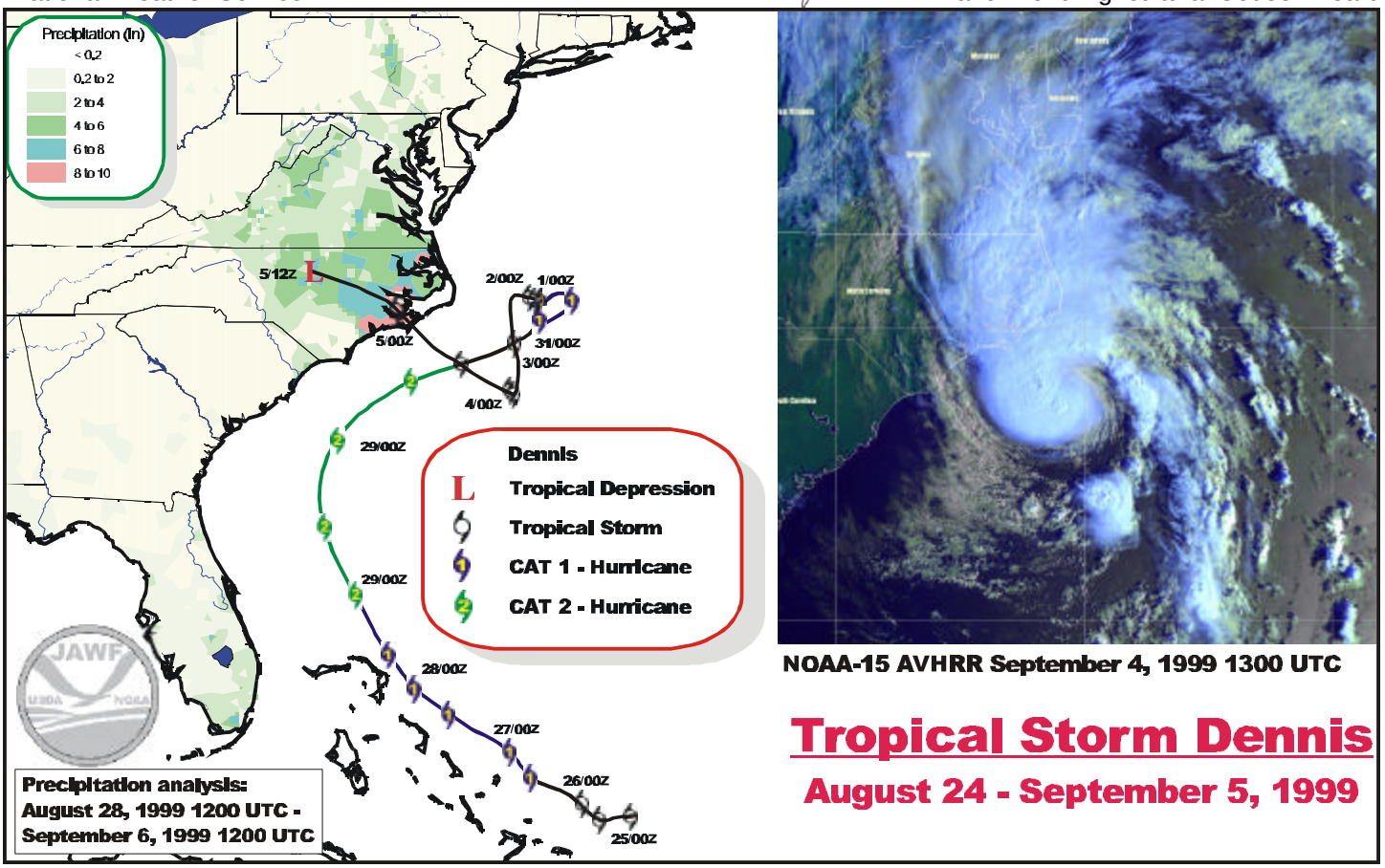
Volume 86, No. 36 September 8, 1999

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



NOAA-15 AVHRR September 4, 1999 1300 UTC

Tropical Storm Dennis

August 24 - September 5, 1999

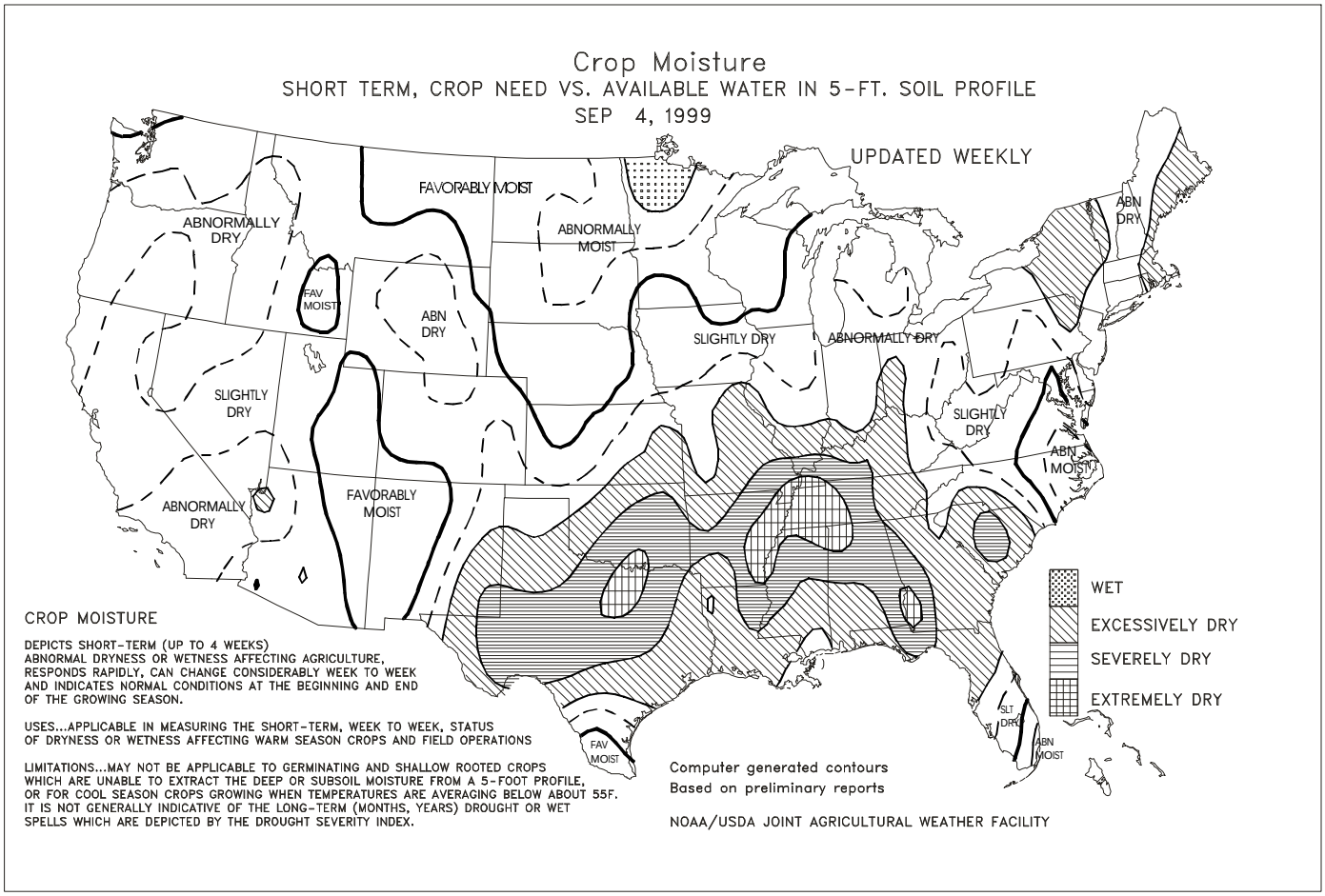
HIGHLIGHTS

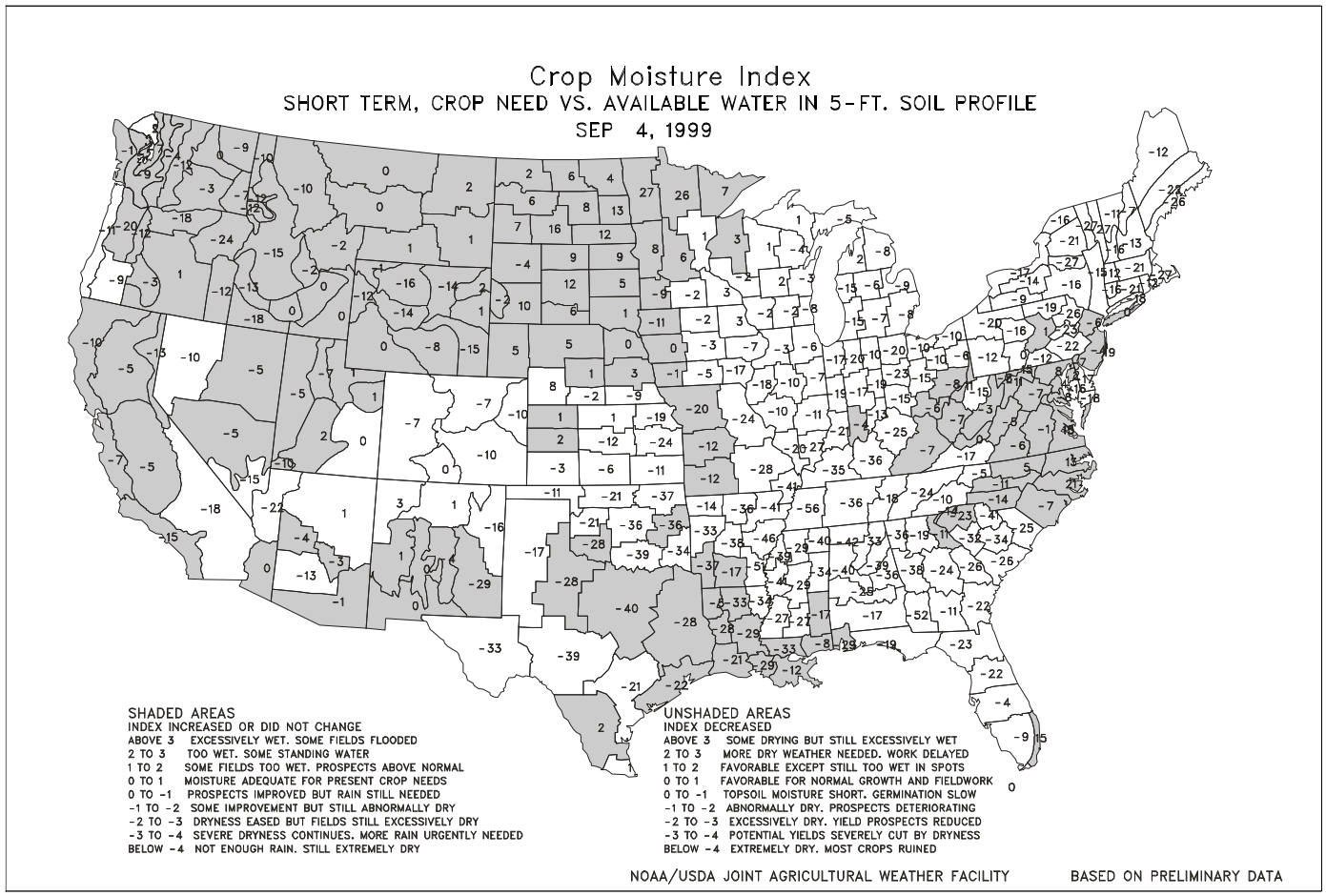
August 29 - September 4, 1999

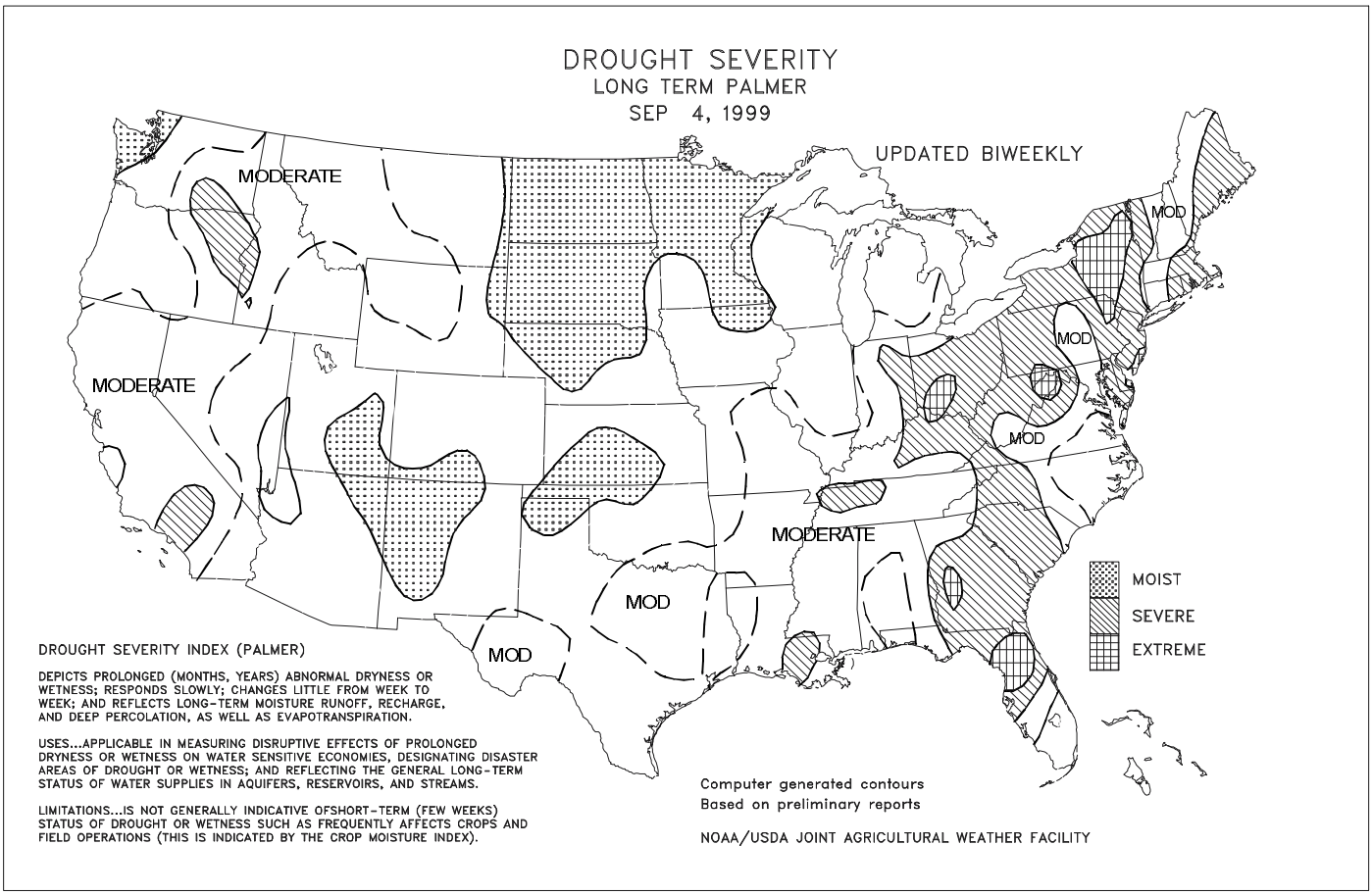
Pesky Tropical Storm Dennis stalled, drifted westward and southward, then finally turned northwestward, making landfall on Saturday, September 4 on the **North Carolina Outer Banks** near **Morehead City**. Maximum sustained winds at landfall were near 70 m.p.h. The former hurricane produced localized wind damage and flooding (storm surge- and rainfall-related), and significant beach erosion, but also provided drought-easing rains from **North Carolina** northward into the **Mid-Atlantic region**. Meanwhile, very heavy rain (2 to 5 inches) and sharply cooler weather halted small grain harvesting and slowed crop development from **northern Nebraska** to the **Red River Valley (North Dakota-Minnesota border)**. Very

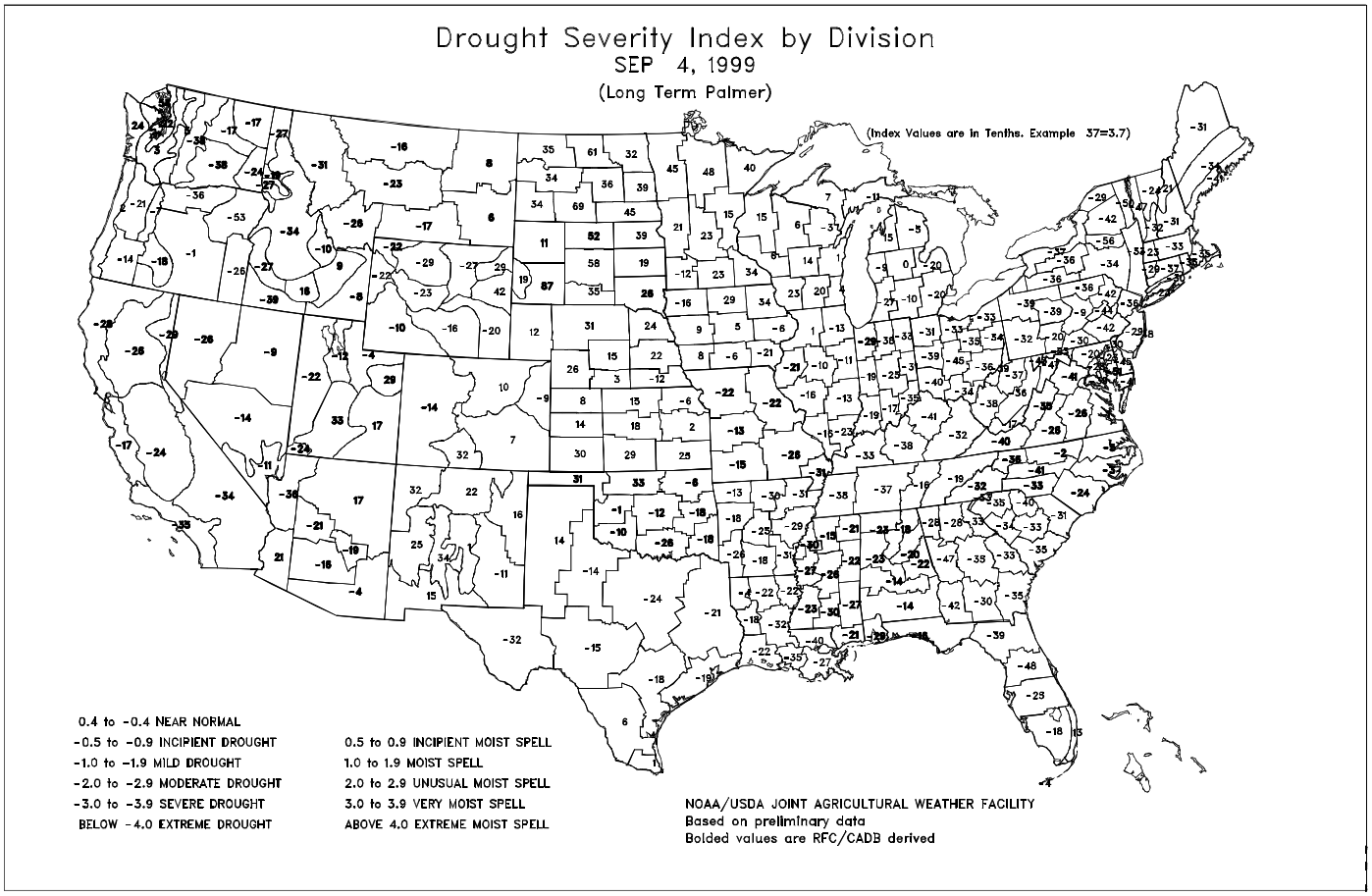
(Continued on page 5)

Contents


Crop Moisture
SHORT TERM, CROP NEED VS. AVAILABLE WATER IN 5-FT. SOIL PROFILE
SEP 4, 1999
UPDATED WEEKLY
FAVORABLY MOIST
ABNORMALLY DRY
ABNORMALLY MOIST
FAV MOIST
ABN DRY
SLIGHTLY DRY
ABNORMALLY DRY
SLIGHTLY DRY
ABN MOIST
SLIGHTLY DRY
ABNORMALLY DRY
FAVORABLY MOIST
ABN DRY
ABN MOIST
WET
EXCESSIVELY DRY
SEVERELY DRY
EXTREMELY DRY
SLT DRY
FAV MOIST
ABN MOIST
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
SEP 4, 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


DROUGHT SEVERITY
LONG TERM PALMER
SEP 4, 1999
UPDATED BIWEEKLY
MODERATE
MODERATE
MOD
MOD
MOD
MODERATE
MOD
MOD
MOIST
SEVERE
EXTREME
DROUGHT SEVERITY INDEX (PALMER)
DEPICTS PROLONGED (MONTHS, YEARS) ABNORMAL DRYNESS OR WETNESS; RESPONDS SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK; AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE, AND DEEP PERCOLATION, AS WELL AS EVAPOTRANSPIRATION.
USES...APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES, DESIGNATING DISASTER AREAS OF DROUGHT OR WETNESS; AND REFLECTING THE GENERAL LONG-TERM STATUS OF WATER SUPPLIES IN AQUIFERS, RESERVOIRS, AND STREAMS.
LIMITATIONS...IS NOT GENERALLY INDICATIVE OFSHORT-TERM (FEW WEEKS) STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).
Computer generated contours
Based on preliminary reports
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY


Drought Severity Index by Division
SEP 4, 1999
(Long Term Palmer)
(Index Values are in Tenths. Example 37=3.7)
0.4 to -0.4 NEAR NORMAL
-0.5 to -0.9 INCIPIENT DROUGHT
-1.0 to -1.9 MILD DROUGHT
-2.0 to -2.9 MODERATE DROUGHT
-3.0 to -3.9 SEVERE DROUGHT
BELOW -4.0 EXTREME DROUGHT
0.5 to 0.9 INCIPIENT MOIST SPELL
1.0 to 1.9 MOIST SPELL
2.0 to 2.9 UNUSUAL MOIST SPELL
3.0 to 3.9 VERY MOIST SPELL
ABOVE 4.0 EXTREME MOIST SPELL
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary data
Bolded values are RFC/CADB derived

Weather Data for Selected Locations in the Delta

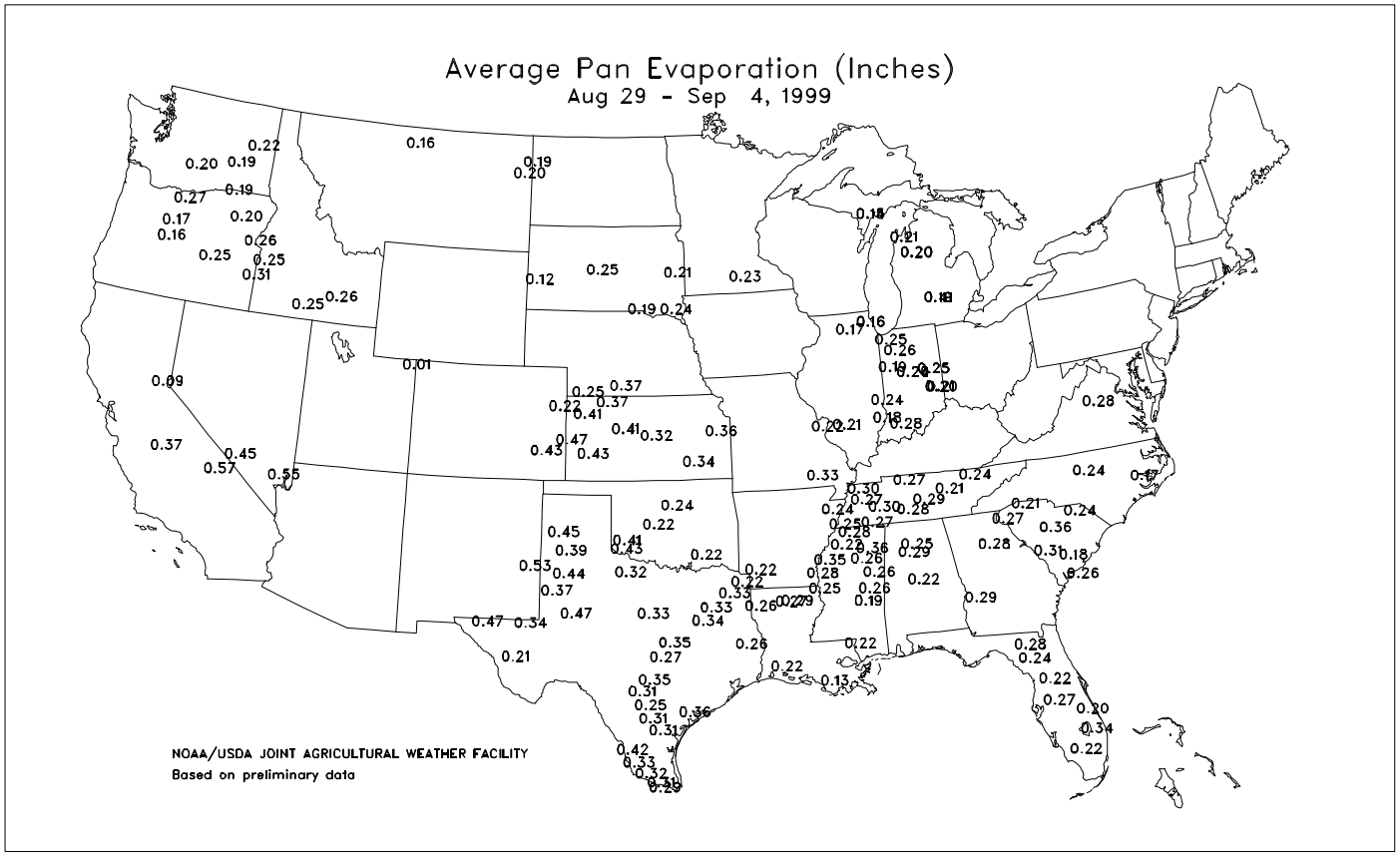
Weather Data for the Week Ending September 4, 1999

