more active period of development. By month's end, shorter-season crops such as barley are usually in or approaching the heading stage of development, especially in the warmer climates of Queensland and northern New South Wales.

CANADA



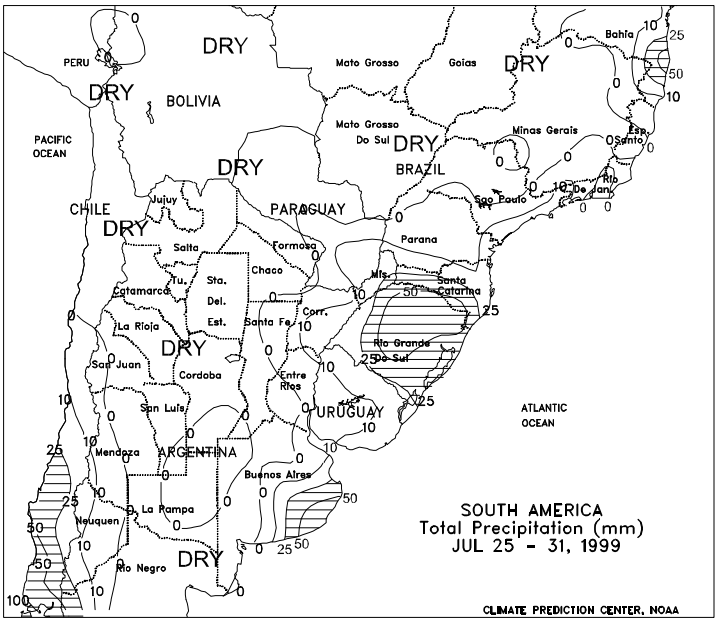
Temperatures rose to more summer-like levels across the Prairies as the dome of heat plaguing the United States spread northward. Highs reached 30 degrees C in nearly all spring grain and oilseed areas of Manitoba, Saskatchewan, and southern and central Alberta, giving crop growth rates a much-needed boost. In the southwest, however, reproductive crops experienced heat stress in the driest crop districts as high temperatures hit 34 to 36 degrees C. Farther north, unseasonably cool weather continued in Alberta's Peace River Valley, with highs hovering in the lower 20's degrees C. Markedly cooler weather returned Prairie-wide by week's end, resulting in weekly temperatures as much as 3 degrees C below normal. By Sunday morning, August 1, minimum temperatures ranged from 2 to 4 degrees C in many parts of Alberta and Saskatchewan. Rainfall was generally scattered and light across the Prairies, with only a few spots recording more than 10 mm of rainfall. Additional moisture was needed in southern Alberta and southwestern Saskatchewan for normal development of immature grains and oilseeds. However, the dry weather allowed a resumption of needed fieldwork, including hay cutting. In eastern Canada, mostly dry, warm weather (temperatures averaging 2-3 degrees C above normal) favored winter wheat harvesting. Corn and soybeans were advancing through moisture-sensitive stages of development and need rain to prevent declines in yield potential.

MEXICO



Widespread seasonal showers (20-80 mm) continued across the Southern Plateau corn belt, aiding vegetative corn. In addition, warm weather (temperatures averaging 1-2 degrees C above normal) in the region favored crop development. Meanwhile in northwestern areas (Sonora and Chihuahua), scattered monsoon showers (5-20 mm, with locally higher totals) continued to ease long-term drought. In contrast, hot (temperatures up to 3 degrees C above normal), dry weather prevailed across northeastern Mexico.

SOUTH AMERICA



In central Argentina, mostly dry weather prevailed over Cordoba, southern Santa Fe, La Pampa, and northern Buenos Aires, allowing final wheat planting efforts to advance toward completion. Farther south, late-week rain (20-58 mm) in southern Buenos Aires interrupted late planting activities but provided beneficial topsoil moisture for crop emergence and early plant establishment. In southern Brazil, moderate showers (25-63 mm) maintained adequate to abundant moisture for vegetative winter wheat. Farther north, seasonably warm, dry weather continued to favor coffee and citrus harvesting from northern Parana northward into Minas Gerais. Weekly temperatures averaged 2 to 4 degrees C above normal in most of central Argentina and southern Brazil.

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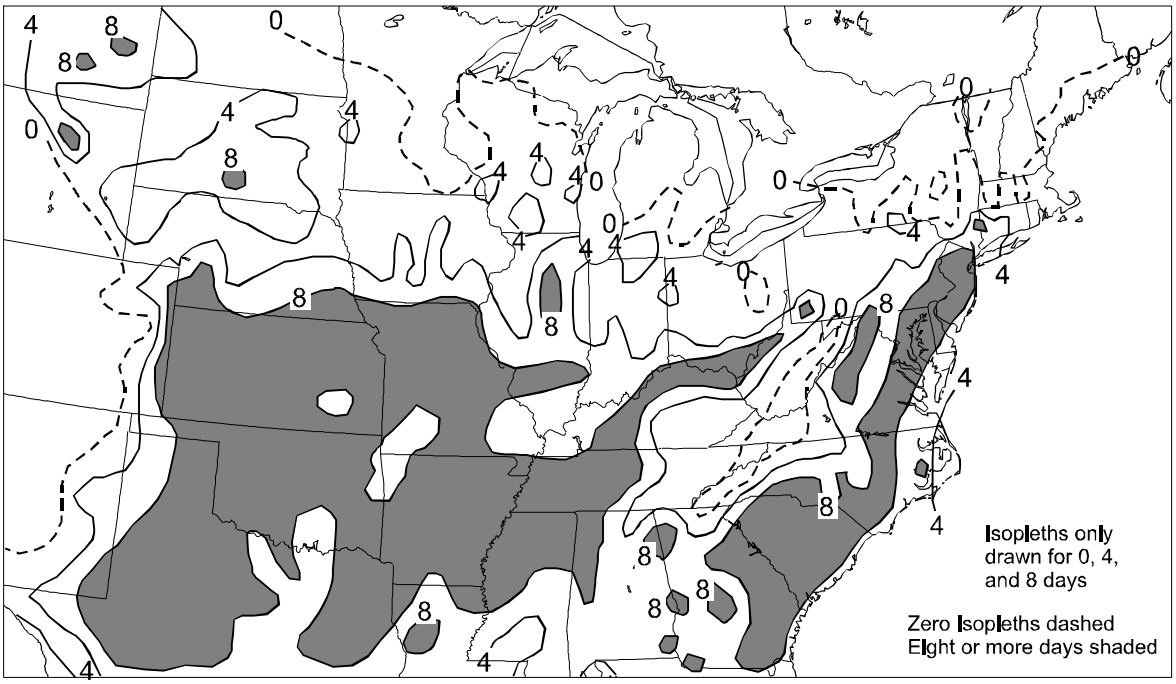
Number of Days Maximum Temperature ≥ 95 F

July 17 - 31, 1999 (15 Days)



Data obtained from Coop Data Network

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