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 Sep 1	PCT. NORMAL SINCE Sep 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	93	66	96	58	80	3	0.00	-0.59	0.00	0.00	0	--	--	--	--	7	0	0	0
	BELZONI	95	67	99	63	81	2	0.00	-0.64	0.00	0.00	0	--	--	--	--	7	0	0	0
	CLARKSDALE	93	68	96	61	81	2	0.04	-0.52	0.04	0.00	0	--	--	--	--	7	0	1	0
	CLEVELAND	95	68	97	59	82	2	0.15	-0.20	0.15	0.15	68	--	--	--	--	7	0	1	0
	GREENVILLE	94	70	97	65	82	3	0.18	-0.37	0.18	0.18	55	--	--	--	--	7	0	1	0
	GREENWOOD	94	68	96	63	81	1	0.06	-0.55	0.06	0.06	17	--	--	--	--	7	0	1	0
	INDIANOLA 1S	95	70	97	63	83	--	0.29	--	0.19	0.10	--	33.05	--	87	80	7	0	2	0
	INVERNESS 5E	94	70	96	65	82	--	0.00	--	0.00	0.00	--	31.00	--	89	76	7	0	0	0
	LYON	95	66	96	56	81	--	0.09	--	0.09	0.00	--	--	--	--	--	7	0	1	0
	MOORHEAD	96	72	98	66	84	4	0.05	-0.49	0.05	0.00	0	--	--	--	--	7	0	1	0
	ONWARD	94	69	98	66	82	--	0.08	-0.61	0.08	0.00	--	40.74	--	81	79	7	0	1	0
	ROLLING FORK	94	68	96	64	81	2	0.00	-0.69	0.00	0.00	0	--	--	--	--	7	0	0	0
	SIDON	94	71	96	65	83	--	0.26	--	0.24	0.26	--	--	--	94	84	7	0	2	0
	TUNICA	92	69	94	64	81	3	0.00	-0.49	0.00	0.00	0	--	--	--	--	6	0	0	0
	VICKSBURG	92	70	94	67	81	1	0.46	-0.25	0.46	0.00	0	--	--	--	--	5	0	1	0
	YAZOO CITY	94	68	98	67	81	1	1.03	-0.26	1.03	1.03	234	--	--	--	--	7	0	1	1
	STONEVILLE *	96	68	98	61	82	4	0.58	-0.14	0.58	0.58	134	35.85	102	94	81	7	0	1	1

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

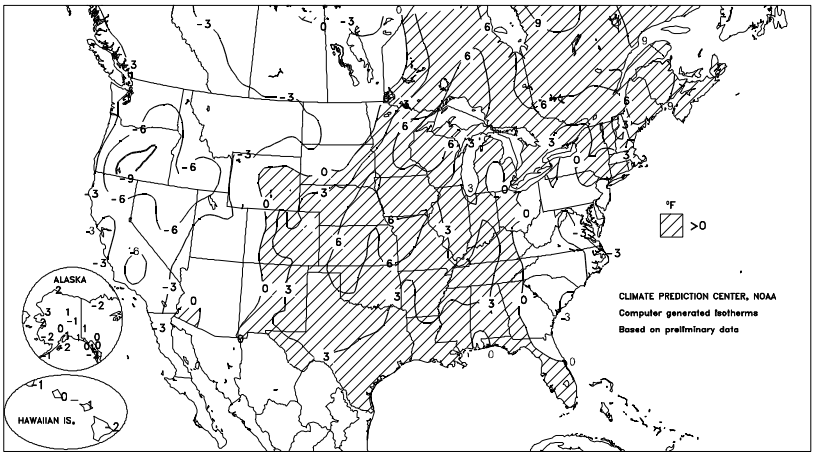
Delta Weather and Crop Summary: Unseasonably dry conditions prevailed again last week. Some cotton growers started to defoliate their fields. Dry soils and above-normal temperatures continued to stress immature summer crops throughout the Mississippi Delta.



(Continued from front cover)
cool, mostly dry weather prevailed in the **West**, slowing crop development but allowing fieldwork to proceed. The season's first widespread freeze affected much of the **Harney and northern Great Basins** (**eastern Oregon** and **northern Nevada**), where weekly temperatures averaged as much as 9ºF below normal. Readings averaged as much as 6ºF below normal on the **northern High Plains** and 7ºF below normal in **California**. Warmer-than-normal weather prevailed elsewhere except in the **Mid-Atlantic region**, cooled by Dennis' influence. Weekly temperatures ranged from 4 to 7ºF above normal from the **central and southern Plains** to the **western Corn Belt**. The warm, mostly dry conditions favored crop maturation and fieldwork, including summer crop harvesting and initial winter wheat planting. However, topsoil moisture remained extremely limited from **central Texas** and **eastern Oklahoma** northeastward to the **middle Ohio Valley**, and eastward to the **southern Atlantic Coast** (excluding **Florida**). During the week, a few beneficial showers provided isolated relief from **eastern Texas** to the **central Gulf Coast**.

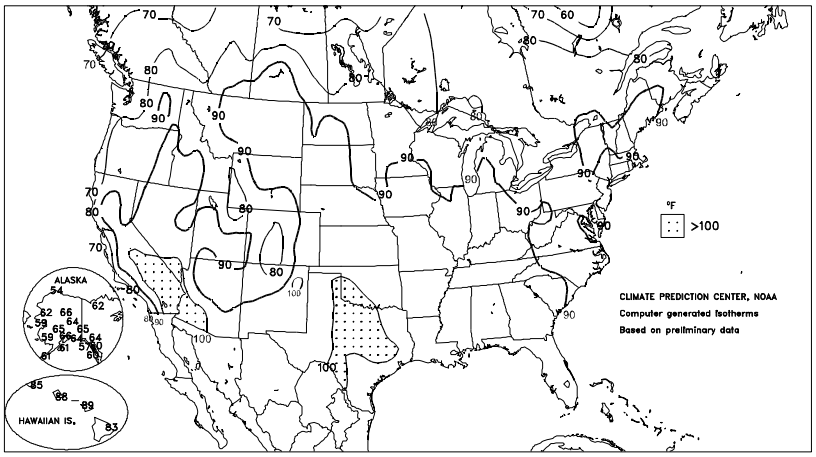
Departure of Average Temperature from Normal (ºF)

AUG 29 - SEP 4, 1999



Extreme Maximum Temperature (ºF)

AUG 29 - SEP 4, 1999



Early in the week, hot weather prevailed along the **Nation's southern tier**. On Sunday, daily-record highs were tied in locations such as **Beaumont, TX** (99ºF) and **West Palm Beach, FL** (95ºF). **Miami Beach, FL** posted an all-time record-tying high of 98ºF, most recently observed on July 13, 1980. A day later, record highs included 101ºF in **Houston, TX** and 96ºF in **Melbourne, FL**. **Melbourne** also noted daily-record highs on Sunday (96ºF), Friday (95ºF), and Saturday (96ºF).

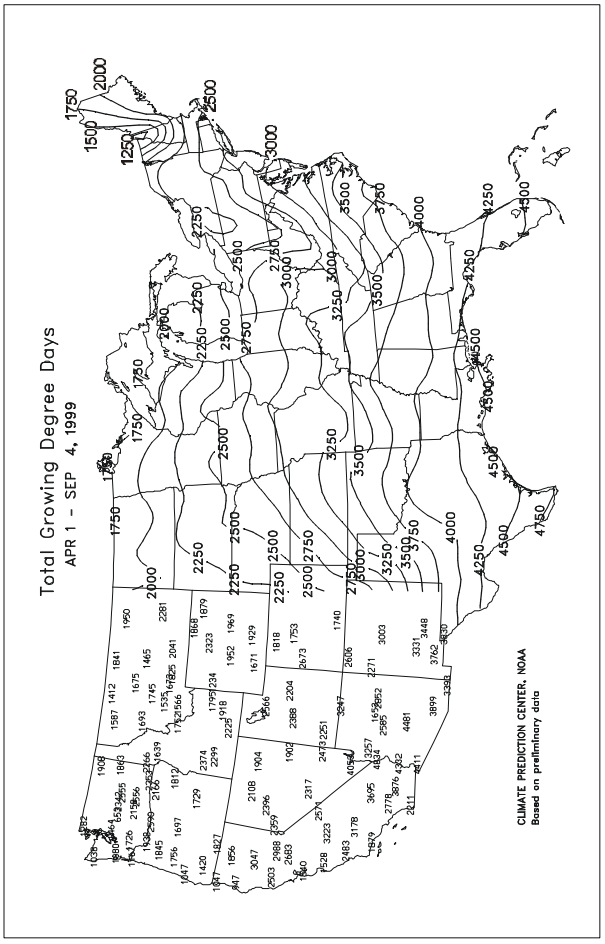
In contrast, chilly air overspread the **Northwest**, while cool air was drawn southward through the **East** on the western edge of Dennis' circulation. As a result, approximately three dozen daily-record lows were set or tied in both areas. **Yakima, WA** closed August and opened September with lows of 37ºF. On the 31st in **Oregon**, **Klamath Falls** tallied a daily-record low of 31ºF, while **Burns** netted an August record-tying low of 24ºF. On September 4, lows in **northern Nevada** plunged to 24ºF in **Elko** and 25ºF in **Ely**. In the **East**, **Elkins, WV** registered three consecutive daily record-tying lows (39, 38, and 38ºF) from August 31 - September 2. On the 1st, lows dipped to 50ºF as far south as **Columbia, SC**. A day later, lows fell below 60ºF as far south as **Jacksonville, FL** (57ºF).

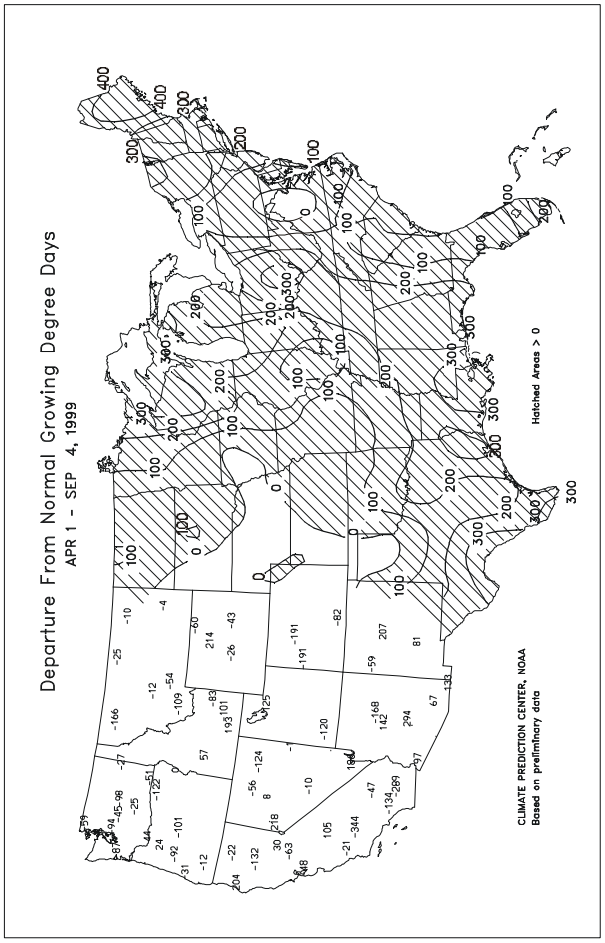
Warmth overspread **New England** late in the week due to the presence of an upper-level ridge that helped to steer Dennis inland. In **Burlington, VT**, highs reached or exceeded 90ºF on three consecutive days (90, 90, and 93ºF) from September 2-4, their first such September occurrence since September 2-4, 1953. **Mt. Washington, NH**, New England's highest mountain, opened the month with four consecutive daily-record highs (66, 65, 69, and 66ºF), the highest of which broke its monthly record of 67ºF, set on September 9, 1960.

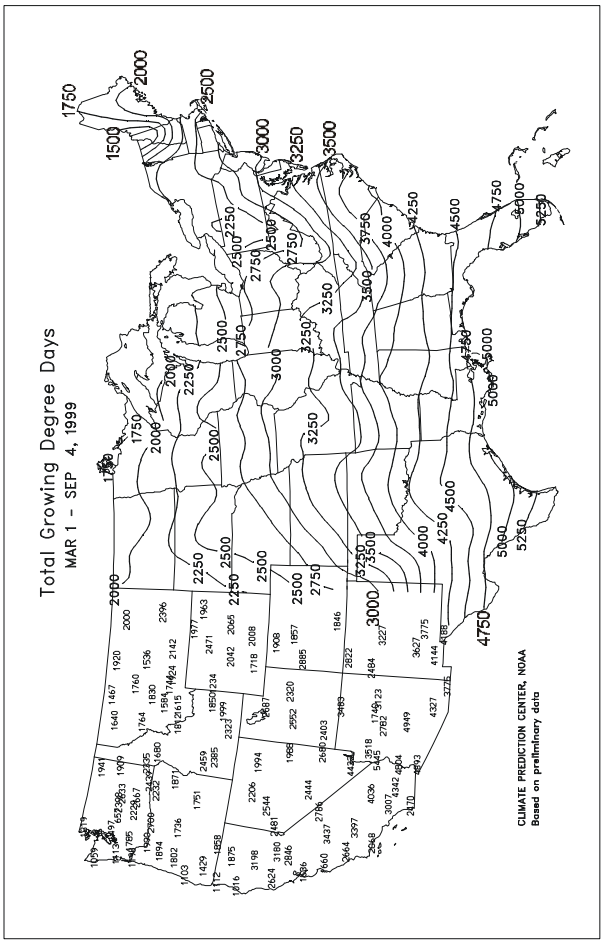
Dennis, a Category 2 hurricane, brushed the **Carolinas** on August 29-30, producing heavy rain, gusty winds, and beach erosion. On the morning of August 30, Dennis passed about 80 miles south of **Cape Fear**, near **Wilmington, NC**, and a similar distance from **Cape Lookout**, near **Morehead City, NC**. Maximum sustained winds during the morning ranged from 100 to 105 mph, and the minimum central pressure was 28.41 inches (962 millibars). **North Carolina** wind gusts were clocked to 111 mph at **Wrightsville Beach**, 82 mph at **Federal Point** (**Kure Beach**) near **Cape Fear**, and 76 mph at the Battleship North Carolina near **Wilmington**. Offshore at **Frying Pan Shoals**, winds near dawn on August 30 were recorded at 93 mph, with gusts to 112 mph. Along the **Neuse River**, tides ran as much as 8 to 10 feet above normal. Less than 24 hours later, a weakening Dennis stalled more than 100 miles east of **Cape Hatteras, NC**.

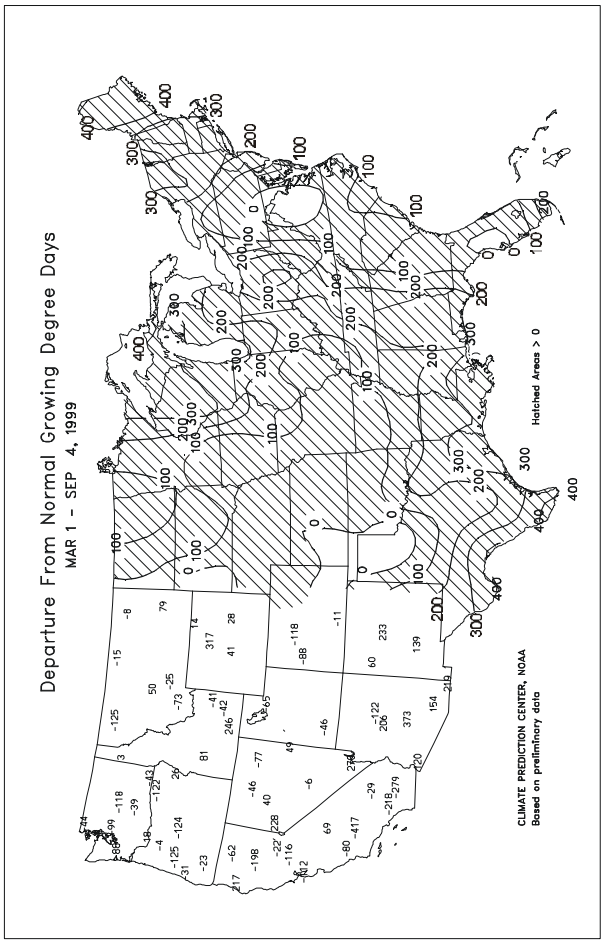
After meandering for nearly a week, Tropical Storm Dennis moved northwestward across the **North Carolina coast** with maximum sustained winds near 70 mph. Dennis made landfall around 5 p.m. on September 4 about 35 miles east-northeast of **Morehead City**, or 50 miles west-southwest of **Cape Hatteras**. The long duration of on-shore winds resulted in extensive damage to the **Outer Banks**, including lost dunes and approximately 1,600 damaged properties. The storm's remnants took a northward turn into **Virginia** by September 6, producing heavy rain along its path. **Raleigh-Durham, NC** noted consecutive daily-record totals on September 4 (1.78 inches) and 5 (4.84 inches). Additional rainfall totals from Dennis, most of which accumulated from September 4-7 and locally exceeded 8 inches, will be summarized in next week's summary.

Meanwhile, Saturday was the last of 56 consecutive days without measurable rainfall in **Dallas-Ft. Worth, TX**. Their only longer such streaks occurred in November-December 1950 and May-July 1934. In addition, **Dallas-Ft. Worth** noted a high of 101ºF on Sunday, their 26th and final day of triple-digit heat during the month, tying their August record set in 1952. Farther north, however, heavy to excessive rainfall soaked the **northern Plains**. In **Montana**, **Billings** received a daily-record total (0.78 inch) on Thursday (and a 2-day total of 1.07 inches). A day later, 1.80 inches drenched **Valentine, NE**, boosting their September 1-3 total to 2.66 inches. **Valentine's** September rainfall record (3.35 inches) was set in 1909. More than 4 inches of rain fell in many locations from **central South Dakota** to the **upper (southern) Red River Valley**. During the first week of September, rainfall reached 5.54 inches in **Fargo, ND**, 3.14 inches in **Aberdeen, SD**, and 3.13 inches in **Valentine**.


Total Growing Degree Days
APR 1 - SEP 4, 1999
CLIMATE PREDICTION CENTER, NOAA
Based on preliminary data


Departure From Normal Growing Degree Days
APR 1 - SEP 4, 1999
Hatched Areas > 0
CLIMATE PREDICTION CENTER, NOAA
Based on preliminary data


Total Growing Degree Days
MAR 1 - SEP 4, 1999
CLIMATE PREDICTION CENTER, NOAA
Based on preliminary data


Departure From Normal Growing Degree Days
MAR 1 - SEP 4, 1999
Hatched Areas > 0
CLIMATE PREDICTION CENTER, NOAA
Based on preliminary data

National Weather Data for Selected Cities

Weather Data for the Week Ending September 4, 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 Sep1	PCT. NORMAL SINCE Sep 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	94	69	97	65	81	4	0.03	-0.84	0.02	0.03	6	37.99	98	84	32	6	0	2	0
	HUNTSVILLE	95	65	97	59	80	4	0.00	-0.87	0.00	0.00	0	35.95	91	87	28	7	0	0	0
	MOBILE	89	72	94	70	80	0	2.60	1.04	2.09	2.53	278	37.80	81	95	60	4	0	6	1
	MONTGOMERY	90	69	95	64	79	0	0.00	-0.91	0.00	0.00	0	31.71	83	94	46	4	0	0	0
AK	ANCHORAGE	59	49	66	48	54	1	1.68	1.06	0.82	1.62	450	11.94	128	94	56	0	0	6	2
	BARROW	42	33	54	28	38	2	0.02	-0.16	0.01	0.00	0	2.91	97	96	78	0	2	2	0
	FAIRBANKS	60	44	64	38	52	0	0.49	0.16	0.43	0.49	288	7.04	93	91	46	0	0	4	0
	JUNEAU	56	49	60	46	52	0	1.10	-0.28	0.44	0.55	69	40.57	130	99	78	0	0	6	0
	KODIAK	58	46	61	41	52	-2	1.03	-0.41	0.46	0.93	109	40.92	99	93	57	0	0	6	0
	NOME	55	44	59	36	49	2	1.15	0.53	0.80	1.15	319	11.89	124	96	75	0	0	4	1
AZ	FLAGSTAFF	71	45	76	32	58	-3	0.72	0.17	0.31	0.06	19	11.35	75	97	44	0	1	5	0
	PHOENIX	98	77	100	72	88	-1	0.08	-0.14	0.08	0.00	0	5.30	114	63	28	7	0	1	0
	TUCSON	92	70	94	65	81	-2	1.23	0.79	1.23	0.00	0	8.70	111	80	33	6	0	1	1
	YUMA	101	80	104	77	90	0	0.08	-0.04	0.08	0.00	0	4.34	224	61	24	7	0	1	0
AR	FORT SMITH	94	72	98	68	83	5	0.46	-0.24	0.46	0.46	112	30.71	112	80	34	6	0	1	0
	LITTLE ROCK	94	70	96	63	82	4	0.00	-0.85	0.00	0.00	0	26.56	79	84	39	7	0	0	0
CA	BAKERSFIELD	87	60	99	55	73	-7	0.00	-0.03	0.00	0.00	0	5.42	137	64	26	1	0	0	0
	EUREKA	64	49	67	45	57	-1	0.00	-0.14	0.00	0.00	0	27.53	128	92	68	0	0	0	0
	FRESNO	88	60	99	56	74	-4	0.00	-0.03	0.00	0.00	0	5.97	85	69	20	2	0	0	0
	LOS ANGELES	74	64	79	62	69	-2	0.00	-0.07	0.00	0.00	0	7.18	90	85	59	0	0	0	0
	REDDING	88	59	96	50	73	-4	0.00	-0.14	0.00	0.00	0	17.16	88	60	17	3	0	0	0
	SACRAMENTO	85	55	90	49	70	-3	0.00	-0.04	0.00	0.00	0	9.91	91	86	22	1	0	0	0
	SAN DIEGO	70	62	73	60	66	-6	0.00	-0.04	0.00	0.00	0	5.08	80	84	64	0	0	0	0
	SAN FRANCISCO	69	54	74	51	61	-3	0.00	-0.01	0.00	0.00	0	12.88	105	90	54	0	0	0	0
CO	ALAMOSA	77	46	80	34	62	2	0.18	-0.04	0.07	0.06	46	6.27	121	94	29	0	0	6	0
	CO SPRINGS	83	55	88	50	69	4	0.10	-0.40	0.10	0.00	0	22.39	167	83	27	0	0	1	0
	DENVER	82	57	89	48	69	2	0.41	0.10	0.22	0.26	144	18.99	160	88	34	0	0	3	0
	GRAND JUNCTION	79	60	93	47	70	-3	0.66	0.47	0.46	0.58	527	7.05	125	78	34	1	0	4	0
	PUEBLO	91	57	96	50	74	3	0.02	-0.31	0.02	0.00	0	12.85	142	86	22	4	0	1	0
CT	BRIDGEPORT	77	60	87	57	69	-1	0.02	-0.68	0.02	0.00	0	25.37	89	80	38	0	0	1	0
	HARTFORD	84	53	90	50	69	0	0.00	-0.87	0.00	0.00	0	23.37	80	90	32	1	0	0	0
DC	WASHINGTON	81	66	91	62	73	-3	0.88	0.05	0.88	0.88	187	24.37	92	73	47	1	0	1	1
DE	WILMINGTON	79	62	88	58	71	-2	0.02	-0.77	0.02	0.02	4	26.63	94	79	47	0	0	1	0
FL	DAYTONA BEACH	90	70	93	64	80	-1	0.00	-1.52	0.00	0.00	0	26.76	81	92	47	4	0	0	0
	JACKSONVILLE	90	66	93	57	78	-2	0.00	-1.89	0.00	0.00	0	23.67	63	93	46	4	0	0	0
	KEY WEST	90	80	92	78	85	1	0.32	-1.01	0.16	0.32	41	26.50	105	86	62	7	0	3	0
	MIAMI	92	76	93	73	84	1	2.79	0.94	1.75	1.75	165	40.48	103	93	54	6	0	3	2
	ORLANDO	93	71	97	65	82	0	0.00	-1.56	0.00	0.00	0	35.14	97	94	45	6	0	0	0
	PENSACOLA	88	73	91	72	81	0	1.25	-0.22	0.94	0.29	35	38.34	84	93	62	3	0	4	1
	TALLAHASSEE	94	68	97	60	81	1	0.00	-1.54	0.00	0.00	0	37.85	77	93	35	7	0	0	0
	TAMPA	91	76	93	72	83	1	0.12	-1.57	0.12	0.12	12	22.74	69	89	54	5	0	1	0
	WEST PALM BEACH	91	75	95	72	83	1	1.26	-0.48	0.83	0.14	13	39.17	99	95	54	4	0	3	1
GA	ATHENS	89	64	93	58	77	0	0.16	-0.62	0.16	0.16	35	29.25	82	87	39	4	0	1	0
	ATLANTA	89	67	93	63	78	2	0.00	-0.79	0.00	0.00	0	26.74	73	77	34	4	0	0	0
	AUGUSTA	92	60	96	51	76	-2	0.00	-0.87	0.00	0.00	0	26.40	79	87	32	6	0	0	0
	COLUMBUS	92	70	96	65	81	1	0.00	-0.78	0.00	0.00	0	21.13	56	80	35	6	0	0	0
	MACON	91	63	94	56	77	-2	0.00	-0.73	0.00	0.00	0	26.05	79	99	42	5	0	0	0
	SAVANNAH	89	66	93	58	77	-2	0.00	-1.43	0.00	0.00	0	39.25	103	90	42	3	0	0	0
HI	HILO	81	68	83	66	74	-2	2.71	0.69	1.14	1.56	133	83.83	98	95	65	0	0	7	2
	HONOLULU	87	74	88	71	81	0	0.08	-0.02	0.08	0.00	0	7.07	58	75	46	0	0	1	0
	KAHULUI	87	72	89	70	80	0	0.04	-0.03	0.02	0.01	33	6.72	50	83	46	0	0	3	0
	LIHUE	84	74	85	71	79	-1	0.12	-0.30	0.06	0.12	50	19.67	76	86	61	0	0	2	0
ID	BOISE	79	48	97	42	64	-4	0.00	-0.15	0.00	0.00	0	6.58	84	59	18	1	0	0	0
	LEWISTON	77	50	95	43	63	-6	0.09	-0.10	0.08	0.00	0	7.69	90	72	25	1	0	2	0
	POCATELLO	73	44	90	40	59	-6	0.36	0.18	0.32	0.02	18	9.48	116	81	20	1	0	3	0
IL	CHICAGO/O'HARE	83	58	92	52	71	2	0.00	-0.98	0.00	0.00	0	30.79	125	93	40	3	0	0	0
	MOLINE	86	58	93	50	72	3	0.01	-0.95	0.01	0.00	0	25.93	93	96	41	3	0	1	0
	PEORIA	85	60	91	55	73	2	0.00	-0.82	0.00	0.00	0	24.61	98	87	41	3	0	0	0
	ROCKFORD	83	57	91	50	70	2	0.01	-0.93	0.01	0.01	2	28.89	113	93	44	2	0	1	0
	SPRINGFIELD	86	59	92	50	73	1	0.01	-0.77	0.01	0.00	0	22.24	91	90	41	3	0	1	0
IN	EVANSVILLE	93	59	97	53	76	3	0.00	-0.69	0.00	0.00	0	30.53	101	83	26	5	0	0	0
	FORT WAYNE	84	54	91	50	69	0	0.01	-0.69	0.01	0.01	3	22.06	91	93	34	2	0	1	0
	INDIANAPOLIS	88	61	94	54	74	4	0.00	-0.73	0.00	0.00	0	26.50	94	81	31	3	0	0	0
	SOUTH BEND	84	58	92	52	71	3	0.00	-0.86	0.00	0.00	0	24.12	91	86	35	3	0	0	0
IA	BURLINGTON	90	65	96	58	77	7	0.00	-0.94	0.00	0.00	0	27.90	110	84	43	4	0	0	0
	CEDAR RAPIDS	85	60	92	53	72	4	0.00	-0.96	0.00	0.00	0	27.33	112	94	42	3	0	0	0
	DES MOINES	86	65	91	60	75	5	0.33	-0.59	0.33	0.33	63	27.17	112	81	46	2	0	1	0
	DUBUQUE	81	60	88	53	70	4	0.29	-0.86	0.29	0.29	43	30.89	115	88	49	0	0	1	0
	SIOUX CITY	83	65	87	62	74	5	3.23	2.54	2.78	0.37	90	28.13	144	93	65	0	0	4	1
	WATERLOO	85	60	91	54	73	6	0.00	-0.82	0.00	0.00	0	40.09	160	91	46	3	0	0	0
KS	CONCORDIA	90	69	93	65	80	7	0.31	-0.47	0.16	0.13	30	22.66	102	82	43	5	0	3	0
	DODGE CITY	94	68	96	63	81	7	0.56	0.03	0.40	0.11	37	18.19	106	84	33	7	0	4	0
	GOODLAND	86	61	95	54	74	4	0.51	0.12	0.51	0.00	0	18.98	128	90	40	3	0	1	1
	TOPEKA	91	68	97	65	80	7	0.67	-0.24	0.67	0.67	129	26.65	104	85	40	5	0	1	1

Based on 1961-90 normals

Weather Data for the Week Ending September 4, 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 Sep 1	PCT. NORMAL SINCE Sep 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	93	70	96	67	81	6	0.76	-0.03	0.33	0.19	40	29.30	137	86	38	6	0	4	0
KY	JACKSON	84	59	89	55	71	0	0.00	-0.85	0.00	0.00	0	30.69	88	85	40	0	0	0	0
	LEXINGTON	90	58	95	54	74	1	0.00	-0.81	0.00	0.00	0	24.54	77	83	31	5	0	0	0
	LOUISVILLE	94	64	99	57	79	5	0.00	-0.75	0.00	0.00	0	30.44	96	73	31	6	0	0	0
	PADUCAH	94	61	99	51	77	3	0.00	-0.81	0.00	0.00	0	31.56	93	87	29	6	0	0	0
LA	BATON ROUGE	92	72	97	70	82	1	0.44	-0.82	0.28	0.16	22	31.67	73	97	52	6	0	3	0
	LAKE CHARLES	93	74	99	71	83	3	0.95	-0.37	0.95	0.95	120	29.59	81	97	51	5	0	1	1
	NEW ORLEANS	89	74	93	73	82	1	1.10	-0.32	0.63	0.95	114	34.80	79	96	60	4	0	5	1
	SHREVEPORT	93	72	99	70	83	2	2.90	2.30	2.28	2.90	784	45.47	146	85	39	5	0	2	2
ME	CARIBOU	80	50	90	41	65	6	0.00	-0.87	0.00	0.00	0	20.96	88	91	39	1	0	0	0
	PORTLAND	81	53	90	49	67	3	0.15	-0.52	0.14	0.00	0	23.90	85	91	36	1	0	2	0
MD	BALTIMORE	79	64	88	60	71	-1	0.67	-0.18	0.67	0.67	137	25.71	91	77	48	0	0	1	1
MA	BOSTON	79	60	87	55	70	1	0.00	-0.73	0.00	0.00	0	20.09	74	79	39	0	0	0	0
	WORCESTER	81	58	90	52	70	5	0.00	-0.90	0.00	0.00	0	23.02	73	70	29	1	0	0	0
MI	ALPENA	78	46	87	40	62	0	0.00	-0.79	0.00	0.00	0	14.24	72	95	37	0	0	0	0
	GRAND RAPIDS	81	53	88	48	67	1	0.00	-0.96	0.00	0.00	0	25.05	107	94	41	0	0	0	0
	HOUGHTON LAKE	80	43	87	38	62	0	0.03	-0.81	0.01	0.03	6	20.72	109	98	35	0	0	3	0
	LANSING	82	47	89	42	64	-1	0.01	-0.84	0.01	0.01	2	22.22	108	100	49	0	0	1	0
	MARQUETTE	77	55	87	35	66	8	0.00	-0.89	0.00	0.00	0	27.25	120	80	43	0	0	0	0
	MUSKEGON	81	53	90	48	67	1	0.00	-0.91	0.00	0.00	0	23.33	115	95	38	1	0	0	0
MN	DULUTH	72	58	80	46	65	6	2.29	1.35	1.54	1.89	344	31.72	150	92	63	0	0	4	1
	INT'L FALLS	69	53	82	41	61	2	3.96	3.22	1.68	3.88	882	26.27	149	96	69	0	0	5	3
	MINNEAPOLIS	83	65	91	59	74	8	0.24	-0.50	0.20	0.22	54	26.03	123	78	48	2	0	4	0
	ROCHESTER	79	60	88	54	69	5	0.01	-0.85	0.01	0.01	2	34.37	158	91	59	0	0	1	0
	ST. CLOUD	79	61	89	54	70	7	1.07	0.21	0.59	0.75	156	22.44	110	89	57	0	0	4	1
MS	JACKSON	94	70	98	67	82	2	0.51	-0.32	0.37	0.14	29	30.52	80	91	41	6	0	2	0
	MERIDIAN	94	67	98	64	80	1	0.02	-0.78	0.02	0.02	4	26.85	67	96	41	7	0	1	0
	TUPELO	96	68	98	60	82	4	0.00	-0.75	0.00	0.00	0	42.55	111	81	28	7	0	0	0
MO	COLUMBIA	92	64	96	55	78	6	0.00	-0.84	0.00	0.00	0	21.13	78	84	31	5	0	0	0
	KANSAS CITY	91	68	95	65	80	7	1.06	0.00	1.06	1.06	166	31.40	118	86	43	6	0	1	1
	SAINT LOUIS	90	65	95	59	78	3	0.20	-0.48	0.20	0.00	0	28.33	110	82	36	5	0	1	0
	SPRINGFIELD	92	67	94	62	79	6	0.48	-0.51	0.48	0.48	81	30.19	106	86	39	7	0	1	0
MT	BILLINGS	69	52	97	46	61	-4	1.31	1.02	0.58	1.31	771	10.48	94	85	37	1	0	3	2
	BUTTE	67	42	87	33	54	-2	0.52	0.20	0.34	0.36	189	10.77	115	96	41	0	0	4	0
	GLASGOW	67	51	95	41	59	-5	0.71	0.43	0.43	0.50	313	12.77	145	91	47	1	0	6	0
	GREAT FALLS	68	45	97	38	56	-6	2.09	1.75	1.09	1.23	647	10.57	89	92	38	1	0	5	1
	KALISPELL	70	40	87	33	55	-4	0.14	-0.19	0.08	0.05	26	9.53	83	94	31	0	0	3	0
	MILES CITY	71	56	100	48	64	-3	0.50	0.21	0.36	0.50	294	10.07	92	83	42	1	0	3	0
	MISSOULA	70	43	88	35	57	-5	0.36	0.08	0.29	0.29	181	8.81	90	90	31	0	0	3	0
NE	GRAND ISLAND	86	66	95	55	76	7	0.21	-0.48	0.13	0.08	20	24.61	127	91	51	3	0	2	0
	LINCOLN	88	67	93	62	77	7	0.95	0.12	0.87	0.88	180	25.41	121	92	47	3	0	3	1
	NORFOLK	86	66	91	57	76	8	0.31	-0.27	0.29	0.31	89	22.94	117	93	50	3	0	2	0
	NORTH PLATTE	82	60	88	51	71	4	0.83	0.47	0.43	0.75	341	18.48	117	94	56	0	0	5	0
	OMAHA	86	68	91	64	77	7	1.18	0.35	1.18	1.18	236	36.55	167	88	55	2	0	1	1
	SCOTTSBLUFF	82	58	94	49	70	3	1.02	0.82	0.87	1.00	909	14.96	122	92	38	2	0	4	1
	VALENTINE	82	61	98	47	71	4	2.81	2.38	1.60	2.78	1112	18.53	123	92	53	2	0	5	2
NV	ELY	76	41	87	25	58	-3	0.35	0.13	0.35	0.00	0	5.69	81	72	13	0	1	1	0
	LAS VEGAS	94	73	102	66	84	-2	0.00	-0.09	0.00	0.00	0	3.38	119	33	13	6	0	0	0
	RENO	78	48	92	41	63	-2	0.00	-0.08	0.00	0.00	0	3.87	78	50	16	1	0	0	0
	WINNEMUCCA	78	41	96	28	59	-6	0.00	-0.09	0.00	0.00	0	4.73	86	55	16	1	1	0	0
NH	CONCORD	84	51	92	45	67	4	0.03	-0.67	0.03	0.00	0	24.39	102	96	31	1	0	1	0
NJ	NEWARK	81	62	89	59	72	-2	0.00	-0.87	0.00	0.00	0	26.65	88	74	36	0	0	0	0
NM	ALBUQUERQUE	84	63	89	58	74	1	0.30	0.00	0.20	0.30	188	7.75	125	75	26	0	0	3	0
NY	ALBANY	82	54	88	46	68	2	0.00	-0.75	0.00	0.00	0	21.65	88	95	40	0	0	0	0
	BINGHAMTON	81	52	88	46	66	2	0.00	-0.78	0.00	0.00	0	19.91	80	86	32	0	0	0	0
	BUFFALO	79	54	87	47	67	1	0.00	-0.92	0.00	0.00	0	21.65	86	89	38	0	0	0	0
	ROCHESTER	77	53	85	45	65	-1	0.01	-0.75	0.01	0.01	2	22.71	106	96	48	0	0	1	0
	SYRACUSE	83	51	91	45	67	1	0.00	-0.85	0.00	0.00	0	18.46	72	87	34	1	0	0	0
NC	ASHEVILLE	85	54	89	48	69	-1	0.00	-0.99	0.00	0.00	0	29.07	87	96	35	0	0	0	0
	CHARLOTTE	86	59	90	51	73	-3	0.00	-0.82	0.00	0.00	0	21.95	73	84	37	1	0	0	0
	GREENSBORO	81	61	86	54	71	-2	1.02	0.19	1.02	1.02	212	28.65	96	79	42	0	0	1	1
	HATTERAS	79	72	86	68	75	-3	8.34	6.98	4.66	3.64	650	39.71	107	98	85	0	0	5	3
	RALEIGH	83	65	88	60	74	-1	1.77	0.94	1.77	1.77	377	24.65	83	82	52	0	0	1	1
	WILMINGTON	83	69	86	64	76	-2	4.78	3.39	3.63	0.05	6	39.23	97	81	61	0	0	3	2
ND	BISMARCK	68	56	95	51	62	-1	1.26	0.89	0.51	0.75	341	25.14	204	93	63	1	0	5	1
	DICKINSON	64	53	86	46	58	-5	1.85	1.49	1.18	1.81	823	16.67	130	99	65	0	0	5	1
	FARGO	68	56	85	49	62	-2	5.16	4.66	2.31	5.04	1800	18.86	129	97	71	0	0	5	4
	GRAND FORKS	68	53	86	42	61	-1	0.86	0.30	0.54	0.84	255	19.57	142	96	66	0	0	5	1
	JAMESTOWN	67	55	87	50	61	-2	2.35	1.91	0.65	1.97	730	21.23	158	98	73	0	0	6	2
	WILLISTON	68	52	94	48	60	-2	1.16	0.87	0.81	1.14	633	14.27	133	88	46	1	0	4	1
OH	AKRON-CANTON	79	53	86	49	66	-2	0.00	-0.78	0.00	0.00	0	24.46	95	94	49	0	0	0	0
	CINCINNATI	87	57	95	52	72	1	0.00	-0.70	0.00	0.00	0	24.11	82	85	29	3	0	0	0
	CLEVELAND	79	55	86	50	67	-1	0.00	-0.82	0.00	0.00	0	20.68	83	88	43	0	0	0	0
	COLUMBUS	85	58	92	54	72	2	0.00	-0.78	0.00	0.00	0	20.03	73	87	31	3	0	0	0
	DAYTON	85	55	93	49	70	0	0.00	-0.65	0.00	0.00	0	23.34	90	88	30	2	0	0	0
	MANSFIELD	80	53	87	49	67	-1	0.00	-0.89	0.00	0.00	0	25.20	90	95	40	0	0	0	0

Based on 1961-90 normals

Weather Data for the Week Ending September 4, 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 Sep 1	PCT. NORMAL SINCE Sep 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	83	54	91	51	69	2	0.01	-0.72	0.01	0.01	2	22.30	98	92	32	1	0	1	0
	YOUNGSTOWN	79	51	87	47	65	-1	0.00	-0.79	0.00	0.00	0	28.83	112	94	38	0	0	0	0
OK	OKLAHOMA CITY	94	70	98	65	82	4	0.16	-0.61	0.16	0.16	34	28.54	122	83	36	7	0	1	0
	TULSA	95	72	98	70	84	6	0.84	-0.10	0.84	0.84	145	31.17	113	75	34	7	0	1	1
OR	ASTORIA	68	50	74	44	59	-1	0.28	-0.16	0.12	0.03	11	55.21	147	94	56	0	0	6	0
	BURNS	71	32	89	22	51	-9	0.01	-0.14	0.01	0.00	0	5.92	93	77	16	0	4	1	0
	EUGENE	75	46	84	38	60	-6	0.38	0.07	0.31	0.01	6	28.21	102	95	32	0	0	4	0
	MEDFORD	79	48	89	42	64	-6	0.43	0.27	0.43	0.00	0	11.95	119	83	21	0	0	1	0
	PENDLETON	74	47	86	41	61	-8	0.16	0.02	0.16	0.00	0	5.59	74	75	27	0	0	1	0
	PORTLAND	74	53	82	50	64	-3	0.31	-0.02	0.27	0.01	5	25.90	126	86	35	0	0	3	0
	SALEM	75	49	84	43	62	-3	0.12	-0.13	0.05	0.00	0	31.58	145	94	33	0	0	3	0
PA	ALLENTOWN	81	54	88	51	68	-1	0.00	-0.98	0.00	0.00	0	19.16	64	87	36	0	0	0	0
	ERIE	76	56	83	53	66	-2	0.00	-1.01	0.00	0.00	0	24.15	92	83	50	0	0	0	0
	MIDDLETOWN	83	60	87	54	72	0	0.00	-0.80	0.00	0.00	0	22.89	82	85	38	0	0	0	0
	PHILADELPHIA	80	65	89	60	73	0	0.04	-0.79	0.04	0.04	8	26.61	91	79	49	0	0	1	0
	PITTSBURGH	82	54	90	49	68	0	0.00	-0.72	0.00	0.00	0	26.96	103	87	31	1	0	0	0
	WILKES-BARRE	84	54	92	46	69	2	0.00	-0.78	0.00	0.00	0	20.55	82	83	25	3	0	0	0
	WILLIAMSPORT	81	53	88	48	67	-1	0.01	-0.77	0.01	0.01	2	25.45	92	95	39	0	0	1	0
RI	PROVIDENCE	80	57	85	52	68	0	0.00	-0.83	0.00	0.00	0	25.59	85	87	40	0	0	0	0
SC	BEAUFORT	87	67	91	59	77	-2	0.20	-1.36	0.20	0.00	0	36.76	94	88	46	3	0	1	0
	CHARLESTON	86	65	90	56	76	-4	0.66	-0.75	0.66	0.00	0	22.58	58	91	47	3	0	1	1
	COLUMBIA	90	63	95	50	77	-1	0.00	-1.13	0.00	0.00	0	22.14	59	80	32	4	0	0	0
	GREENVILLE	89	62	93	54	76	1	0.00	-0.89	0.00	0.00	0	21.74	60	78	31	3	0	0	0
SD	ABERDEEN	70	59	86	54	65	-1	4.26	3.80	1.54	3.14	1163	20.84	141	97	77	0	0	6	3
	HURON	78	61	89	53	70	3	2.92	2.51	1.29	1.35	563	15.21	95	97	70	0	0	5	3
	RAPID CITY	74	55	96	42	64	-1	0.73	0.41	0.35	0.70	389	17.49	130	93	53	2	0	5	0
	SIOUX FALLS	83	64	89	59	73	7	1.20	0.48	0.33	0.65	151	21.14	120	92	59	0	0	5	0
TN	BRISTOL	89	53	94	47	71	-1	0.00	-0.73	0.00	0.00	0	27.26	94	91	28	3	0	0	0
	CHATTANOOGA	94	65	98	61	79	3	0.00	-0.89	0.00	0.00	0	37.00	100	88	28	6	0	0	0
	KNOXVILLE	89	61	92	58	75	1	0.00	-0.68	0.00	0.00	0	41.79	125	90	33	4	0	0	0
	MEMPHIS	95	71	98	63	83	4	0.00	-0.82	0.00	0.00	0	35.78	102	85	39	7	0	0	0
	NASHVILLE	92	64	96	57	78	3	0.00	-0.82	0.00	0.00	0	31.89	97	80	30	6	0	0	0
TX	ABILENE	97	71	100	69	84	4	0.01	-0.72	0.01	0.01	2	13.18	79	70	26	7	0	1	0
	AMARILLO	92	64	96	62	78	5	1.17	0.55	1.12	1.17	355	24.31	158	74	27	6	0	2	1
	AUSTIN	99	70	102	66	84	1	0.08	-0.54	0.08	0.08	21	21.98	103	91	32	7	0	1	0
	BEAUMONT	92	75	99	72	83	2	0.03	-1.38	0.02	0.03	4	24.36	64	96	54	4	0	2	0
	BROWNSVILLE	95	75	97	74	85	1	0.20	-0.95	0.20	0.20	27	15.47	98	94	49	7	0	1	0
	CORPUS CHRISTI	93	75	96	73	84	1	0.01	-1.12	0.01	0.00	0	22.73	117	99	55	7	0	1	0
	DEL RIO	96	74	99	72	85	2	0.00	-0.51	0.00	0.00	0	14.92	124	87	37	7	0	0	0
	EL PASO	92	69	94	67	80	3	0.02	-0.38	0.02	0.02	8	5.04	89	66	29	6	0	1	0
	FORT WORTH	97	76	101	73	87	5	0.00	-0.64	0.00	0.00	0	16.17	70	72	31	7	0	0	0
	GALVESTON	90	78	97	76	84	2	0.58	-0.73	0.39	0.57	70	19.83	72	86	59	2	0	4	0
	HOUSTON	95	72	101	70	84	3	0.28	-0.72	0.28	0.28	46	22.72	75	96	46	6	0	1	0
	LUBBOCK	93	65	96	62	79	4	0.00	-0.61	0.00	0.00	0	15.28	116	75	29	7	0	0	0
	MIDLAND	96	69	98	65	83	5	0.00	-0.52	0.00	0.00	0	6.37	66	61	22	7	0	0	0
	SAN ANGELO	97	69	99	66	83	4	0.00	-0.68	0.00	0.00	0	11.74	89	76	25	7	0	0	0
	SAN ANTONIO	96	74	97	71	85	2	0.77	0.06	0.75	0.02	5	14.73	71	89	35	7	0	2	1
	VICTORIA	96	72	100	69	84	1	1.55	0.48	1.30	1.42	209	22.16	90	100	42	7	0	3	1
	WACO	98	73	102	68	85	2	0.00	-0.61	0.00	0.00	0	14.96	71	84	35	7	0	0	0
	WICHITA FALLS	99	73	103	70	86	6	0.00	-0.79	0.00	0.00	0	23.48	118	73	29	7	0	0	0
UT	SALT LAKE CITY	77	55	92	45	66	-5	0.72	0.48	0.36	0.40	267	10.83	99	79	34	2	0	3	0
VT	BURLINGTON	83	52	93	45	68	4	0.00	-0.87	0.00	0.00	0	16.16	70	90	33	3	0	0	0
VA	LYNCHBURG	82	58	87	52	70	-2	1.75	1.01	1.75	1.75	407	23.41	84	83	32	0	0	1	1
	NORFOLK	77	71	86	67	74	-2	3.30	2.30	2.19	2.58	453	33.45	104	90	74	0	0	6	2
	RICHMOND	77	66	89	62	71	-3	1.78	0.93	1.76	1.78	371	28.41	94	86	61	0	0	2	1
	ROANOKE	84	55	90	47	70	-2	0.68	-0.18	0.68	0.68	142	23.72	84	85	35	1	0	1	1
	WASH/DULLES	81	60	90	55	70	-1	1.02	0.17	1.02	1.02	212	28.33	102	83	38	1	0	1	1
WA	OLYMPIA	71	46	78	37	58	-3	0.17	-0.22	0.16	0.01	4	39.82	142	96	38	0	0	2	0
	QUILLAYUTE	68	41	74	35	54	-4	0.18	-0.55	0.08	0.02	5	75.02	125	100	58	0	0	3	0
	SEATTLE-TACOMA	69	51	76	47	60	-4	0.09	-0.25	0.06	0.00	0	24.92	121	92	49	0	0	2	0
	SPOKANE	72	45	87	37	59	-6	0.20	0.03	0.19	0.00	0	9.57	93	82	26	0	0	2	0
	YAKIMA	75	44	87	37	59	-6	0.30	0.19	0.18	0.00	0	4.80	100	90	31	0	0	2	0
WV	BECKLEY	79	52	84	47	66	-1	0.00	-0.75	0.00	0.00	0	25.09	86	88	42	0	0	0	0
	CHARLESTON	85	53	92	47	69	-3	0.00	-0.81	0.00	0.00	0	24.72	83	97	34	1	0	0	0
	ELKINS	82	43	89	38	63	-3	0.23	-0.71	0.16	0.23	43	24.85	78	98	29	0	0	2	0
	HUNTINGTON	84	55	89	50	70	-2	0.01	-0.74	0.01	0.01	2	22.78	77	99	40	0	0	1	0
WI	EAU CLAIRE	83	59	91	50	71	7	0.08	-0.94	0.08	0.08	14	26.18	113	87	42	2	0	1	0
	GREEN BAY	80	52	90	44	66	2	0.01	-0.84	0.01	0.01	2	19.49	98	95	45	1	0	1	0
	LACROSSE	85	61	93	54	73	6	0.00	-0.94	0.00	0.00	0	27.81	126	85	41	3	0	0	0
	MADISON	82	54	90	47	68	3	0.00	-0.90	0.00	0.00	0	27.43	125	97	44	2	0	0	0
	MILWAUKEE	79	60	89	57	69	3	0.00	-0.83	0.00	0.00	0	30.81	135	86	48	0	0	0	0
WY	CASPER	77	52	92	43	64	1	0.80	0.63	0.48	0.80	727	7.73	83	84	34	1	0	3	0
	CHEYENNE	79	53	87	44	66	3	1.35	1.01	0.64	1.26	630	14.55	126	90	34	0	0	5	2
	LANDER	75	51	91	43	63	-1	0.72	0.53	0.28	0.66	550	11.28	118	88	31	1	0	6	0
	SHERIDAN	74	52	96	44	63	0	2.56	2.30	1.07	2.51	1569	11.49	109	84	43	1	0	5	2

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

August Weather and Crop Summary

Weather

The extreme heat and dryness that developed in late July from Oklahoma and Texas to the southern Atlantic Coast persisted through August, stressing pastures and immature summer crops, including cotton and soybeans. Meanwhile, heat did not return to the Corn Belt after late July, keeping heat stress on Midwestern corn and soybeans at a minimum. Unfavorably dry weather persisted, however, across the southern and eastern Corn Belt, particularly in Missouri and the lower Ohio Valley. In contrast, wet conditions prevailed from the Southwest to the northern Plains and upper Midwest, courtesy of an active monsoon and numerous cold fronts. Beneficial rain fell in the Northwest, but dry conditions and lightning strikes sparked wildfire activity in California and the Great Basin. Much-needed rain also fell in the northern Mid-Atlantic region, tempering the 14-month drought. In the tropics, Bret became the first hurricane to cross the Texas coast this decade on August 22, arriving as a Category 3 storm (125 mph sustained winds) in sparsely populated Kenedy County, Texas. Hurricane Dennis, a category 2 storm (100 to 105 mph winds) brushed the coastal Carolinas on August 29-31, producing heavy rain, gusty winds, and beach erosion. Although no tropical systems affected southern Florida, rainfall was well above normal.

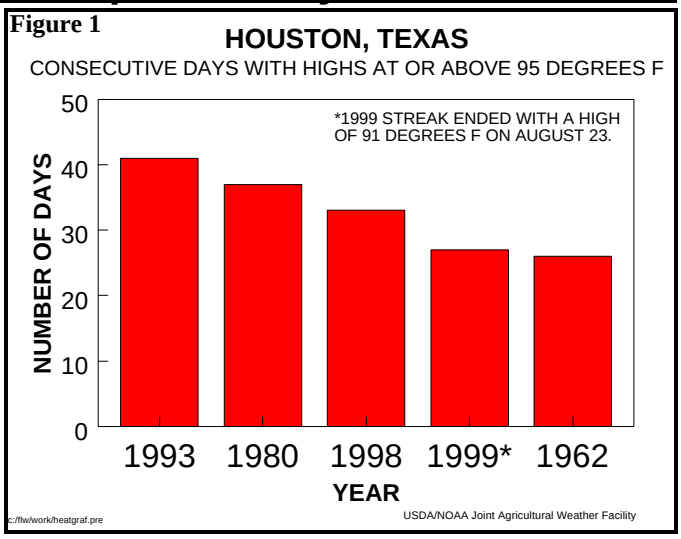
Monthly rainfall was more than 200 percent (%) of normal from the Four Corners region to the central High Plains, and in a few locations on the northern Plains and interior Northwest. Precipitation was less than 25% of normal in many areas from central Texas to the middle and lower Mississippi Valley, in portions of the Great Basin, and in coastal and southern California.

Monthly temperatures averaged 2 to 5°F above normal from Texas and Oklahoma to the southern Atlantic Coast. Temperatures were up to 3°F above normal in the northern High Plains and the Northwest. In contrast, readings averaged as much as 3°F below normal in the Corn Belt and as much as 5°F below normal in California's San Joaquin Valley. Near-normal temperatures prevailed in the Mid-Atlantic region.

As the month began, very hot conditions prevailed across the South. August 1 featured an all-time-record high of 105°F in Charleston, SC, an August-record high of 103°F in Wilmington, NC, and a high of 107°F in Augusta, GA–1°F shy of their August record. The core of extreme heat shifted westward as the month progressed, while the Southeast gained some occasional relief. In Washington, DC, an 18-day spell (July 22 - August 8) with highs at or above 90°F–their longest since a record-setting 21-day streak in 1988–ended with a high of 84°F on August 9. In Raleigh-Durham, NC, a 23-day spell (July 17 - August 8) with highs at or above 90°F also ended on August 9, just 1 day shy of their record of 24 days, set in 1995. Greenville-Spartanburg, SC, which closed July with an all-time record-tying high of 104°F, had 33 consecutive days (July 18 - August 19) with highs at or above 90°F. Their record remains 38 days, set in 1993. In Arkansas, Little Rock's streak of 90-degree heat (31 days from July 15 - August 14) ended with a high of 89°F on August 15, then resumed through month's end. Little Rock's maximum of 105°F on August 11 represented their highest reading since an all-time-record high of 110°F on July 31, 1986. Similarly, in Missouri, Joplin's maximum of 104°F on August 12 was their highest reading since the mercury reached 108°F on July 30, 1986.

Meanwhile in Texas, a 27-day streak (July 27 - August 22) with highs at or above 95°F ended in Houston on August 23 (fig. 1). Houston's maximum of 105°F on August 20 was their highest temperature since 1980. In addition, Houston's 10 days with triple-digit heat represented their second-highest August total, behind only 14 days in 1993, and the monthly average temperature

Figure 1



86.8°F was their highest in August since 1962. (Houston finally got a reprieve with a high of 86°F on September 1, their first sub-90°F maximum since July 21.) In Dallas-Ft. Worth, highs averaged 101.7°F during the month, peaking at or above 100°F on an August record-tying (with 1952) 26 days. Dallas-Ft. Worth's 24 consecutive days (July 28 - August 20) with 100-degree heat was their fourth-longest such streak, behind 42 days in 1980, 29 days in 1998, and 25 days in 1952. Farther north, occasional surges of heat produced some extremely high temperatures. Tulsa, OK recorded 109°F on August 26, their highest temperature so late in the season since the mercury peaked at 109°F on September 2 and 3, 1939. In Arkansas, Ft. Smith registered 106°F on August 11 and 26, and El Dorado recorded 108°F on August 19. The last time El Dorado's temperature exceeded that level was July 15, 1939, when the high reached 109°F.

August average-temperature records were set in a few locations across the South. In addition, it was the hottest August since 1951 in Mobile, AL and since 1993 in Pensacola, FL.

August-Record Average Temperatures (°F)

Location	Avg.	Dep.	Former Record/Year
Austin (city), TX	88.3	+3.5	87.6 in 1951
Wilmington, NC	82.6	+2.9	82.4 in 1975

Dryness accompanied the heat in most cases, and also extended northward into the Ohio Valley. Little Rock's August rainfall was 0.71 inch, following a 0.65-inch total in July. The last time Little Rock had less than 1 inch of rain during 2 consecutive months was 1980. In Kentucky, Louisville's July-August rainfall (1.48 inches, or 18% of normal) was their lowest since only 1.45 inches fell in 1930. Paducah, KY followed their driest July on record (0.28 inch, or 7% of normal) with their third-driest August (0.54 inch, or 16%). Dryness extended as far west as eastern Kansas, where Topeka's 2-month total (1.68 inches, or 22% of normal) was their third-driest such period on record.

In Texas, monthly rainfall totaled just a trace in Dallas-Ft. Worth and Waco. Dallas-Ft. Worth's streak without measurable rainfall eventually reached 56 days (July 11 - September 4)–behind only 58 days streaks in November-December 1950 and May-July 1934–before ending with a 0.35-inch total on September 5. In Galveston, TX, where 0.26 inch (6% of normal) fell during the month, only 1990 (0.18 inch) had a drier August during this half-century. Shreveport, LA went 29 days (July 26 - August 23) without a drop of rain, their longest such streak since a 34-day spell from September 28 - October 31, 1963. It was also Shreveport's

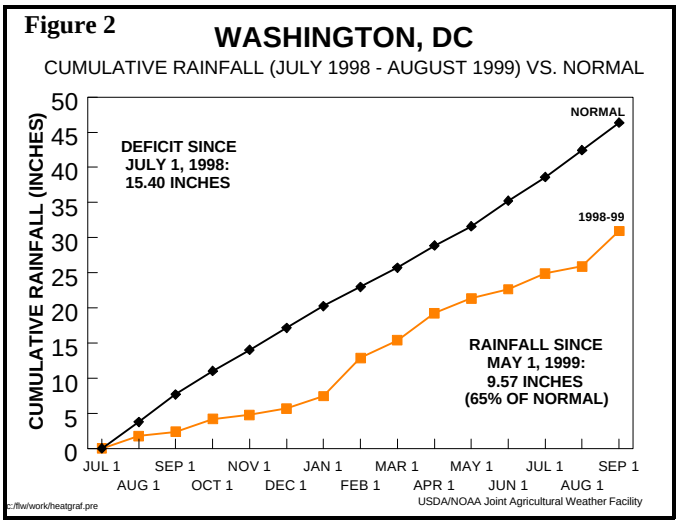
longest stretch without measurable precipitation since the summer of 1980. Record-low August rainfall totals were observed in several locations across the South. Totals were as low as 0.79 inch (20% of normal) in Greenville-Spartanburg; 0.78 inch (25%) in Jackson, TN; 0.42 inch (13%) in Tulsa; 0.39 inch (12%) in Tupelo, MS; and 0.20 inch (7%) in Ft. Smith. In Alabama, Birmingham netted 0.20 inch (5% of normal), all of which fell on August 25.

Record-Low August Rainfall (Inches)

Location	Total	Normal	Former Record/Year
Lake Charles, LA	trace	5.33	0.77 in 1976
Beaumont, TX	trace	5.34	0.72 in 1924
Baton Rouge, LA	0.38	6.00	0.96 in 1950
Pinson, AL	0.47	n/a	0.74 in 1955

Meanwhile, the Mid-Atlantic region experienced relief from long-term drought, especially late in the month. While Greenville-Spartanburg saw their 14-month precipitation deficit rise another 3.16 inches to 18.86 inches, deficits dropped 1.11 inches (to 15.40 inches) in Washington, DC (fig. 2) and 2.22 inches (to16.27 inches) in Baltimore, MD. Most of Washington's rain (4.38 of 5.02 inches) fell from August 23-27. Similarly, 4.15 inches of Baltimore's 6.14 inches (157% of normal) fell from August 24-26. At New York's Central Park, June-August rainfall (4.97 inches, or 41% of normal) was the fourth lowest on record, despite a near-normal August total (3.94 inches, or 98%). Dryness actually intensified across much of New England, where Portland, ME concluded a record-dry summer (4.10 inches, or 44% of normal). Their previous record, 4.57 inches, had stood since 1957. Across southern Florida, meanwhile, frequent heavy showers boosted monthly totals. West Palm Beach, FL collected 12.08 inches during August, 201% of normal. Late-month thunderstorms padded totals on the drought-affected west slopes of the central Appalachians. Jackson, KY had their wettest August day on record on the 24th, when 3.84 inches fell. On August 24-25, Huntington, WV received 3.59 inches, their heaviest 24-hour total since 3.73 inches fell on May 28, 1990.

Figure 2



More widespread wetness affected areas from the Southwest to the northern Plains. On the High Plains, a near-record total (7.04 inches, or 233% of normal) fell in Colorado Springs, second only to 7.09 inches in August 1929. Colorado Springs rainfall was bolstered by an all-time-record, 24-hour total of 4.21 inches on August 4-5. Similarly, Bismarck, ND received an August-record, 24-hour total of 4.74 inches on August 11-12, boosting their monthly total to a near-record 7.91 inches (460% of normal). In Montana, August 11 rainfall totaled 1.03 inches in Great Falls and 1.79 inches in Cut Bank, the greatest 1-day amounts since May 30, 1998 (1.88 inches), and June 6, 1995 (2.09 inches), respectively. Boise, ID received 0.26 inch of rain on August 11, their first measurable total since June 15, a span of 56 days. A day earlier, unusually heavy rain fell as far south as northern California, where Redding (0.23 inch) and Red Bluff (0.25 inch) posted daily-record totals. Early in the month, the heavy rainfall extended as far east as the western Corn Belt, where thunderstorms dumped 10.48 inches on Omaha (Eppley Airfield), NE during a 24-hour period on August 6-7.

Locally heavy rain, accompanied by generally cool weather, continued in the Southwest. Albuquerque, NM netted 3.04 inches (185% of normal), their wettest August since 1988. In eastern Arizona, Willcox received 6.60 inches (244% of normal), boosting their summer (June-August) total to 12.47 inches (220%). On August 13 in Tucson, AZ, the temperature reached 100°F for the first time since July 6. Tucson's 37 days without 100-degree heat was their longest summer stretch since 1968. In Nevada, Las Vegas' high of 102°F on August 25 was their first above-normal maximum since July 5, ending a 50-day streak. In California's San Joaquin Valley, Fresno (2.0°F below normal) had their coolest August since 1976, while Bakersfield (5.0°F below normal) had their coolest since 1954. Monthly temperatures in Bakersfield have been below normal for the last 12 months and 18 of the last 19 months.

During the first 8 months of 1999, wildfires burned more than 4.2 million acres, 170% of the 10-year average. More than half of the land burned in Alaska during July and the Great Basin during August. In northern Nevada, monthly rainfall totaled just 0.19 inch (29% of normal) in Elko and 0.16 inch (36%) in Winnemucca).

In the Midwest, heat simply failed to return after the July heat wave. The highest temperatures during the month included 89°F in Indianapolis, IN, 89°F in LaCrosse, WI, and 85°F in Rochester, MN. In Wisconsin, spells with at- or above-normal monthly temperatures ended at 20 months (December 1997 - July 1999) in Milwaukee (0.5°F below normal) and Madison (1.4°F below normal). Farther west, signs of autumn appeared at month's end. Burns, OR logged an August record-tying low of 24°F on the 31st. Meanwhile in Montana, the lowest temperatures of the month occurred on August 31 in Havre (44°F) and Helena (41°F), just 1 day after the month's highest readings (100°F in Havre and 96°F in Helena).

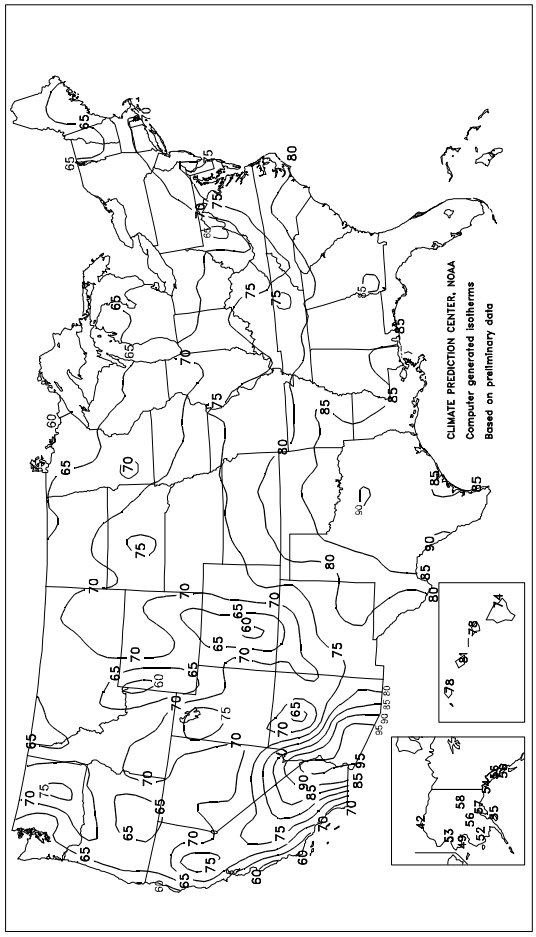
In the tropics, Bret made landfall on August 22 in Kenedy County, TX as a Category 3 hurricane with maximum sustained winds estimated at 125 mph. The storm peaked in intensity a few hours before landfall with sustained winds near 140 mph. The last hurricane to cross the Texas coast had been Jerry, which arrived near Galveston as a minimal hurricane on October 15, 1989. Texas' previous longest stretch without hurricane activity had been just under 9 years, from Hurricane Fern in September 1971 to Hurricane Allen in August 1980. Bret produced more than 4 inches of rain near its landfall position, and lower amounts farther to the west. About 60 miles north of the Padre Island landfall, Corpus Christi, TX collected daily-record totals on August 22 (4.56 inches) and 23 (2.04 inches). Just north of Bret's track through Kenedy County, Sarita reported 24-hour totals of 8.20 inches on August 22-23 and 4.50 inches on August 23-24. Bret produced 12 new cuts across Padre Island National Seashore, connecting the Gulf of Mexico to Laguna Madre.

Dennis, a Category 2 hurricane, brushed the Carolinas on August 29-30, producing heavy rain, gusty winds, and beach erosion. On the morning of August 30, Dennis passed about 80 miles south of Cape Fear, near Wilmington, NC, and a similar distance from Cape Lookout, near Morehead City, NC. Maximum sustained winds during the morning ranged from 100 to 105 mph, and the minimum central pressure was 28.41 inches (962 millibars). North Carolina wind gusts were clocked to 111 mph at Wrightsville Beach, 82 mph at Federal Point (Kure Beach) near Cape Fear, and 76 mph at the Battleship North Carolina near Wilmington. Offshore at Frying Pan Shoals, winds near dawn on August 30 were recorded at

(Continued on page 15)

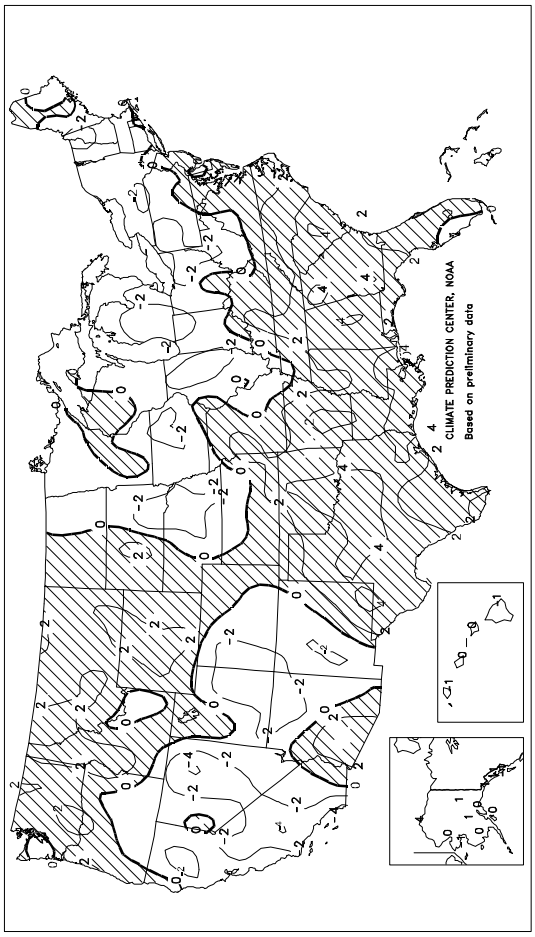
Average Temperature (°F)

AUG 1999



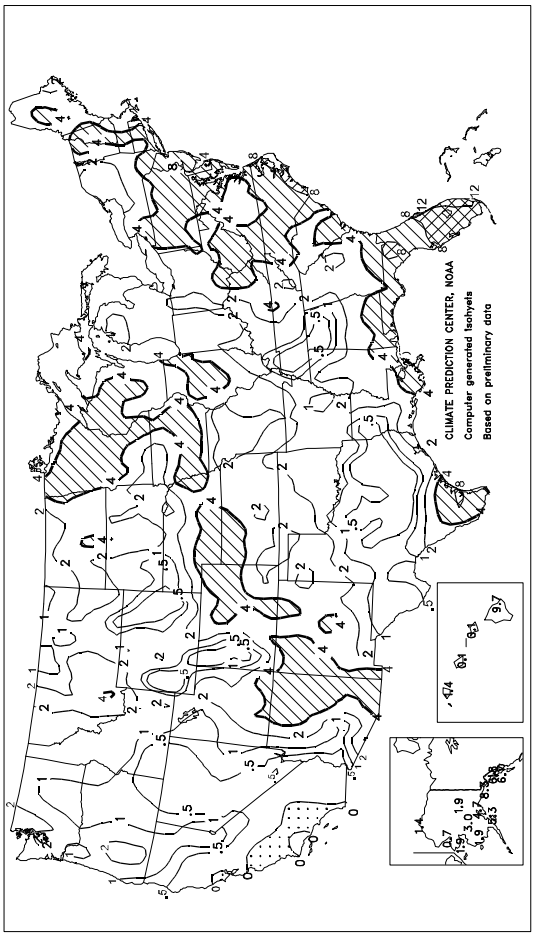
Departure of Average Temperature from Normal (°F)

AUG 1999



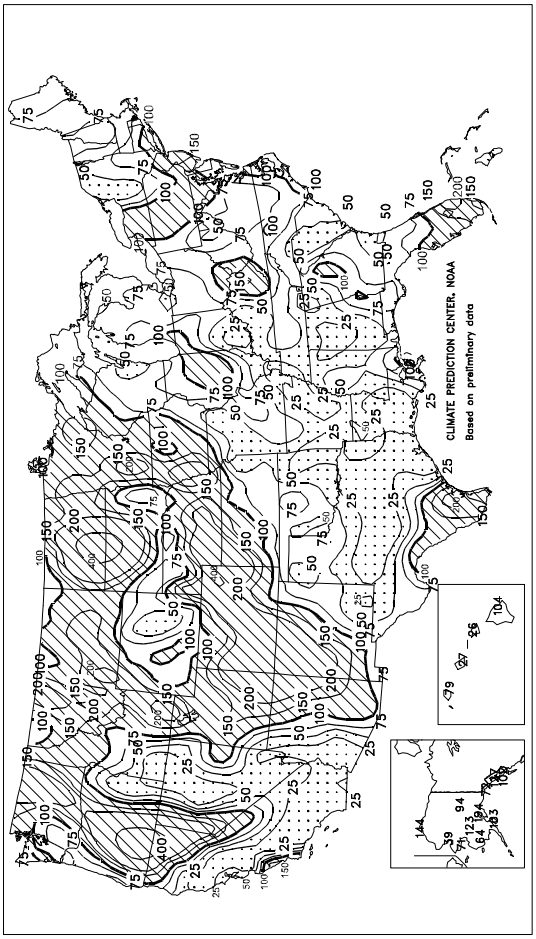
Total Precipitation (Inches)

AUG 1999



Percent Of Normal Precipitation

AUG 1999



TEMPERATURE AND PRECIPITATION SUMMARY
August 1999

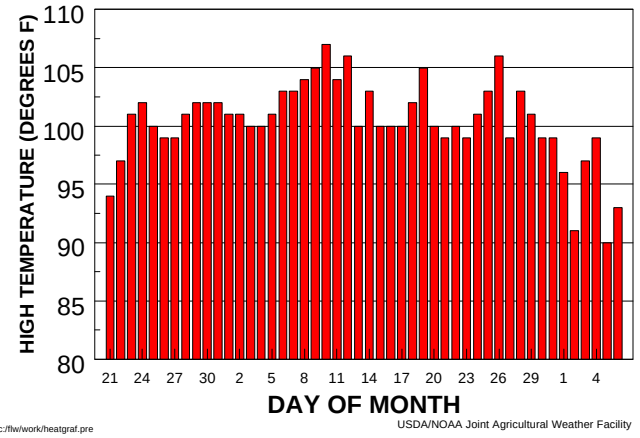
STATES AND STATIONS		TEMP, °F		PRECIP.		STATES AND STATIONS		TEMP, °F		PRECIP.		STATES AND STATIONS		TEMP, °F		PRECIP.	
		AVERAGE	DEPARTURE	TOTAL	DEPARTURE			AVERAGE	DEPARTURE	TOTAL	DEPARTURE			AVERAGE	DEPARTURE	TOTAL	DEPARTURE
AL	BIRMINGHAM	83	5	0.80	-2.80	ME	CARIBOU	63	0	3.69	-0.37		WILKES-BARRE	69	-1	2.12	-1.22
	HUNTSVILLE	81	2	0.66	-2.80		PORTLAND	67	0	1.53	-1.33		WILLIAMSPORT	70	-1	3.86	0.47
	MOBILE	84	3	2.87	-4.09	MD	BALTIMORE	76	0	6.14	2.23	RI	PROVIDENCE	72	1	3.25	-0.38
	MONTGOMERY	84	3	0.20	-3.49	MA	BOSTON	71	-1	1.32	-1.94	SC	BEAUFORT	83	3	2.40	-5.48
AK	ANCHORAGE	57	1	4.73	2.29		WORCESTER	68	0	1.87	-1.93		CHARLESTON	83	3	3.68	-3.55
	BARROW	42	4	1.38	0.42	MI	ALPENA	63	-2	1.33	-2.05		COLUMBIA	83	4	1.31	-4.77
	FAIRBANKS	58	1	1.85	-0.11		GRAND RAPIDS	68	-2	3.22	-0.35		GREENVILLE	81	4	0.79	-3.15
	JUNEAU	56	2	6.77	1.46		HOUGHTON LAKE	63	-2	2.23	-1.14	SD	ABERDEEN	69	-1	3.19	1.06
	KODIAK	55	-1	5.29	0.14		LANSING	65	-3	2.41	-0.79		HURON	72	1	2.56	0.59
	NOME	49	-1	1.92	-0.79		MARQUETTE	62	-2	2.35	-1.06		RAPID CITY	72	1	0.87	-0.80
AZ	FLAGSTAFF	62	-2	2.48	-0.25		MUSKEGON	67	-1	3.36	-0.05		SIOUX FALLS	71	-1	0.80	-2.05
	PHOENIX	93	2	0.92	-0.06	MN	DULUTH	63	0	7.42	3.44	TN	BRISTOL	74	0	2.01	-1.16
	TUCSON	85	1	3.05	0.86		INT'L FALLS	62	-2	2.71	-0.38		CHATTANOOGA	81	4	0.45	-3.09
	YUMA	94	2	0.08	-0.56		MINNEAPOLIS	70	0	2.64	-0.98		KNOXVILLE	78	2	0.85	-2.28
AR	FORT SMITH	85	4	0.20	-2.74		ROCHESTER	67	-2	6.20	2.32		MEMPHIS	83	2	1.18	-2.26
	LITTLE ROCK	85	3	0.71	-2.54		ST. CLOUD	67	0	4.97	1.02		NASHVILLE	80	1	3.05	-0.42
CA	BAKERSFIELD	78	-5	0.00	-0.10	MS	JACKSON	84	3	1.71	-2.06	TX	ABILENE	87	4	0.42	-2.38
	EUREKA	60	2	0.30	-0.18		MERIDIAN	83	3	1.39	-2.20		AMARILLO	78	2	2.04	-1.18
	FRESNO	79	-2	0.01	-0.02		TUPELO	83	3	0.39	-2.66		AUSTIN	86	1	1.03	-1.02
	LOS ANGELES	69	-2	0.00	-0.16	MO	COLUMBIA	76	0	0.83	-2.44		BEAUMONT	86	3	0.00	-5.34
	REDDING	78	-2	0.23	-0.23		KANSAS CITY	76	0	1.56	-2.46		BROWNSVILLE	85	1	2.61	-0.17
	SACRAMENTO	73	-2	0.00	-0.06		SAINT LOUIS	76	-1	1.95	-0.89		CORPUS CHRISTI	84	0	7.59	4.28
	SAN DIEGO	68	-4	0.00	-0.10		SPRINGFIELD	78	1	2.00	-1.52		DEL RIO	88	3	2.42	0.95
	SAN FRANCISCO	64	0	0.01	0.00	MT	BILLINGS	72	2	1.75	0.74		EL PASO	81	1	1.43	-0.16
CO	ALAMOSA	63	0	3.08	1.96		BUTTE	64	3	2.83	1.52		FORT WORTH	90	5	0.00	-2.20
	CO SPRINGS	69	1	7.04	4.02		GLASGOW	71	2	1.26	-0.09		GALVESTON	86	2	0.37	-4.16
	DENVER	71	0	3.25	1.74		GREAT FALLS	68	1	2.08	0.53		HOUSTON	87	5	0.52	-2.96
	GRAND JUNCTION	74	-3	2.22	1.39		KALISPELL	66	4	1.02	-0.38		LUBBOCK	81	3	0.64	-1.87
	PUEBLO	74	-1	2.98	1.00		MILES CITY	75	3	2.02	0.88		MIDLAND	84	3	0.05	-1.64
CT	BRIDGEPORT	73	0	4.34	1.09		MISSOULA	68	2	2.10	0.91		SAN ANGELO	85	3	0.03	-1.90
	HARTFORD	71	-1	2.67	-0.98	NE	GRAND ISLAND	73	-1	5.83	3.01		SAN ANTONIO	86	1	2.11	-0.43
DC	WASHINGTON	80	1	5.02	1.10		LINCOLN	74	-1	3.41	0.00		VICTORIA	85	1	0.98	-2.03
DE	WILMINGTON	76	1	4.25	0.84		NORFOLK	71	-1	2.02	-0.52		WACO	88	3	0.00	-1.77
FL	DAYTONA BEACH	83	2	3.59	-2.58		NORTH PLATTE	71	-1	5.49	3.75		WICHITA FALLS	89	5	1.37	-1.11
	JACKSONVILLE	83	2	3.51	-4.43		OMAHA	73	-1	12.27	9.03	UT	SALT LAKE CITY	77	2	0.70	-0.15
	KEY WEST	84	0	9.55	4.52		SCOTTSBLUFF	72	1	2.33	1.24	VT	BURLINGTON	68	0	2.41	-1.66
	MIAMI	84	1	13.89	6.31		VALENTINE	73	1	0.60	-1.68	VA	LYNCHBURG	75	0	2.51	-1.08
	ORLANDO	83	1	4.50	-2.28	NV	ELY	65	-1	1.24	0.41		NORFOLK	80	2	4.47	-0.34
	PENSACOLA	84	3	5.03	-2.36		LAS VEGAS	88	-1	0.25	-0.24		RICHMOND	78	1	2.00	-2.41
	TALLAHASSEE	84	3	6.06	-1.47		RENO	70	0	0.82	0.50		ROANOKE	75	1	2.63	-1.53
	TAMPA	84	1	8.35	0.74		WINNEMUCCA	68	-1	0.16	-0.30		WASH/DULLES	75	1	5.43	1.47
	WEST PALM	83	1	12.06	6.03	NH	CONCORD	67	0	3.45	0.12	WA	OLYMPIA	64	1	0.84	-0.45
GA	ATHENS	82	3	4.09	0.39	NJ	NEWARK	76	0	5.51	1.60		QUILLAYUTE	59	0	1.80	-0.75
	ATLANTA	82	4	1.27	-2.39	NM	ALBUQUERQUE	75	-1	3.04	1.40		SEATTLE-TACOMA	65	-1	0.93	-0.21
	AUGUSTA	83	3	2.27	-2.23	NY	ALBANY	69	-1	3.45	-0.03		SPOKANE	70	2	1.07	0.34
	COLUMBUS	84	3	3.27	-0.45		BINGHAMTON	65	-2	1.42	-1.93		YAKIMA	71	2	0.74	0.33
	MACON	84	3	3.23	-0.40		BUFFALO	68	-1	4.38	0.21		BECKLEY	69	0	3.52	0.14
	SAVANNAH	83	2	4.27	-3.19		ROCHESTER	68	-1	5.72	2.32	WV	CHARLESTON	72	-2	2.97	-1.05
HI	HILO	74	-2	10.14	0.81		SYRACUSE	69	0	1.02	-2.50		ELKINS	67	-1	1.88	-2.47
	HONOLULU	81	0	0.12	-0.32	NC	ASHEVILLE	74	2	3.37	-1.30		HUNTINGTON	74	0	5.32	1.49
	KAHULUI	78	-1	0.31	-0.17		CHARLOTTE	79	1	1.42	-2.31		EAU CLAIRE	69	0	3.49	-0.99
	LIHUE	78	-1	1.78	0.03		GREENSBORO	77	2	5.00	1.11	WI	GREEN BAY	65	-2	1.32	-2.18
ID	BOISE	75	3	0.29	-0.15		HATTERAS	80	2	8.56	2.55		LACROSSE	70	-1	2.19	-1.74
	LEWISTON	76	2	1.06	0.27		RALEIGH	80	3	3.18	-0.84		MADISON	67	-1	3.26	-0.79
	POCATELLO	69	0	1.06	0.39		WILMINGTON	83	3	8.35	1.41		MILWAUKEE	69	0	1.69	-1.85
IL	CHICAGO/O'HARE	70	-1	2.30	-1.92	ND	BISMARCK	69	1	7.91	6.20	WY	CASPER	70	1	0.11	-0.55
	MOLINE	71	-2	3.58	-0.64		DICKINSON	69	1	3.87	2.41		CHEYENNE	68	1	0.78	-0.91
	PEORIA	71	-2	2.78	-0.32		FARGO	68	0	6.79	4.37		LANDER	71	2	0.58	0.04
	ROCKFORD	69	-2	3.19	-0.96		GRAND FORKS	65	-2	4.44	2.04		SHERIDAN	71	3	0.38	-0.44
	SPRINGFIELD	72	-2	4.64	1.34		JAMESTOWN	67	-2	4.07	2.00						
IN	EVANSVILLE	74	-2	0.64	-2.48		WILLISTON	69	1	1.04	-0.20						
	FORT WAYNE	69	-2	3.10	-0.28	OH	AKRON-CANTON	68	-2	2.86	-0.45						
	INDIANAPOLIS	72	-1	1.50	-2.14		CINCINNATI	72	-1	2.61	-0.74						
	SOUTH BEND	70	-1	4.12	0.46		CLEVELAND	69	-1	1.80	-1.62						
IA	BURLINGTON	75	2	2.51	-1.38		COLUMBUS	73	1	2.40	-1.32						
	CEDAR RAPIDS	69	-2	1.96	-2.07		DAYTON	71	-1	1.80	-1.40						
	DES MOINES	72	-2	6.34	2.13		MANSFIELD	67	-3	2.10	-1.98						
	DUBUQUE	68	-2	2.87	-1.82		TOLEDO	69	0	1.40	-1.86						
	SIOUX CITY	71	-2	4.57	1.61		YOUNGSTOWN	67	-2	3.53	0.19						
	WATERLOO	69	-1	6.23	2.58	OK	OKLAHOMA CITY	85	4	1.35	-1.26						
KS	CONCORDIA	76	-1	2.38	-1.15		TULSA	85	3	0.42	-2.69						
	DODGE CITY	79	1	2.91	0.19	OR	ASTORIA	62	1	1.06	-0.27						
	GOODLAND	74	0	4.87	3.07		BURNS	64	0	0.56	-0.12						
	TOPEKA	78	1	1.09	-2.80		EUGENE	67	0	0.93	-0.15						
	WICHITA	81	2	1.25	-1.78		MEDFORD	73	0	2.03	1.51						
KY	JACKSON	74	0	6.58	2.67		PENDLETON	73	1	0.54	0.00						
	LEXINGTON	76	1	0.99	-2.94		PORTLAND	69	1	0.75	-0.34						
	LOUISVILLE	78	3	0.97	-2.57		SALEM	68	1	0.68	-0.08						
	PADUCAH	76	0	0.54	-2.81	PA	ALLENTOWN	72	-1	3.82	-0.46						
LA	BATON ROUGE	85	3	0.38	-5.62		ERIE	69	-1	2.77	-1.29						
	LAKE CHARLES	86	4	0.00	-5.33		MIDDLETOWN	75	1	3.92	0.62						
	NEW ORLEANS	86	4	5.21	-0.97		PHILADELPHIA	77	2	5.32	1.52						
	SHREVEPORT	86	4	1.47	-0.96		PITTSBURGH	69	-2	2.21	-0.99						

Based on 1961-90 normals.

August Weather: Selected Graphs

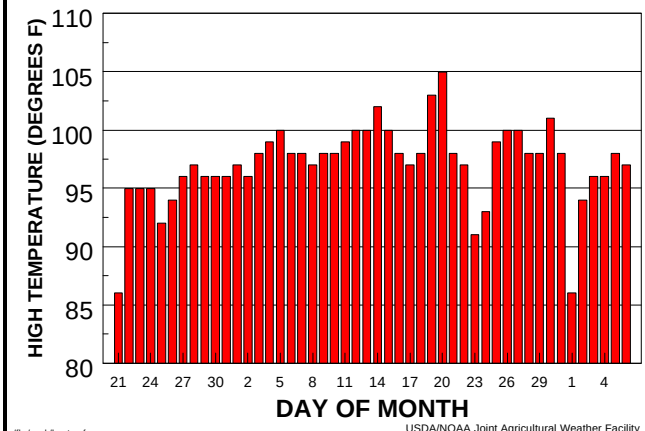
DALLAS-FT. WORTH, TEXAS

HIGH TEMPERATURES, JULY 21 - SEPTEMBER 6, 1999



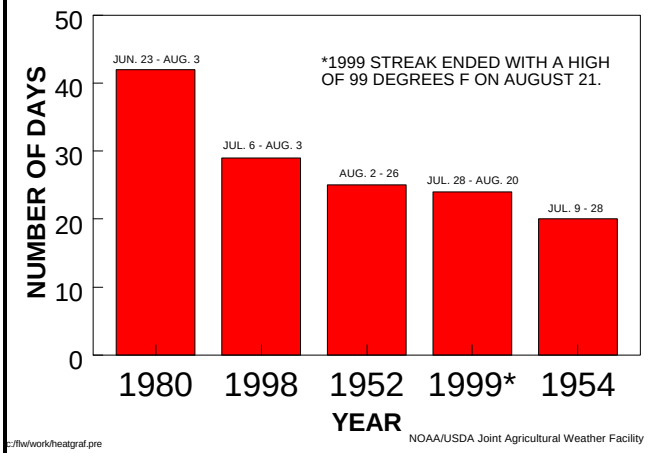
HOUSTON, TEXAS

HIGH TEMPERATURES, JULY 21 - SEPTEMBER 6, 1999



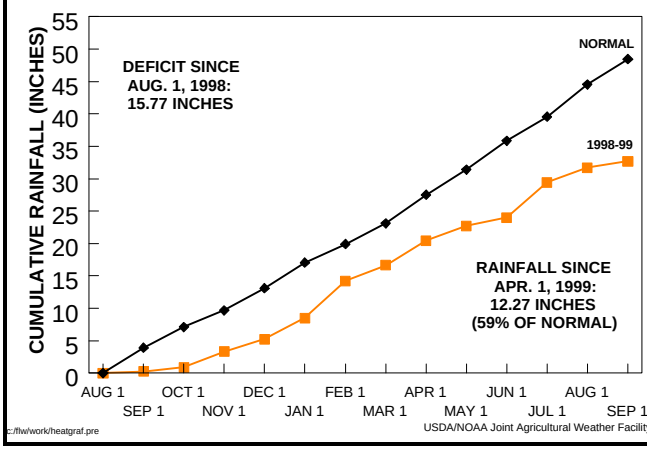
DALLAS-FT. WORTH, TEXAS

CONSECUTIVE DAYS WITH HIGHS AT OR ABOVE 100 DEGREES F



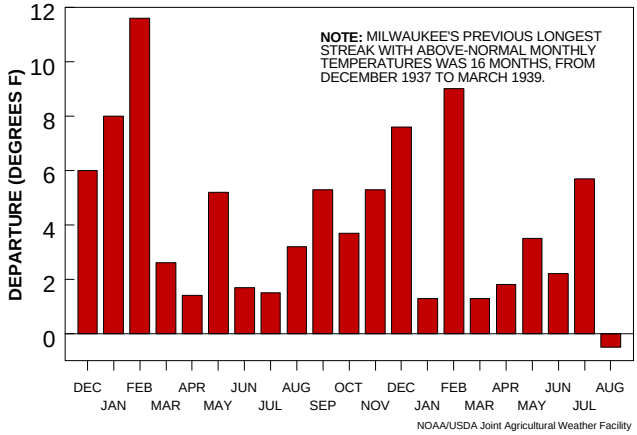
LEXINGTON, KENTUCKY

CUMULATIVE RAINFALL (AUGUST 1998 - AUGUST 1999) VS. NORMAL



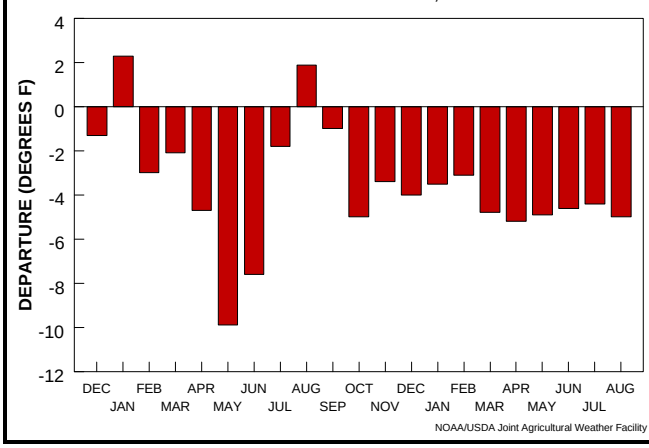
MILWAUKEE, WISCONSIN: WARM SPELL ENDS AT 20 MONTHS

MONTHLY TEMPERATURE DEPARTURES, DEC. 1997 - AUG. 1999



BAKERSFIELD, CALIFORNIA: PERSISTENTLY COOL

MONTHLY TEMPERATURE DEPARTURES, DEC. 1997 - AUG. 1999



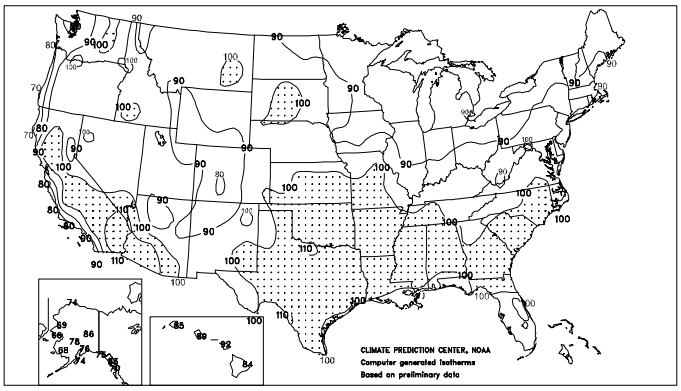
(Continued from page 11)
93 mph, with gusts to 112 mph. Along the Neuse River, tides ran as much as 8 to 10 feet above normal. Less than 24 hours later, a weakening Dennis stalled more than 100 miles east of Cape Hatteras, NC.

Long-term drought continued to affect much of Hawaii, although near- to above-normal August totals were observed in far western islands (especially Kauai) and in windward (east-facing) portions of the Big Island. Only 0.12 inch (30 percent of normal) fell during August in Honolulu, Oahu, leaving their total since the beginning of 1998 at 11.14 inches (33% of normal). Similarly, the 20-month total in Kahului, Maui, stood at 13.40 inches (39% of normal). Hilo, Hawaii, coming off their driest July on record (3.53 inches), received 10.14 inches (108% of normal) during August.

Temperatures averaged within 2°F of normal throughout much of Alaska, except up to 4°F above normal in northern areas due to an early-month heat wave. All-time-records highs were tied in Chalkytsik (94°F on August 6), about 40 miles east of Ft. Yukon, and Umiat (88°F on August 4). August records were set in Circle City (88°F on August 5), Chandalar Lake (86°F on August 5) and Deadhorse (81°F on August 5). In the southeast, Juneau notched 83°F on August 2, their highest temperature since June 20, 1991. Cooler weather invaded many areas toward month's end. In Cold Bay (1.8°F below normal during August), where below-normal temperatures were observed for a ninth consecutive month, a low of 32°F on August 28 represented their earliest first freeze on record. Wet weather affected portions of southern Alaska, including Anchorage, where 4.73 inches (194% of normal) fell.

Extreme Maximum Temperature (°F)

August 1999



Fieldwork

Mild temperatures eased crop stress in the central and northern Great Plains and most of the Corn Belt. Timely rains provided adequate moisture for crop development in parts of the central and western Corn Belt and central Great Plains. Increasing moisture shortages stressed crops in the southern and eastern Corn Belt and most of the lower Mississippi Valley and Southeast. Dry conditions aided small grain harvest across the Northern States from the Great Lakes to the Pacific Northwest, and row crop harvest in the Southern States from the Great Plains to the Atlantic Coastal Plains. Field preparations began for winter wheat seeding, but planting and tillage were delayed while growers waited for rain to recharge soil moisture supplies. Crop development remained slow in the Southwest due to persistent cool weather.

Corn rapidly entered the silking stage in South Dakota, Colorado, and Pennsylvania early in the month. In Ohio, 40 percent of the crop entered the dough stage during the first week of the month and was nearly twice the normal rate on August 15. As mid-month approached, corn in the dough stage rapidly advanced in Iowa, Nebraska, and South Dakota. Fields quickly progressed to the dent stage along the Ohio River Valley in the southern Corn Belt, with more than half of the acreage denting in Missouri and Kentucky by August 15. After mid-month, acreage entering the dough stage accelerated in Colorado, while denting accelerated in Iowa, Illinois, Indiana, and Kansas. As of August 29, corn in the dough stage or beyond was at 92 percent, and 62 percent of the crop was at the dent stage or beyond. Development was about 1 week ahead of the 5-year averages of 81and 44 percent respectively. Twelve percent of the crop was mature by the end of the month, as progress neared 50 percent along the Mississippi and Ohio River Valleys in the southern Corn Belt. Harvest began in the central and High Plains regions of Texas, and was virtually complete in the southern and coastal regions of the State.

Ninety-six percent of the soybean acreage was blooming by mid-August, slightly ahead of last year and the average. Acreage entering the blooming stage remained active in the northern Mississippi Delta and lower Ohio and Tennessee River Valleys after mid-month. Soybeans setting pods advanced well ahead of the average in the eastern Corn Belt, and slightly ahead of normal in the western Corn Belt. Nearly one-fourth of the acreage in Indiana, and almost one-third of the crop in Ohio began setting pods during the first week of the month. As mid-month approached, pod setting accelerated in the central and western Corn Belt, advancing about 25 percentage points in Nebraska and Minnesota and nearly 20 percentage points in Illinois and Kansas during the second week of the month. Warm weather quickly ripened fields in Kentucky, Mississippi, Tennessee, and Ohio late in the month. On August 29, more than half of the acreage was dropping leaves in Mississippi, 34 percentage points ahead of the average. A few isolated fields began dropping leaves in the western Corn Belt, while ripening accelerated in the eastern and southern Corn Belt.

Above normal temperatures promoted cotton development in the southern Plains, Mississippi Delta, and Southeast during most of August. Conditions steadily deteriorated throughout the month in most areas, as soil moisture levels diminished. Isolated showers temporarily boosted conditions along parts of the Gulf Coast and Atlantic Coastal Plains. Cool weather hindered growth in California most of the month, while above-normal temperatures accelerated development in Arizona. By August 29, bolls were opening on 35 percent of the cotton acreage, as warm weather accelerated ripening in Mississippi, Missouri, and Tennessee. Harvest began in southern Texas and advanced northward into the Blacklands, Central Texas, and the Upper Coast as the month progressed.

As the month began, the winter wheat harvest was nearly complete, while spring wheat and barley harvest gained momentum. Dry weather aided harvest efforts in the northern Great Plains and Pacific Northwest, but late developing fields limited the harvest pace for most of the month. The oat harvest proceeded ahead of normal in the Corn Belt, but slow crop development and late-month rains delayed progress in Minnesota and North Dakota. Growers prepared fields for seeding winter wheat in the southern and central Great Plains, but planting was delayed due to dry soils.

Warm weather promoted rice development in the lower Mississippi Valley as fields rapidly entered the heading stage in Arkansas and Mississippi. Development lagged in California due to persistent cool weather. In Texas and Louisiana, the harvest began early in the month and remained active, as dry weather prevailed most of the month along the western Gulf Coast. The harvest pace gained momentum in inland areas of the Mississippi Delta late in the month. As of August 29, 26 percent of the crop was harvested.

Sorghum development proceeded slightly behind normal for most of the month, with 94 percent headed, 53 percent turning color, and 28 percent mature on August 29. Fields rapidly progressed to the heading stage in New Mexico and South Dakota late in the month. Fields turning color advanced 29 percentage points in Illinois during the last week in August. Hot weather quickly ripened fields in the southern Great Plains and lower Mississippi Valley.

National Agricultural Summary

August 30 - September 5, 1999

HIGHLIGHTS

Tropical Storm Dennis delivered heavy rains to parts of the middle Atlantic Coastal Plains, recharging moisture levels and revitalizing late summer crops. A cold front delivered rain to parts of the northern Great Plains and extreme western Corn Belt, and cooler temperatures for the rest of the Corn Belt. Crops benefited from the moisture but the small grain harvest was delayed in parts of the upper Mississippi Valley and adjacent areas in the northern Great Plains. Farther west, in the High Plains and Pacific Northwest, dry weather aided small grain harvest efforts. Harvest gained momentum in the southern Corn Belt, where warm, dry weather quickly ripened row crops. Field tillage continued in most areas of the Great Plains, but many growers delayed winter wheat seeding, hoping rain would recharge soil moisture levels. Crop development slowly progressed in the Southwest due to below normal temperatures.

Corn: Ninety-seven percent of the acreage was in the dough stage or beyond, slightly ahead of last year's 96-percent pace, and more than 1 week ahead of the 91-percent average. Progress remained active in Colorado and Pennsylvania. Nearly all of the acreage in Michigan was at or beyond the dough stage, well ahead of the average. Eighty percent of the crop was at the dent stage or beyond, equal to last year's pace, and 17 percentage points ahead of the average. Fields rapidly progressed to the dent stage, advancing 20 percentage points or more in most Corn Belt States. In the eastern Corn Belt, fields at the dent stage or beyond exceeded the average by 32 percentage points or more. Denting was also well ahead of normal in Wisconsin. The crop was 25 percent mature, well ahead of the 16-percent average, and slightly ahead of last year's 23 percent progress. Dry weather quickly ripened corn fields in Kentucky, where more than three-fourths of the crop was mature, double the average for this date. Four percent of the acreage was harvested, compared with 5 percent last year, and the normal pace of 3 percent. Harvest continued in Texas and the Southeast and gained momentum in the southern Corn Belt. More than half of the acreage in Texas, and more than one-third of the acreage in Kentucky was harvested. Rain boosted conditions in South Dakota, Minnesota, Kansas, and North Carolina.

Soybeans: Thirteen percent of the acreage was dropping leaves, compared with 12 percent last year and 8 percent normally dropping leaves by this date. Warm weather aided progress in the eastern Corn Belt, where acreage dropping leaves advanced 10 to 20 percentage points in most areas. In Mississippi, over half of the crop was dropping leaves. Development was nearly 4 times the normal rate in Ohio and 2 times the average in Mississippi. Development was less advanced in the western Corn Belt and Southeast. Dry soils continued to stress soybeans in most areas of the Corn Belt and lower Mississippi Valley. Cool weather limited crop deterioration in the Corn Belt, but excessive heat contributed to crop deterioration in the lower Mississippi Valley. Conditions in South Dakota and parts of Minnesota were boosted by much needed rain. Conditions also improved in North Carolina, where Tropical Storm Dennis soaked dry soils.

Cotton: Bolls were opening on 46 percent of the cotton acreage, behind last year's 49-percent, but 6 percentage points ahead of the 5-year average. Above-normal temperatures promoted development in the southern Great Plains, lower Mississippi Valley, and Southeast, while cool weather hindered development in the Southwest. Bolls were opening on nearly three-fourths of the acreage in Missouri and Tennessee, more than double the normal pace in both States. Acreage with bolls opening was 35 percentage points behind normal in California and well behind normal in Arizona. In Texas, harvest continued in the Coastal Bend, Blacklands, and Central regions with few delays. Excessive heat and dry soils stressed many fields, especially in Missouri and Mississippi. In the southern Atlantic Coastal Plains, conditions deteriorated due to dry soils, but crop damage was limited by seasonal temperatures.

All Wheat: The spring wheat harvest advanced to 70 percent complete, well behind last year's 95-percent pace, and 9 percentage points behind the average. Rain delayed progress in North Dakota. In Montana and Idaho, progress was aided by dry weather, but continued to lag behind normal. Winter wheat harvest neared completion in the Pacific Northwest. Field preparations for winter wheat seeding progressed in most of the Great Plains, but many growers waited for rain to recharge soil moisture levels. Planting slowly began in the Great Plains, but dry soils limited progress in the southern Plains. Sowing gained momentum in Washington and was ahead of the average for this date.

Other small grains: The barley crop was 71 percent harvested, 13 percentage points behind the average and well behind last year's 95 percent pace, despite rapid progress. Harvest lagged well behind normal in North Dakota, as wet weather further delayed progress. Dry weather aided harvest efforts in Washington and Idaho, but progress remained behind the 5-year average. The oat crop was 92 percent harvested, 6 percentage points behind last year, and 3 percentage points behind the average. Rain curtailed progress in North Dakota and Minnesota, where most of the unharvested acreage remained.

Rice: Thirty-five percent of the acreage was harvested, compared with 34 percent last year and the average 28-percent pace. Harvest progressed with few delays in Texas and Louisiana and accelerated in Arkansas. In Mississippi, harvest gained momentum, but progress lagged behind normal. Harvesting slowly began in California, as cool weather delayed ripening.

Sorghum: Sixty-eight percent of the Sorghum acreage was turning color, behind last year's pace, but equal to the 5-year average. Above-normal temperatures promoted rapid development in the Great Plains and Corn Belt. Acreage at the coloring stage or beyond more than doubled in Colorado and Oklahoma, to 52 and 46 percent, respectively. In Illinois, sorghum coloring was nearly double the 5-year average. Thirty-six percent was mature, slightly behind last year, but ahead of the average for this date. Hot weather quickly ripened fields in the Mississippi Delta and adjoining areas in the southern Corn Belt. Sorghum mature more than doubled in Missouri and advanced 30 percentage points in Arkansas. Hot weather and dry soils stressed fields in New Mexico.

Peanuts: Five percent of the peanut acreage was harvested, slightly ahead of last year and the average. Dry weather aided digging in Florida and Texas. Heat and dry soils stressed most peanut fields along the eastern Gulf Coast and many fields in the southern Atlantic Coastal Plains.

Crop Progress and Condition

Week Ending September 5, 1999

Winter Wheat Percent Planted

	Sep 5 1999	Prev Week	Prev Year	5-Yr Avg
AR	0	NA	0	0
CA	0	NA	0	0
CO	7	NA	6	8
GA	0	NA	0	0
ID	1	NA	2	3
IL	0	NA	0	0
IN	0	NA	1	0
KS	1	NA	2	2
MI	0	NA	1	1
MO	0	NA	0	0
MT	1	NA	3	2
NE	3	NA	8	8
NC	0	NA	0	0
OH	0	NA	0	0
OK	2	NA	0	6
OR	0	NA	0	0
SD	4	NA	16	9
TX	5	NA	14	10
WA	28	NA	30	22
19 Sts	4	NA	6	5

These 19 States planted 91% of last year's winter wheat acreage.

Soybeans Percent Dropping Leaves

	Sep 5 1999	Prev Week	Prev Year	5-Yr Avg
AL	15	10	16	8
AR	8	5	6	7
GA	16	11	20	11
IL	6	1	5	4
IN	28	11	29	12
IA	3	0	3	4
KS	18	6	25	15
KY	22	11	9	7
LA	38	23	35	22
MI	11	1	23	10
MN	6	1	11	6
MS	55	51	35	28
MO	8	2	5	3
NE	4	0	4	6
NC	8	0	4	2
OH	36	17	15	10
SC	5	3	4	2
SD	18	*15	24	23
TN	17	10	9	6
19 Sts	13	6	12	8

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

Corn Percent Dough

	Sep 5 1999	Prev Week	Prev Year	5-Yr Avg
CO	85	70	95	84
GA	100	100	100	100
IL	99	95	94	92
IN	100	100	97	94
IA	95	89	96	90
KS	100	98	100	98
KY	100	99	98	99
MI	99	93	99	71
MN	98	95	99	93
MO	100	95	100	97
NE	96	91	98	95
NC	100	94	99	100
OH	100	93	95	91
PA	81	70	76	80
SD	95	*87	94	89
TX	100	100	100	100
WI	91	82	98	81
17 Sts	97	92	96	91

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

Corn Percent Dented

	Sep 5 1999	Prev Week	Prev Year	5-Yr Avg
CO	35	16	47	46
GA	100	100	100	100
IL	81	75	71	66
IN	93	74	73	57
IA	85	64	86	66
KS	85	73	94	81
KY	99	87	87	86
MI	74	47	76	38
MN	79	56	93	62
MO	95	86	92	83
NE	75	52	91	65
NC	95	84	84	91
OH	78	62	57	46
PA	50	43	42	45
SD	63	*45	71	54
TX	90	80	99	95
WI	70	42	73	44
17 Sts	80	63	80	63

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

Corn Percent Mature

	Sep 5 1999	Prev Week	Prev Year	5-Yr Avg
CO	5	0	0	4
GA	100	98	99	98
IL	29	16	19	11
IN	27	10	26	11
IA	27	8	26	16
KS	40	17	54	34
KY	79	50	50	37
MI	11	0	15	5
MN	7	1	11	5
MO	62	43	51	38
NE	9	2	8	6
NC	78	58	69	80
OH	18	9	7	4
PA	15	5	6	7
SD	11	1	20	10
TX	76	61	87	72
WI	13	0	8	8
17 Sts	25	12	23	16

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

Corn Percent Harvested

	Sep 5 1999	Prev Week	Prev Year	5-Yr Avg
CO	0	NA	0	0
GA	75	NA	70	67
IL	0	NA	0	0
IN	2	NA	1	0
IA	0	NA	0	0
KS	8	NA	10	4
KY	36	NA	2	1
MI	0	NA	1	0
MN	0	NA	0	0
MO	20	NA	18	9
NE	0	NA	1	0
NC	28	NA	28	25
OH	1	NA	2	0
PA	2	NA	0	1
SD	0	NA	16	9
TX	54	NA	64	57
WI	0	NA	0	0
17 Sts	4	NA	5	3

These 17 States harvested 92% of last year's corn acreage.

Crop Progress and Condition

Week Ending September 5, 1999

Cotton Percent Bolls Opening

	Sep 5 1999	Prev Week	Prev Year	5-Yr Avg
AL	46	32	49	34
AZ	60	39	60	82
AR	56	42	46	38
CA	10	5	3	45
GA	46	36	56	44
LA	85	63	87	71
MS	87	80	84	66
MO	73	53	47	32
NM	52	40	30	39
NC	30	25	46	31
OK	7	4	41	17
SC	31	17	39	29
TN	75	48	46	33
TX	39	29	47	33
14 Sts	46	35	49	40

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

Sorghum Percent Coloring

	Sep 5 1999	Prev Week	Prev Year	5-Yr Avg
AR	99	93	89	92
CO	52	24	47	40
IL	82	65	47	43
KS	64	44	78	60
LA	100	100	100	98
MS	100	99	97	95
MO	77	56	87	72
NE	49	28	76	55
NM	27	15	24	24
OK	46	17	72	61
SD	58	35	66	55
TX	78	70	86	83
12 Sts	68	53	79	68

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

Rice Percent Harvested

	Sep 5 1999	Prev Week	Prev Year	5-Yr Avg
AR	20	5	15	11
CA	1	0	0	3
LA	81	79	85	72
MS	18	9	37	27
TX	91	83	84	71
5 Sts	35	26	34	28

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

Sorghum Percent Mature

	Sep 5 1999	Prev Week	Prev Year	5-Yr Avg
AR	83	53	62	57
CO	4	0	1	2
IL	8	1	17	6
KS	12	6	23	11
LA	99	98	98	86
MS	96	92	81	80
MO	40	18	41	26
NE	7	0	5	3
NM	0	0	1	2
OK	6	6	20	13
SD	9	1	15	12
TX	70	61	64	65
12 Sts	36	28	38	33

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

Oats Percent Harvested

	Sep 5 1999	Prev Week	Prev Year	5-Yr Avg
IA	100	100	100	100
MI	100	100	100	96
MN	93	89	99	97
NE	100	100	100	100
ND	70	64	96	84
OH	100	100	100	100
PA	99	98	96	96
SD	100	*98	98	99
WI	100	95	100	98
9 Sts	92	89	98	95

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

Barley Percent Harvested

	Sep 5 1999	Prev Week	Prev Year	5-Yr Avg
ID	63	47	84	77
MN	82	67	99	87
MT	72	50	95	77
ND	68	58	98	88
SD	100	*96	100	99
WA	80	52	98	94
6 Sts	71	55	95	84

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

Peanuts Percent Harvested

	Sep 5 1999	Prev Week	Prev Year	5-Yr Avg
AL	6	NA	0	5
FL	14	NA	9	6
GA	4	NA	1	5
NC	2	NA	0	0
OK	0	NA	0	0
SC	5	NA	9	10
TX	7	NA	2	1
VA	0	NA	1	0
8 Sts	5	NA	2	3

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

Spring Wheat Percent Harvested

	Sep 5 1999	Prev Week	Prev Year	5-Yr Avg
ID	64	48	88	78
MN	81	65	98	80
MT	69	52	94	77
ND	59	54	94	75
SD	100	*97	100	99
5 Sts	70	60	95	79

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

Crop Progress and Condition

Week Ending September 5, 1999

Cotton Crop Condition by Percent

	VP	P	F	G	EX
AL	21	27	27	23	2
AZ	2	6	44	33	15
AR	0	9	32	44	15
CA	0	0	5	80	15
GA	15	25	36	21	3
LA	6	16	45	28	5
MS	5	14	32	39	10
MO	24	21	31	22	2
NM	0	4	27	59	10
NC	2	5	43	44	6
OK	0	13	27	32	28
SC	11	33	40	16	0
TN	14	34	37	15	0
TX	9	23	30	31	7
14 Sts	8	19	31	35	7
Prev Wk	7	20	30	34	9
Prev Yr	13	19	34	29	5

Sorghum Crop Condition by Percent

	VP	P	F	G	EX
AR	3	12	38	40	7
CO	0	1	8	61	30
IL	3	17	44	35	1
KS	2	7	28	56	7
LA	0	5	32	58	5
MS	5	10	20	45	20
MO	17	28	38	16	1
NE	1	8	32	52	7
NM	0	1	18	80	1
OK	0	5	18	74	3
SD	0	4	33	57	6
TX	4	17	38	36	5
12 Sts	3	11	32	48	6
Prev Wk	4	9	30	49	8
Prev Yr	6	15	27	44	8

Soybeans Crop Condition by Percent

	VP	P	F	G	EX
AL	38	24	18	17	3
AR	8	19	32	31	10
GA	22	25	35	17	1
IL	5	12	37	37	9
IN	8	21	46	23	2
IA	3	7	21	45	24
KS	6	16	38	38	2
KY	25	28	30	16	1
LA	5	19	46	26	4
MI	2	9	27	45	17
MN	2	7	28	53	10
MS	16	19	27	31	7
MO	27	30	29	12	2
NE	7	12	28	38	15
NC	4	10	24	55	7
OH	6	17	34	37	6
SC	14	28	42	16	0
SD	2	6	23	54	15
TN	38	32	22	8	0
19 Sts	8	15	31	36	10
Prev Wk	6	14	33	37	10
Prev Yr	3	9	25	47	16

Rice Crop Condition by Percent

	VP	P	F	G	EX
AR	1	4	24	47	24
CA	0	0	20	75	5
LA	0	3	18	59	20
MS	1	4	31	55	9
TX	0	0	6	62	32
5 Sts	1	3	21	55	20
Prev Wk	1	2	23	55	19
Prev Yr	0	5	24	56	15

Corn Crop Condition by Percent

	VP	P	F	G	EX
CO	1	2	10	58	29
GA	13	18	31	33	5
IL	5	13	36	37	9
IN	8	21	42	26	3
IA	3	7	23	44	23
KS	1	5	23	62	9
KY	5	17	32	38	8
MI	2	9	21	51	17
MN	2	6	23	54	15
MO	25	25	28	19	3
NE	2	8	21	48	21
NC	3	11	36	47	3
OH	8	18	34	35	5
PA	18	30	29	18	5
SD	2	5	21	55	17
TX	0	3	16	51	30
WI	0	2	11	51	36
17 Sts	5	10	26	43	16
Prev Wk	4	10	29	43	14
Prev Yr	3	7	23	50	17

Peanuts Crop Condition by Percent

	VP	P	F	G	EX
AL	5	11	42	23	19
FL	0	0	22	70	8
GA	10	18	43	25	4
NC	0	1	45	53	1
OK	3	9	40	46	2
SC	10	18	45	18	9
TX	10	9	21	39	21
VA	0	0	9	55	36
8 Sts	7	11	34	36	12
Prev Wk	5	10	30	41	14
Prev Yr	7	11	35	40	7

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 6.6. Topsoil 54% very short, 29% short, 17% adequate. Soil moisture supplies declined as the State experienced scarce precipitation, above average temperatures. Corn 95% dough; 92% dented, 100% 1998, 100% avg.; 85% mature, 94% 1998, 91% avg.; 48% harvested, 59% 1998, 46% avg.; 1% very poor, 2% poor, 26% fair, 54% good, 17% excellent. Pasture feed 26% very poor, 27% poor, 30% fair, 16% good, 1% excellent. Livestock 3% very poor, 9% poor, 42% fair, 37% good, 9% excellent. Some cotton growers began defoliation treatments. Cattle marketing increased in response to hay, pasture shortages.

ALASKA: Days suitable for fieldwork 2.4. Topsoil 5% short, 90% adequate, 5% surplus. Subsoil 5% short, 95% adequate. Weather conditions rainy with daytime high temperatures mostly in the 60s. Nighttime lows were mostly in the forties, dropped into the twenties in the Kenny Lake area. Oats, 85% ripe or earlier, 15% swathed. Barley, 85% ripe or earlier, 15% harvested. Second cutting hay harvest, 25% complete. Commercial storage potato harvest, 20% complete. Wind damage to crops, 90% none, 5% light, 5% moderate. Major activities included: Cutting hay, harvesting vegetables, grains, hay, killing vines, digging potato fields.

ARIZONA: Cotton continues to progress. Alfalfa harvest activity 22% not being harvested, 4% light, 35% moderate, 39% active. Alfalfa 3% poor, 22% fair, 63% good, 12% excellent. Last week central area producers shipped a light volume of watermelons, mangoes.

ARKANSAS: Days suitable for fieldwork 7. Topsoil 55% very short, 40% short, 5% adequate. Temperatures were above normal throughout the week and most areas were below normal in rainfall. Some areas received rainfall late this week. However, most areas remained dry and hot. Irrigated crops were reported in good condition, dryland crop conditions declined. Livestock were reported in fair condition, hot, humid weather, lack of grazing was causing deaths in poultry, livestock. Many farmers were having to feed hay early this year because of the drought. Main farm activities: Fertilizing cotton, warm season forages, preparing land for planting of annual forages such as rye, wheat, ryegrass, finishing harvesting hay, planning for fall pastures. Other activities: Brush hogging, irrigating soybeans, draining of rice, defoliating cotton, spraying fields for insects, weeds, starting corn, sorghum, pea, rice harvesting, scouting for and treating webworms in soybeans, treating crop lands for armyworms, planting winter wheat, tree fruit, small fruit harvesting, melon harvesting, dusting, ear tagging cattle for external parasites, fall calving, giving Brucellosis vaccinations, pregnancy checking spring bred cows, selling cull cows, weaning calves. Corn 69% harvest; 2% poor 27% fair 53% good 18% excellent. Cotton 56% opening bolls, 9% poor 32% fair 44% good 15% excellent. Soybeans 100% bloomed, 94% setting pods, 8% shedding; 8% very poor 19% poor 32% fair 31% good 10% excellent; Sorghum 99% turning color, 83% mature, 24% harvested; 3% very poor 12% poor 38% fair 40% good 7% excellent. Alfalfa 6% very poor 27% poor 38% fair 29% good. Other hay 20% very poor 44% poor 29% fair 7% good 0% excellent. Range, pastures feed 25% very poor 43% poor 27% fair 5% good.

CALIFORNIA: Field activities progressed normally under favorable conditions in most areas. Seedbed preparations for fall-seeded small grains and forage crops were ongoing. Winter forage planting was underway in the northern San Joaquin Valley. Harvest of short grain rice varieties and wild rice began in the Sacramento Valley. Medium, long grain rice fields were being drained with harvest expected in two to three weeks. Cotton bolls were opening, many fields received their final irrigation in the San Joaquin Valley. Verticillium wilt began to appear in some Pima, non-Acala cotton varieties due to the cooler than normal growing season. Cotton growers continued spraying for aphids, leafhoppers, lygus, worms. Black eye bean harvest gained momentum, while garbanzo bean harvest was winding down. Safflower harvest was virtually complete, except in the northern Sacramento Valley. Seed alfalfa harvest neared completion, with excellent yields reported. Sugar beets were harvested in the central valleys; less mature fields were treated for armyworms, mites. Corn silage harvest remained active in most growing areas. Harvest of corn for grain started in the southern San Joaquin Valley. Alfalfa, bermuda grass, sudan grass were cut for hay or green chopped. Some older stands of alfalfa hay were removed due to depressed prices. Harvest of grapes for fresh consumption gained momentum in the San Joaquin Valley. Varieties picked included Red Globe, Flame Seedless, Thompson Seedless. Grapes picked for raisins were laid, some trays were rolled. Cool weather has delayed maturity. Picking of wine grapes continued. Stone fruit harvest was winding down. Apple picking was active. Olives were maturing well. Bartlett pear harvest was active in Lake and Mendocino counties. Asian pear harvest was active in the San Joaquin Valley. Harvest of almonds continued. Walnut growers were preparing for harvest. Valencia oranges, lemons were picked in southern California. Strawberry growers were planting. Processing tomato harvest was proceeding smoothly; good yields were reported. Recent warm weather allowed gains in maturity levels. Few cases of wilt were reported. Some delays have been reported at the tomato canneries as a result of the late spring and mild summer temperatures. Cantaloupe, melon harvests continued. Watermelon harvest was winding down. Quality of the watermelons harvested this season has been described as the best ever. Sweet corn was being picked; much of the production was going to local markets. Sweet potato and lima bean harvests continued. Fall broccoli, cauliflower, cabbage and lettuce fields were growing well under nearly ideal conditions; some fields were treated for aphids, worms. Aphid problems were observed in several pumpkin fields. Some spinach was being planted. Growers were preparing desert area fields for winter vegetable planting. Soils were treated for nematodes. Among the myriad vegetables harvested were green beans, bitter melon, cilantro, cucumbers, gourds, leeks, eggplant, onions, squash, peppers. Irrigated pastures remained in good to fair condition, while non-irrigated rangeland, pastures were in fair to poor condition. Fresno County's non-irrigated grazing land was in very poor condition, with forage on 400,000 acres damaged or partially destroyed by high temperatures and grasshopper populations. The fire hazard remains very high on rangeland in most areas. Cattle were being moved from poorer pastures and from high elevation rangeland. Milk production rebounded, poultry mortality rates declined with the cooler temperatures during the past week.

COLORADO: Days suitable for fieldwork 5.1. Topsoil 3% very short, 12% short, 69% adequate, 16% surplus. Subsoil 4% very short, 21% short, 66% adequate, 9% surplus. The middle of the week brought the Front Range and Eastern Plains thunderstorms accompanied with hail. Some undetermined amount of crop damage resulted from these storms. Winter wheat 7% seeded, 6% 1998, 8% avg. Spring wheat 56% harvested, 63% 1998, 65% avg.; 7% poor, 14% fair, 60% good, 19% excellent. Spring barley 84% harvested, 88% 1998, 79% avg. Oats 85% harvested, 80% 1998, 77% avg. Corn silage 4% harvested, 9% 1998, 8% avg. Dry onions 45% harvested, 49% 1998, 47% avg.; 1% very poor, 4% poor, 14% fair, 64% good, 17% excellent. Sugar beets 1% very poor, 2% poor, 20% fair, 52% good, 25% excellent. Dry beans 23% cut, 35% 1998, 33% avg.; 11% harvested, 16% 1998, 18% avg.; 2% poor, 11% fair, 63% good, 24% excellent. Summer potatoes 48% harvested, 49% 1998, 48% avg.; 1% very poor, 3% poor, 30% fair, 57% good, 9% excellent. Fall potatoes 5% harvested, 3% 1998, 4% avg.; 7% poor, 14% fair, 45% good, 34% excellent. Alfalfa 55% 3rd cutting, 49% 1998, 38% avg.; 1% very poor, 13% poor, 23% fair, 48% good, 15% excellent. Pasture, range feed in mostly good condition.

DELAWARE: Days suitable for fieldwork 5.5. Topsoil 4% very short, 28% short, 68% adequate. Subsoil 26% very short, 45% short, 29% adequate. Field corn 15% very poor, 39% poor, 32% fair, 13% good, 1% excellent; 80% dented, 79% 1998, 81% avg.; 37% mature, 22% 1998, 32% avg.; 6% harvested for grain, 8% 1998, 5% avg.; 70% harvested for silage, 40% 1998, 43% avg. Soybeans 11% very poor, 23% poor, 25% fair, 37% good, 4% excellent; 89% setting pods, 65% 1998, 78% avg.; 14% turned, 12% 1998, 7% avg.; 6% shedding leaves, 5% 1998, 2% avg. Sorghum 12% poor, 60% fair, 28% good; 36% turned, 28% 1998, 24% avg. Sweet corn 81% harvested, 77% 1998, 90% avg. Snap beans 83% harvested, 75% 1998, 82% avg. Cantaloupes 95% harvested, 78% 1998, 89% avg. Watermelons 90% harvested, 75% 1998, 88% avg. Cucumbers 80% harvested, 76% 1998, 89% avg. Lima beans 48% harvested, 48% 1998, 49% avg. Tomatoes 79% harvested, 74% 1998, 86% avg. Potatoes 85% harvested, 93% 1998, 93% avg. Apples 5% fair, 85% good, 10% excellent; 43% harvested, 43% 1998, 42% avg. Peaches 95% harvested, 90% 1998, 93% avg. Clover, other hay 89% 3rd cutting, 86% 1998, 81% avg.; 32% 4th cutting, 26% 1998, 10% avg. Alfalfa hay 42% 4th cutting, 30% 1998, 26% avg. Hay supplies 3% very short, 55% short, 42% adequate. Pasture feed 6% very poor, 38% poor, 36% fair, 20% good. Activities: Soybeans recovering slightly from rain, continued vegetable harvesting, monitoring of pod worms in soybeans.

FLORIDA: Topsoil moisture throughout State mostly short to adequate. Mostly dry weather. Rainfall varied from none at several locations to almost 3.00 in., Miami. Most temperatures normal to 1 degree above; many record daily highs equal or exceeded. Temperatures at Daytona Beach, Jacksonville averaged one to two degrees below normal. Daytime highs 80s, 90s; nighttime lows mostly in 60s, 70s. Jacksonville recorded at least one low at 57°. Tobacco marketing active. Cotton, soybean, sugarcane condition

normal. Haying active. Cotton starting to cut out, bolls starting to open. Peanuts 14% harvested; 22% fair, 70% good, 8% excellent. Mostly clear weather allowed vegetable fieldwork to progress steadily although rains around Homestead delayed some activity. Light rain first of week followed by dry conditions citrus areas. Some irrigation running over weekend to keep trees, fruit in good condition. New crop fruit good condition. A few packing houses shipping limited volume of Navels, grapefruit. Caretakers cutting cover crops, spraying, fertilizing, pushing dead trees, planting resets. Pasture feed 5% poor, 15% fair, 75% good, 5% excellent. Cattle 10% fair, 90% good. Pasture conditions poor in Panhandle, north, progressively improved towards south. Panhandle moisture very short, pasture condition poor. North; pasture condition fair. Central; adequate moisture; pasture, range condition fair to good; pastures stressed, hay growth slowed. Central; pasture, range condition fair; ground water table still low; hay harvest active but late, armyworms very active in some west central locations. Southwest; adequate to surplus soil moisture, some spots had standing water. Cattle condition statewide mostly good.

GEORGIA: Days suitable for fieldwork 6.8. Soil moisture 41% very short, 40% short, 19% adequate. Soil moisture conditions deteriorated from the previous week. It was hot, dry over much of the State. These conditions continued to deplete soil moisture, hurt crop conditions. Cotton 2% harvested, 3% 1998, 1% avg. Hay 19% very poor, 33% poor, 36% fair, 12% good. Peanuts 9% dug, 4% 1998, 11% avg. Rye 0% planted, 1% 1998, 0% avg. Sorghum 15% very poor, 25% poor, 34% fair, 25% good, 1% excellent; 44% harvested for grain, 25% 1998, 24% avg. Soybeans 98% blooming, 98% 1998, 99% avg.; 89% setting pods, 89% 1998, 91% avg. Tobacco 94% harvested, 82% 1998, 94% avg. Apples 3% very poor, 5% poor, 43% fair, 45% good, 4% excellent; 26% harvested, 35% 1998, 34% avg. Pecans 7% very poor, 18% poor, 31% fair, 38% good, 6% excellent. Corn harvest continued ahead of the five year average pace. Peanuts, soybeans were being sprayed. Soybean condition decreased from the previous week. Sorghum harvest continued. There were some reports of cotton boll-lock due to extreme temperatures. Cotton condition dropped. Peanut digging continued as condition decreased. Pastures and hayfields continued to suffer from the lack of moisture. Army worms continued to be a problem in some fields. There were reports of cattlemen continued supplemental feeding, culling some cattle. Moisture is needed to plant winter grazing. Apple harvest continued last week. Apple condition decreased slightly from the previous week. There were reports of apples dropping due to the heat last week. Pecan condition decreased from the previous week. Other activities included preparing for cotton, peanut harvests as well as routine care of livestock.

HAWAII: Days generally sunny, dry except for windward areas which received light to moderate showers. Variable weather conditions were fair for agriculture. Moderate to brisk trade winds hampered some forms of irrigation, spraying during the first half of the week. Winds diminished latter in the week. Banana orchards remained in fair to good condition. Abundant sunshine, warm temperatures, adequate soil moisture promoted normal crop progress. Harvesting will remain active in all major growing areas. Papaya fields in fair to good condition. Harvesting active on all islands. Head cabbage in fair condition. Heavy irrigation ensuring normal crop progress. Cucumbers, sweet corn in good condition.

IDAHO: Days suitable for fieldwork 6.0. Topsoil, 8% very short, 35% short, 55% adequate, 2% surplus. Rain in Eastern areas slows small grain harvest. First report of late blight in potato fields. Irrigation supply 57% excellent, 35% good, 7% fair, 1% poor. Alfalfa hay 52% 3rd cutting, 54% 1998, 41% avg. Oats 63% harvested for grain, 74% 1998, 69% avg. Mint 76% harvested, 89% 1998, 88% avg. Dry peas 86% harvested, 98% 1998, 86% avg. Dry beans 12% harvested, 9% 1998, 18% avg. Corn 9% harvested for silage, 4% 1998, 5% avg. Sweet corn 61% harvested, 45% 1998, 56% avg. Lentils 80% harvested, 90% 1998, 67% avg. Onions 8% harvested, 16% 1998, 21% avg. Peaches 61% harvested, 56% 1998, 70% avg. Prunes, plums 38% harvested, 26% 1998, 45% avg. Apples 3% harvested, 7% 1998, 7% avg. Hops 22% harvested, 35% 1998, 29% avg. Potatoes 18% with vines dead/kill, 17% 1998, 33% avg.; 5% harvested, 4% 1998, 5% avg. Winter wheat 89% harvested, 98% 1998, 96% avg.; 1% planted, 2% 1998, 3% avg. Activities: Monitoring for insects and disease, harvesting cereal grains, potatoes, hay, mint, lentils, dry peas, oats, onions, hops sweet corn, fruit.

ILLINOIS: Days suitable for fieldwork 6.8. Topsoil 23% very short, 42% short, 34% adequate, 1% surplus. Most of the State went without rain last week. This caused continuing stress on the corn, soybean, hay crops, particularly in the southern districts. Because of poor pasture conditions, some livestock producers are even beginning to feed hay. Early planted and drought or wind damaged corn is being harvested, as well as many seed corn fields. Soybean progress as of September 5 is similar to the 1998 crop. Other activities last week included chopping silage, preparing harvest equipment, caring for livestock, cleaning out bins, hauling grain. Alfalfa third cut 87%, 85% 1998, 75% avg.

INDIANA: Days suitable for fieldwork 7.0. Topsoil 45% very short, 42% short, 13% adequate. Subsoil 44% very short, 44% short, 12% adequate. Hot dry weather prevailed. Virtually no precipitation, statewide. Topsoil, subsoil very dry. Corn harvest advanced, mostly southwest areas. Corn, soybean declined. Corn 29% good to excellent. Soybean 25% good to excellent. Pastures dried up, most areas. Range, pasture feed 34% very poor, 38% poor, 26% fair, 2% good. Feeding hay continues. Third cutting alfalfa hay virtually complete. Tobacco harvest 55% complete, 43% 1998, 34% avg. Activities: selling corn & soybeans, cleaning, repairing grain bins, preparing harvest equipment, purchasing wheat seed, harvesting tobacco, mowing roads, baling hay, painting buildings, caring for livestock.

IOWA: Days suitable for fieldwork 6.8. Topsoil 8% very short, 30% short, 59% adequate, 3% surplus. Subsoil 6% very short, 22% short, 68% adequate, 4% surplus. Corn, soybeans maturing fast. Rain is needed, especially in southern third of State. Crops on sandier ground being stressed; some soybeans not filling due to lack of moisture. In some areas crops maturing too fast due to disease. In west central, central, south central southwest areas, rust in many corn fields, as well as grey leaf spot, blight. Corn 95% dough stage, 96% 1998, 90% avg.; 85% dent stage, 86% 1998, 66% avg.; 27% mature stage, 26% 1998, 15% avg. Corn 3% very poor, 7% poor, 23% fair, 44% good, 23% excellent. Soybeans 21% leaves changing color, 29% 1998, 26% avg.; 3% leaves dropping, 3% 1998, 4% avg. 4%. Soybean 3% very poor, 7% poor, 21% fair, 45% good, 24% excellent. Livestock generally in good condition; in north central, central pastures starting to get short, rain would prevent need for feeding hay. Range, pasture feed 8% very poor, 20% poor, 24% fair, 30% good, 18% excellent. Third cutting of alfalfa 77%, 66% 1998, 65% avg. Hay 3% very poor, 12% poor, 26% fair, 36% good, 23% excellent.

KANSAS: Days suitable for fieldwork 6.6. Topsoil 20% very short, 52% short, 28% adequate. Subsoil 13% very short, 42% short, 44% adequate, 1% surplus. Wheat seeding has begun primarily in the western, southern districts. In some areas, farmers are waiting for moisture before planting. Corn harvest is underway in all areas except the northwest, milo harvest has begun in about half the State. Soybeans 96% setting pods, 99% 1998, 97% avg. Sorghum 4% harvested, 8% 1998, 2% avg. Sunflower 3% poor, 17% fair, 67% good, 13% excellent. Ray flowers 60% dry, 88% 1998. Bracts 35% turning yellow, 50% 1998. Sunflowers 6% mature, 10% 1998; 1% harvested, 3% 1998. Fourth cutting alfalfa 63%, 56% 1998, 43% avg. Last week producers were busy seeding wheat, preparing fields for seeding, harvesting grain, harvesting silage, putting up hay, planting alfalfa. Hay, forage supplies 1% very short, 7% short, 83% adequate, 9% surplus. With many areas experiencing drought conditions, some ranchers are being forced to move cattle off of grass, begin feeding hay. Stock water supplies remain mostly adequate, though ponds are beginning to dry up in a few areas.

KENTUCKY: Days suitable for fieldwork 5.9. Topsoil 68% very short, 26% short, 6% adequate. Subsoil 71% very short, 25% short, 4% adequate. No significant rainfall anywhere in State. Crops in desperate need of moisture. Soybeans severely stressed and at a critical stage. Soybean condition declining. Corn harvesting active. Burley tobacco cut 69%. Dark tobacco cut 74%. Tobacco 18% very poor, 32% poor, 32%fair, 16% good, 2% excellent. Tobacco drying too fast in barns. Eighteen percent of reports indicated some houseburn present in barns. Pasture feed 47% very poor, 36% poor, 13% fair, 4% good. Farmers continue to feed hay due to poor pasture conditions. Minimal hay harvest reported. Hay 46% very poor, 35% poor, 13% fair, 5% good, 1% excellent. Corn continues being chopped, soybeans being cut for hay.

LOUISIANA: Days suitable for fieldwork 5.4. Soil moisture 22% very short, 36% short, 31% adequate, 11% surplus. Corn 99% harvested, 95% 1998, 87% avg. Cotton 4% harvested, 2% 1998, 1% avg. Cotton growers have begun to defoliate and harvest. Hay 73% final cutting, 70% 1998, 78% avg. Rice 95% ripe, 96% 1998, 89% avg. Rice harvest edged closer to completion. Sorghum 81% harvested, 73% 1998, 55% avg. Soybeans 100% setting pods, 100% 1998, 99% avg.; 59% leaves turning, 57% 1998, 41% avg.; 12% harvested, 10% 1998, 6% avg. Soybean conditions improved slightly with rain showers. Sugarcane 1% very poor, 1% poor, 19% fair, 52% good, 27% excellent; 81% planted, 34% 1998, 37% avg. Sweet potatoes 6% poor, 25% fair, 66% good, 3% excellent; 25% harvested, 18% 1998, 21% avg. Livestock 1% very poor, 10% poor, 35% fair, 44% good, 10% excellent. Vegetables 7% very poor, 20% poor, 40% fair, 30% good, 3% excellent. Pastures continued to be very dry.

MARYLAND: Days suitable for fieldwork 4.8. Subsoil 39% very short, 32% short, 29% adequate. Topsoil 1% very short, 21% short, 71% adequate, 7% surplus. Corn 18% very poor, 26% poor, 34% fair, 18% good, 4% excellent; 85% dough, 89% 1998, 88% avg.; 67% dent, 75% 1998, 67% avg.; 34% mature, 39% 1998, 24% avg.; 8% harvested for grain, 9% 1998, 5% avg.; 42% harvested for silage, 23% 1998, 25% avg. Soybeans 7% very poor, 15% poor, 29% fair, 41% good, 8% excellent; 93% setting pods, 94%

1998, 89% avg.; 9% turned, 14% 1998, 11% avg.; 5% shedding leaves, 5% 1998, 4% avg. Sorghum 10% very poor, 40% poor, 44% fair, 6% good; 39% turning color, 41% 1998, 33% avg. Tobacco 8% very poor, 19% poor, 31% fair, 37% good, 5% excellent; 94% topped, 95% 1998, 96% avg.; 59% harvested, 52% 1998, 68% avg. Snap beans 88% harvested, 89% 1998, 87% avg. Cucumbers 83% harvested, 89% 1998, 92% avg. Sweet Corn 94% harvested, 93% 1998, 89% avg. Tomatoes 91% harvested, 89% 1998, 88% avg. Cantaloupes 95% harvested, 93% 1998, 95% avg. Lima beans 32% harvested, 49% 1998, 39% avg. Watermelons 95% harvested, 91% 1998, 90% avg. Apples 1% poor, 21% fair, 78% good; 34% harvested, 20% 1998, 22% avg. Clover, other hays 80% 3rd cutting, 76% 1998, 59% avg. Alfalfa 87% 3rd cutting harvested, 96% 1998, 90% avg.; 32% 4th cutting, 36% 1998, 38% avg. Pasture feed 10% very poor, 26% poor, 37% fair, 26% good, 1% excellent. Hay 16% very short, 53% short, 31% adequate. Activities: More rain received during last week, western areas still dry, continued vegetable harvesting.

MICHIGAN: Days suitable for fieldwork 7.0. Topsoil 18% very short, 42% short, 40% adequate. Subsoil 17% very short, 43% short, 40% adequate, 0% surplus. Hot, dry conditions dominated the past week as fields looked stressed. Little rain, if any, was reported anywhere in the State. Hay 4% very poor, 8% poor, 23% fair, 46% good, 19% excellent. Dry beans 1% poor, 14% fair, 64% good, 21% excellent. Hay 67% 3rd cutting, 74% 1998, 49% avg.; 8% 4th cutting, 12% 1998, 3% avg. Dry beans 98% turning leaves, 100% 1998, 65% avg. Dry beans 71% shedding leaves, 95% 1998, 43% avg.; 14% mature, 23% 1998, 8% avg. Silage 19% harvested, 29% 1998, 10% avg. Soybeans 41% turning leaves, 52% 1998, 32% avg. Work conditions almost perfect all week and record highs recorded last weekend. It was perfect weather all week to work as farmers cut hay. Most third cuttings completed, some areas starting on their fourth cutting. Very early planted dry beans being harvested in the southern areas. Corn maturing nicely aided by dry weather. Corn silage harvest was in full swing. Sugar beets still need rain as some fields showing moisture stress. White mold continued to surface in many soybean fields and spraying was completed as needed. Cabbage for fall harvest was behind in development. Cantaloupe harvest continued. Carrot harvest was moving quickly with excellent yields and quality. Cauliflower and broccoli harvest were underway with good quality. Celery harvest was on schedule at mid-season. Cucumber harvest continued with improved quality. Onion harvest was beginning with the outlook favorable and good drying weather. Pepper harvest continued with excellent quality. Pumpkin maturity remained ahead of normal but with less than normal production expected. Snap bean harvest was in full swing with good yields and quality. Zucchini, summer squash harvest continued. Sweet corn harvest was winding down, supplies becoming limited. Processing tomato harvest continued with average to above average yields, very good quality. Apple fruit 3 inches diameter. Peach harvest neared completion in the south and was in high gear in the West Central region. Stanley plum harvest was ending in the southwest while later season plum harvest started. Niagara grape harvest started in the southwest. Southwest Bartlett pear harvest wrapped up, harvest of later varieties started. Fall red raspberry harvest continued.

MINNESOTA: Days suitable for fieldwork 4.7. Topsoil 4% very short, 12% short, 59% adequate, 25% surplus. Soybeans 41% turning yellow, 54% 1998, 35% avg. Corn 19% silage cut, 25% 1998, 9% avg. Winter wheat 15% seeded, 50% 1998, 39% avg. Rye 18% seeded, 53% 1998, 39% avg. Dry beans 11% harvested, 42% 1998, 19% avg. Sweet corn 74% harvested, 84% 1998, 72% avg. Potatoes 14% harvested, 17% 1998, 13% avg. Grain/Hay stubble plowed 40%, 58% 1998, 40% avg. Pasture feed 3% very poor, 12% poor, 26% fair, 53% good, 6% excellent. Sugar beets 2% very poor, 7% poor, 25% fair, 51% good, 15% excellent. Sunflowers 2% very poor, 11% poor, 30% fair, 49% good, 8% excellent. Dry beans 6% very poor, 13% poor, 38% fair, 38% good, 5% excellent. Rain-producing systems crossed most of the State, but dumped heavy rainfall mainly in the north. Wheat producers in northwestern areas are discouraged by the persistent rains which keep many from completing harvest and some even from beginning harvest. Soybeans are showing typical progress toward maturity as a large portion of the acreage has begun to change color.

MISSISSIPPI: Days suitable for fieldwork 6.3. Soil moisture 50% very short, 30% short, 20% adequate. Conditions remained hot, dry across the State with scattered showers towards the end of the week. Preparations for fall planting have begun in some parts of the State. Corn 81% harvested, 79% 1998, 50% avg.; 98% silage harvested, 89% 1998, 87% avg. Cotton 87% open bolls, 84% 1998, 66% avg.; 3% harvested, 3% 1998, 1% avg.; 5% very poor, 14% poor, 32% fair, 39% good, 10% excellent. Rice 67% mature, 66% 1998, 66% avg.; 18% harvested, 37% 1998, 27% avg.; 1% very poor, 4% poor, 31% fair, 55% good, 9% excellent. Sorghum 96% mature, 81% 1998, 80% avg.; 67% harvested, 49% 1998, 44% avg.; 76% silage harvested, 74% 1998, 65% avg. Soybeans 76% turning color, 66% 1998, 47% avg.; 55% shedding leaves, 35% 1998, 28% avg.; 22% harvested, 8% 1998, 5% avg.; 16% very poor, 19% poor, 27% fair, 31% good, 7% excellent. Sweet potatoes 15% harvested, 19% 1998, 23% avg.; 1% very poor, 7% poor, 47% fair, 45% good. Hay (warm-season) 87% harvested, 89% 1998, 90% avg. Cattle, 2% very poor, 14% poor, 38% fair, 40% good, 6% excellent. Pasture feed 26% very poor, 22% poor, 35% fair, 16% good, 1% excellent.

MISSOURI: Days suitable for fieldwork 6.8. Topsoil continues to decline to 62% very short, 28% short, 10% adequate. Subsoil 50% very short, 35% short, 15% adequate. Precipitation 0.30 in. Nearly all reporters indicated very short or short as the most common ratings. Northeast remains the driest district with 99% very short, 1% short of moisture. Late summer drought conditions are continuing to develop. Rainfall is needed throughout the State especially for soybeans, pastures, and livestock water supplies. Ninety-five percent of the corn has dented and 62% is mature. Warm, dry weather has speeded maturity of the crop too slightly ahead of 1998, about ten days ahead of average. Twenty percent of the corn is harvested, 3 days ahead of 1998, 12 days ahead of normal. Harvesting progress ranges from just beginning in the northern districts to 68% complete in the southeast. Ninety-six percent of all soybeans were setting pods, 24% turning color, 8% dropping leaves. Dry weather is forcing the crop into maturity slightly ahead of 1998 early crop, several days ahead of average. Seventy-seven percent of the sorghum crop was turning color, 40% has reached maturity. The Bootheel leads all districts with 83% of the grain sorghum crop matured. Throughout the State grain sorghum progress of both coloring and maturity is several days ahead of normal. Seventy-three percent of the cotton crop is opening bolls, about two weeks ahead of the 32% normal for this date. Range, pasture feed 45% very poor, 29% poor, 19% fair, 7% good. Most districts reported pastures as poor to very poor except the northwest, west-central districts which indicated over 55% as fair to good condition

MONTANA: Days suitable for fieldwork 3.7. Topsoil 9% very short, 30% short, 59% adequate, 2% surplus. Subsoil 15% very short, 41% short, 43% adequate, 1% surplus. Week started out hot, dry, but as the week progressed, temperatures cooled off. Good moisture was received at many locations across the State. Sugar beets 1% poor, 24% fair, 45% good, 30% excellent. Winter wheat harvested 96%, 99% 1998, 95% avg. Spring wheat ripe 90%, 98% 1998, 93% avg. Barley ripe 89%, 98% 1998, 92% avg. Oats ripe 92%, 98% 1998, 94% avg.; harvested 69%, 93% 1998, 77% avg. Corn for silage harvested 9%, 6% 1998, 9% avg.; 1% poor, 17% fair, 67% good, 15% excellent. Potatoes 11% fair, 65% good, 24% excellent. Dry beans harvested 38%, 33% 1998, 22% avg.; 6% poor, 27% fair, 57% good, 10% excellent. Alfalfa second cutting 75%, 89% 1998, 84% avg. Other hay harvested 92%, 97% 1998, 97% avg. Cattle, calves moved from summer ranges 16%, 8% 1998, 6% avg. Sheep, lambs moved from summer ranges 10%, 6% 1998, 7% avg.

NEBRASKA: Days suitable for fieldwork 5.3. Topsoil 12% very short, 36% short, 48% adequate, 4% surplus. Subsoil 10% very short, 26% short, 61% adequate, 3% surplus. Temperatures 3° in the Panhandle up to 8° above normals in the northeast. Precipitation less than 0.20 in. south central portion of the State up to 2.00 in. Panhandle. Corn 2% very poor, 8% poor, 21% fair, 48% good, 21%; dryland corn 56%, irrigated corn 78% good, 22% excellent. Corn Dough rated 96%, below 98% 1998, ahead of 95% avg.; corn dented moved to 75% behind 91% 1998, ahead of 65% avg.; corn matured 9%, above 8% 1998, 6% avg. Soybeans 7% very poor, 12% poor, 28% fair, 38% good, 15% excellent; coloring rated 22%, compared to 33% 1998, 28% avg. Soybeans dropping leaves 4%, 4% 1998, but slightly below the 6% avg. Sorghum heading near completion at 99%, just below last year's 100%, 100% 1998; turning color moved slowly to 49%, compared to 76% 1998, 55% avg.; 1% very poor, 8% poor, 32% fair, 52% good, 7% excellent. Dry beans turning color rated 93%, well ahead of 74% 1998, 79% avg.; dropping leaves 48%, above 35% 1998, 37% avg.; 20% poor, 27% fair, 46% good, 7% excellent. Alfalfa 2% very poor, 8% poor, 28% fair, 54% good, 8% excellent; 3rd cutting 90%, just above 88% 1998, ahead of 84% avg. Range, pasture feed 5% very poor, 13% poor, 27% fair, 45% good, 10% excellent. Pastures were starting to dry up due to lack of moisture. Producer activities included moving grain, haying prairies, preparations for seeding wheat, fertilizer application, irrigating, field demonstrations of seed companies' test plots, silage cutting, marketing of yearlings, preparations of harvest equipment.

NEVADA: Temperatures turned sharply cooler with much of northern State experiencing the first killing frost of the season. No precipitation was recorded anywhere in the State. Third cutting of alfalfa hay was in full swing, while the cooler temperatures dimmed prospects for a fourth cutting in the north. Alfalfa seed harvest gained momentum. Grain harvest was nearly completed and stubble was being burned. Onion harvest intensified and onion seed harvest was underway. Swathing of mint for distillation continued. Cantaloupe harvest was well along. Garlic harvest continued in full swing. Preparations for digging potatoes were underway. Pasture, range condition remained mostly good despite seasonal drying. Gathering of cattle scattered by wildfires continued. Rangeland restoration planning for the 1.5 million acres burned was underway. Main farm, ranch activities: Harvesting alfalfa hay, grain harvest, alfalfa seed harvest, garlic, onion digging, irrigating, working cattle.

NEW ENGLAND: Days suitable for fieldwork 6.8. Topsoil 47% very short, 35% short, 18% adequate. Subsoil 45% very short, 33% short, 22% adequate. Pasture feed 30% very poor, 42% poor, 20% fair, 8% good. Maine potatoes 5% harvested, 5% 1998, 5% avg.; condition excellent to good. Massachusetts potatoes 50% harvested, 50% 1998, 45% avg.; condition good to fair. Rhode Island potatoes 45% harvested, 25% 1998, 30% avg.; condition poor to fair. Oats in Maine 80% harvested, 70% 1998, 50% avg.; condition good to excellent. Barley in Maine 95% harvested, 85% 1998; condition good to excellent. Field corn 20% harvested, 5% 1998, 5% avg.; condition good. Sweet corn 85% harvested, 75% 1998, 80% avg.; condition good to fair. Shade Tobacco 95% harvested, 100% 1998, 95% avg., condition good. Broadleaf Tobacco 99% harvested, 95% 1998, 95% avg.; condition good. Second cut hay 90% harvested, 85% 1998, 80% avg.; condition good to fair. Third cut hay 50% harvested, 35% 1998, 40% avg.; condition fair. Apples 15% harvested, 20% 1998, 20% avg.; size below average to average, condition good. Peaches 70% harvested, 85% 1998, 85% avg.; size average to below average, condition fair. Pears 15% harvested, 30% 1998, 30% avg.; size below average to average, condition good to fair. Cranberries size average, condition good to excellent. Highbush blueberries 95% harvested, 95% 1998, 95% avg.; size average, condition good to fair. Wild Blueberries 100% harvested, 100% 1998, 99% average; size average, condition good to fair. Major farm activities included: Harvesting oats, barley, potatoes, silage corn. Picking apples, pears and peaches. Wild blueberry harvest completed in Maine, highbush blueberry harvest almost complete. Harvesting late summer vegetables including squash, sweet corn, peppers. Harvesting, marketing mums.

NEW JERSEY: Days suitable for fieldwork 6. Temperatures above normal. Extremes 46°; 92°. Rainfall 0.50 in. north, 0.18 in. central, 0.37 in. south. The heaviest 24 hour total 1.27 in. at Charlotteburg on the 5th to the 6th. Estimated soil moisture, in percent of field capacity, this past week averaged 78% north, 67% central, 59% south. Four inch soil temperatures averaged 68° north, 70° central, 71° south. Irrigation water supply is between short, adequate in most areas. Preparation of fields for small grains, hay, grass seeding occurred extensively during the week. Field corn condition is poor in most areas despite the recent rains. Cutting of corn silage started earlier than usual. Many fields that were originally intended for grain are now being cut for silage. Soybeans condition is between fair and poor across the State. Recent rains arrived just in time to help late planted soybean fields in northern areas that were still in the critical pod setting stage. Condition of alfalfa, other hay fields is improving slowly, a delayed second cutting might occur in areas that have not had it yet. Prospects of a third cutting are looking good if the rains continue. Pasture condition continued to improve, however, supplemental feeding of cattle is still needed in most areas. Some farmers are turning their cattle out to hay fields. Harvest of summer vegetable crops is in full swing. Tomatoes are between good, fair condition. Some end rot and skin cracking problems caused by the recent rains have been reported. Peppers, snap beans, cucumbers fields are also between good and fair condition. Smaller than normal sizes, misshapen fruits have been reported for tomatoes, peppers in areas of central, northern areas. Potato sizes have also been reported to be somewhat smaller than normal, yields are down. Sweet potatoes are in good condition across the State. Planting of fall spinach, cabbage, lettuce continued. Harvest of peaches, apples continued across the State. Quality of both crops has been reported to be from excellent to good, especially in terms of flavor, texture, color. Some farmers in central, northern areas have reported sizes a little smaller than usual for both fruits. However, the overall quality is still considered as good.

NEW MEXICO: Days suitable for fieldwork 6.4. Hit, miss thunderstorms produced measurable rainfall at most locations during the week; however, precipitation was very spotty in the extreme northeast, southeast, southwest. Temperatures were near normal everywhere except the Eastern Plains, far southwest desert. Statewide average was between 1 to 2° above normal. Conditions were favorable across most of the State for continued harvest of hay, vegetable crops. Fall planting of wheat was progressing rapidly. Chile, silage harvest remained active. Ranchers continued to report good weight gains with no supplemental feeding. Range, pasture feed 1% very poor, 4% poor, 22% fair, 63% good, 10% excellent. Cattle, sheep conditions remained in mostly good to excellent condition.

NEW YORK: Days suitable for fieldwork 6.5. Soil moisture 50% very short, 44% short, 6% adequate. Pasture feed 42% very poor, 38% poor, 15% fair, 5% good. Hay 22% poor, 56% fair, 22% good. Alfalfa 3rd cutting 79% complete, 62% 1998, 55% avg. Corn 13% poor, 31% fair, 43% good, 13% excellent. Silage corn 33% harvested. Grain corn harvest underway. Oat harvest near completion. Potato digging gained momentum. Onion harvest in full swing. Progress was ahead of average. Bulb size has been smaller than normal. Apple harvest continued on early varieties. Few Macintosh apples were picked. Early grape varieties were harvested in the Finger Lakes region. Dairy farmers still dealing with water supply problems. Feeding required to supplement poor pastures.

NORTH CAROLINA: Days suitable for fieldwork 5.7, 5.2 last week. Temperatures were cooler throughout the week as western counties received little to no rainfall and coastal counties experienced the rains from Hurricane Dennis. After moving Northeast off the North Carolina coast, Dennis was forced south and then west by the rotation of the two high pressure systems, making landfall early Saturday evening. The tropical disturbance trekked northwest dropping heavy rainfall over most of the State. Prior to the tropical storm that engulfed the State, soil moisture levels dropped but the late week rains should restore some levels closer to normal for this time of year. Soil moisture, before the weekend rains, was 11% very short, 31% short, 49% adequate, 9% surplus. Tobacco harvesting, marketing are still the major activities along with corn for grain, silage harvest. Other activities included sorghum harvest, weed control in all crops, baling hay, harvesting apples, peaches, vegetables, crop scouting, tending livestock. Peanut threshing sweet potato harvest kicked off this week.

NORTH DAKOTA: Days suitable for fieldwork 2. Topsoil 5% short, 72% adequate, 23% surplus. Subsoil 6% short, 72% adequate, 22% surplus. Rain across the State resulted in little harvest progress this past week. Producers are in need of warm, dry weather to allow harvest to resume. Durum wheat 27% combined, 79% 1998, 53% avg. Canola 98% turning, 100% 1998; 89% swathed, 97% 1998; 41% combined, 79% 1998. Corn for grain 62% denting, 82% 1998, 67% avg.; 8% ripe, 21% 1998, 10% avg. Dry edible beans 97% fully podded, 100% 1998, 100% avg.; 77% lower leaves yellowing, 100% 1998, 96% avg.; 49% mature, 96% 1998, 80% avg.; 13% cut, 58% 1998, 29% avg.; 3% combined, 36% 1998, 16% avg. Flaxseed 88% turning, 100% 1998, 94% avg.; 18% combined, 66% 1998, 30% avg. Potatoes 52% vines killed, 74% 1998, 55% avg.; 3% dug, 5% 1998, 8% avg. Soybeans 95% fully podded, 98% 1998, 98% avg.; 32% lower leaves yellowing, 59% 1998, 63% avg.; 9% mature, 24% 1998, 22% avg. Sunflowers 66% ray flowers dried, 90% 1998, 83% avg.; 18% bracts turned yellow, 58% 1998, 46% avg.; 4% bracts turned brown, 13% 1998, 11% avg. Sugar beets 2% lifted, 2% 1998 1% avg. Dry beans, flax, soybeans, sunflowers remain behind average in crop development progress while corn, potatoes were near average. Emerged condition: durum 4% very poor, 11% poor, 43% fair, 38% good, 4% excellent; corn for grain 2% very poor, 5% poor, 23% fair, 61% good, 9% excellent; corn for silage 0% very poor, 3% poor, 31% fair, 56% good, 10% excellent; dry edible beans 0% very poor, 8% poor, 31% fair, 49% good, 12% excellent; flaxseed 0% very poor, 5% poor, 26% fair, 55% good, 14% excellent, potatoes 0% very poor, 7% poor, 12% fair, 42% good, 39% excellent; soybeans 3% very poor, 9% poor, 23% fair, 55% good, 10% excellent; sugar beets 1% very poor, 6% poor, 12% fair, 54% good, 27% excellent; sunflower 1% very poor, 6% poor, 25% fair, 53% good, 15% excellent. Stock water 1% short, 92% adequate, 7% surplus. Hay 8% above normal.

OHIO: Days suitable for fieldwork 6.9. Topsoil 30% very short, 43% short, 27% adequate. Soybeans 36% dropping leaves, 15% 1998, 10% avg.; 6% mature, 0% 1998, 1% avg.; 1% harvested, 0% 1998, 0% avg. Alfalfa hay 90% 3rd cutting, 85% 1998, 68% avg.; 33% 4th cutting, 19% 1998. Other hay 61% 3rd cutting, 57% 1998, 41% avg. Corn 78% dented, 57% 1998, 46% avg.; 18% mature, 7% avg. Corn 30% harvested for silage, 9% 1998, 6% avg.; 1% harvested for grain, 0% 1998. Summer apples 91% harvested, 100% 1998, 84% avg. Fall, winter apples 11% harvested, 0% avg. Peaches 92% harvested, 97% 1998. Grapes 2% harvested, 0% 1998. Tobacco 99% topped, 92% 1998. Tobacco 37% harvested, 37% 1998. Processing tomatoes 53% harvested, 40% 1998, 33% avg. Potatoes 56% harvested, 62% 1998, 38% avg. Pasture feed 23% very poor, 26% poor, 33% fair, 17% good, 1% excellent. Corn 8% very poor, 18% poor, 34% fair, 35% good, 5% excellent. Soybeans 6% very poor, 17% poor, 34% fair, 37% good, 6% excellent. Activities for the week include making hay; mowing, seeding CRP; combining soybeans; chopping wheat stubble; picking tomatoes, sweet corn; digging potatoes; chopping silage; plowing wheat ground; applying minerals; seeding filter strips; hauling grain; installing tile, waterways; leveling land; constructing, cleaning grain bins; hauling manure; pulling weeds in soybeans; scouting for insects, disease; preparing for harvest; selling livestock; spraying, topping, cutting tobacco; hauling water; irrigating specialty crops; attending fairs. Reported weed pressures include yellow foxtail, pigweed, velvetleaf, lambs quarters, Canadian thistle, giant ragweed, sourdock, Johnson grass, mare's tail, ironweed, smartweed, barnyard grass, nutsedge, and goldenrod. Reported insects include spider mites on soybeans; leaf hoppers in potatoes; corn borers; stink bugs on pumpkins, squash; beetles in soybeans, corn. Reported diseases include sudden death syndrome, white mold, root rot in soybeans; gray leaf spot, aflatoxin, fungus on corn; collapse of cantaloupe. Fruit, vegetable conditions range from fair to good. In Medina county, tomatoes, sweet corn, pumpkins are growing well. In Wayne county, one reporter mentioned that pumpkin, squash production is below average, garden potatoes are below average in quality and quantity. In Warren county, pumpkin size was helped by recent rains. Pasture, grass conditions are still poor in most areas of the state. Many reporters mentioned that grass is improving with recent rains, cooler temperatures, growth is minimal, pastures are over grazed. Livestock are reported in mostly good condition. In Wayne county, some mastitis is reported in dairy cows due to

dry weather. In southern counties, livestock are heat stressed. Many reporters are feeding hay. Livestock continue to be sold due to water shortages.

OKLAHOMA: Days suitable for fieldwork 6.7. Subsoil 17% very short, 44% short, 39% adequate. Topsoil 33% very short, 59% short, 8% adequate. Scattered showers bring relief to a few regions of state, most areas remain dry. Wheat 67% seedbed prepared, 59% 1998, 67% avg. Oats 55% seedbed prepared, 51% 1998, 49% avg. Corn 2% very poor, 1% poor, 5% fair, 90% good, 2% excellent; 50% mature, 36% 1998, 45% avg.; 11% harvested, 20% 1998, 16% avg. Sorghum 92% headed, 93% 1998, 92% avg.; 1% harvested, 4% 1998, 2% avg. Soybeans 3% very poor, 28% poor, 37% fair, 31% good, 1% excellent; 85% flowering, 98% 1998, 97% avg.; 70% setting pods, 86% 1998, 89% avg.; 16% mature, 30% 1998, 24% avg.; 3% harvested, 7% 1998, 5% avg. Peanuts 4% mature, 20% 1998, 12% avg. Watermelons 93% harvested, 95% 1998, 83% avg. Alfalfa hay 1% very poor, 16% poor, 35% fair, 45% good, 3% excellent; 65% 4th cutting, 32% 1998, 54% avg.; 7% 5th cutting, 1% 1998, 5% avg. Other hay 60% 2nd cutting, 13% 1998, 62% avg. Livestock 4% poor, 23% fair, 69% good, 4% excellent. Feeder steer prices steady at $77 per cwt.

OREGON: Days suitable for fieldwork 6.5. Topsoil 34% very short, 47% short, 19% adequate. Subsoil 30% very short, 49% short, 21% adequate. Barley harvested 72%, 86% 1998, 77% avg. Spring wheat harvested 89%, 96% 1998. Winter wheat harvested 98%, 99% 1998, 98% avg. Range, pasture feed 6% very poor, 31% poor, 29% fair, 32% good, 2% excellent. Activities: Small grain harvest continued across the State, most areas finished except those halted by rain, cold temperatures. Central growers reported good wheat yields; protein content lower than hoped for in hard red spring wheat. Mint harvest underway, grass seed harvest almost complete; second, third crop of hay in full swing in eastside. Hay down or in windrow affected by last week's rain, cool weather. Willamette Valley producers were finished with grass seed harvest, busy baling straw. Most hay in the barn, some second, third crops ready to cut. Mint still being harvested, sugar beet seed about done in Willamette Valley. Irrigation, summer maintenance is the main activity at nurseries. Easter lily transplanting continued in south coast. Christmas tree shearing still going on, trees are being flagged for the 1999 harvest. Potato harvest on-going in east side despite frost reported in southeast. Northeast Russet Burbank potatoes suffering from high levels of leafroll virus. Early season cool temperatures, hail, severe winds affecting onions. Onion harvest also in progress with some eastern counties reporting low yields. Carrot, radish seed crops being harvested in Malheur County. Willamette Valley vegetable harvest was in full-swing. Green beans past their peak, sweet corn, tomatoes & squash being harvested, onions near pulling stage. Most potatoes been harvested. In Mid-Columbia Basin, harvesting of Gala apples begun. In the Willamette Valley U-pick blueberry harvest ending. Cranberries being pruned, trained. The peach harvest continued. In the southwest the fruit harvest still underway. Some areas still having a shortage of pickers. In the west side livestock fair to good. Pastures mostly dry except for irrigated areas. In the east side livestock reported good to excellent condition. Range conditions poor to fair. Some reports of early movement of cattle.

PENNSYLVANIA: Days suitable for fieldwork 6.5. Soil moisture 35% very short, 36% short, 29% adequate. Corn 81% dough, 76% 1998, 80% avg.; 50% dent, 42% 1998, 45% avg.; 15% mature; 15% harvested, 6% 1998, 7% avg. Ensilage corn 32% harvested, 13% 1998, 12% avg. Soybean 18% very poor, 33% poor, 26% fair, 20% good, 3% excellent. Barley 10% planted, 13% 1998, 11% avg. Tobacco harvest 40% complete, 78% 1998, 65% avg. Potato 30% harvest, 27% 1998, 30% avg. Alfalfa 76% 3rd cutting, 71% 1998, 65% avg. Alfalfa 40% 4th cutting, 36% 1998, 27% avg. Timothy clover 81% 2nd cutting, 80% 1998, 80% avg. Quality of hay made 4% very poor, 9% poor, 22% fair, 45% good, 20% excellent. Apple 26% harvest, 31% 1998, 26% avg.; 1% very poor, 6% poor, 25% fair, 56% good, 12% excellent. Peach 89% harvest, 89% 1998, 80% avg. Grape harvest 5% complete, 3% 1998, 13% avg. Fall plowing 24% complete, 23% 1998, 28% avg. Activities include harvesting fruits, vegetables, potatoes, corn silage, tobacco; planting barley and wheat; machinery maintenance; filling silos; hauling manure; pumping and spreading manure; spreading lime; caring for livestock; cutting hay; plowing for the fall.

SOUTH CAROLINA: Days suitable for fieldwork 6.2. Soil moisture 16% very short, 51% short, 31% adequate, 2% surplus. Apples 30% harvested, 27% 1998, 30% avg.; 39% poor, 46% fair, 15% good. Corn 99% matured, 100% 1998, 99% avg.; 79% harvested, 69% 1998, 59% avg.; 7% very poor, 24% poor, 41% fair, 23% good, 5% excellent. Livestock 2% very poor, 12% poor, 37% fair, 38% good, 11% excellent. Grapes 20% poor, 60% fair, 20% good. Peaches 99% harvested, 100% 1998, 99% avg. Pasture feed 16% very poor, 38% poor, 36% fair, 10% good. Sorghum 98% headed, 98% 1998; 89% turned color, 89% 1998; 60% matured, 59% 1998; 35% harvested, 34% 1998, 30% avg.; 8% very poor, 35% poor, 50% fair, 7% good. Sweet Potatoes 7% harvested, 5% 1998, 7% avg.; 6% poor, 44% fair, 50% good. Tobacco 86% harvested, 88% 1998, 88% avg.; 54% stalks destroyed, 39% 1998, 44% avg. Watermelons 100% harvested, 100% 1998, 99% avg. Winter grazings 3% planted, 12% 1998, 8% avg.

SOUTH DAKOTA: Days suitable for fieldwork 4.0. Topsoil 8% very short, 18% short, 59% adequate, 15% surplus. Subsoil 3% very short, 25% short, 61% adequate, 11% surplus. Alfalfa 2% very poor, 4% poor, 24% fair, 54% good, 16% excellent; 92% 2nd cutting complete, 95% 1998, 92% avg.; 56% 3rd cutting complete, 61% 1998. Other hay 92% harvested, 91% 1998, 92% avg. Sorghum 98% headed, 99% 1998, 98% avg.; 0% harvested, 3% 1998, 1% avg., harvested for silage 3%, 14% 1998, 5% avg. Soybeans 99% setting pods, 100% 1998, 99% avg.; 1% mature, 11% 1998, 7% avg. Sunflower 1% poor, 21% fair, 60% good, 18% excellent; 95% blooming, 93% 1998, 98% avg.; 55% ray flowers dry, 80% 1998, 78% avg.; 42% bracts yellow, 64% 1998, 53% avg.; 1% mature, 14% 1998, 6% avg. Flaxseed 25% fair, 58% good, 17% excellent; 99% ripe, 100% 1998, 93% avg.; 76% harvested, 90% 1998, 68% avg. Corn 15% harvested for silage, 17% 1998, 7% avg. Winter rye 3% seeded, 30% 1998, 13% avg. Winter wheat 4% seeded, 16% 1998, 9% avg. Range, pasture feed 2% very poor, 6% poor, 24% fair, 52% good, 16% excellent. Stock water supplies 1% very short, 7% short, 77% adequate, 15% surplus. Cattle 8% fair, 70% good, 22% excellent. Sheep 6% fair, 62% good, 32% excellent.

TENNESSEE: Days suitable for fieldwork 7.0. Topsoil 66% very short, 26% short, 8% adequate. Subsoil 59% very short, 30% short, 11% adequate. Corn 90% mature, 70% 1998, 61% avg.; 55% harvested for grain, 27% 1998, 15% avg.; 80% silage harvested, 68% 1998, 65% avg. Tobacco 15% very poor, 24% poor, 32% fair, 22% good, 7% excellent. Burley 67% harvested, 44% 1998, 51% avg. Dark Air-Cured 81% harvested, 56% 1998, 64% avg. Dark Fire-Cured 74% harvested, 57% 1998, 61% avg. Pasture feed 42% very poor, 32% poor, 18% fair, 8% good. Cattle 5% very poor, 16% poor, 47% fair, 29% good, 3% excellent. Drought conditions persisted last week with most of the State receiving no rain. The dry weather continued to adversely affect crops, especially soybeans and pastures. The State's soybean crop continued to be rated in mostly poor to very poor and desperately needs a rain soon. Pastures were rated even worse than soybeans. Lack of adequate grazing and water has caused many herds to show signs of stress, with heavy feeding and movement to market common. On the bright side, corn harvest continued and was nearly three weeks ahead of the five- year average. Respectable corn yields have been reported.

TEXAS: Conditions were hot, dry over the state with only widely scattered showers reported in the Plains, North, East Texas, along the Upper Coast. Water from Hurricane Bret continued to recede in South Texas. Fall land preparation remained slow in many locations due to continued dry conditions. The dry conditions also escalated harvest activities. Grain storage problems continued in some locations. Livestock conditions remained fair to good, declining, supplemental feeding continued.

Crops: Small Grains, Some early wheat emerged where moisture was available. Other fields were being dry planted. Emerged 1%, 2% 1998, 1% avg. Oat seeding continued where moisture permitted following scattered showers, 4%, 5% 1998, 3% avg. Corn High Plains crop continued to mature, harvest was in full swing. Silage harvest was mostly complete. Harvest neared completion in the Blacklands, Central Texas and Upper Coast. Markets continued to be weak. Statewide corn condition was rated at 89% of normal compared with 61 percent last year. Cotton: Good growth, development continued in the Plains where showers fell, however many fields have reached cut out. Dryland fields need more rain as boll drop was still a problem. Boll weevil eradication spraying was in progress in some areas. Harvest continued in the Coastal Bend, Blacklands, Central Texas with good yields reported. Cotton condition 60% of normal, 45% 1998; 100% setting bolls, 100% 1998, 99% avg.; 11% harvested, 20% 1998, 16% avg. Peanuts Fields continued to look good in the Plains and North Central Texas. Irrigation was still active but beginning to wind down in most locations. Dryland fields need more rain. Some spraying for diseases was still occurring. Early harvest continued in central, south central. Other locations will began soon. Peanuts 74% of normal, 63% 1998. Rice: Harvest made good progress along the Upper Coast with very good yields, excellent quality reported. Rice 95% normal, 81% 1998. Sorghum: Fields matured rapidly in the Plains under continued hot dry conditions and harvest began to expand. Storage space continued to be a problem. Sorghum condition was rated at 65% of normal, 48% 1998; 96% headed, 99% 1998, 98% avg.; 65% harvested, 54% 1998, 58% avg. Soybeans: Progress and development was good in the High Plains, however dryland fields need more rain. Irrigation remained active but declined as fields mature. Harvest continued to near completion in the Blacklands and Upper Coast. Soybeans 50%, 81% 1998, 39% avg.

Commercial Vegetables: In the Rio Grande Valley, land preparation was limited as drying conditions were still needed. In the San Antonio-Winter Garden, some planting of fall vegetables continued. Some areas received scattered showers. In East Texas, sweet potato and watermelon harvest continued but slowed. Harvest of vegetables declined as well due to continued dry weather. In the High Plains, vegetable harvest was mostly completed. In the Trans Pecos, some vegetables remained to be harvested but most were complete. Peaches: Harvest continued in the High Plains but

was completed in other areas. Pecans: Scattered showers offered minimal help to Pecans, nut drop continued. Pressure from Shuck Worms, weevils, Aphids, Web Worms, Scab was still increasing in most areas.

Range and Livestock: Hay production continued to diminish, however supplies remained good. Supplemental feeding continued to increase. Grass fires continued to be a problem in Central Texas, the Edwards Plateau, the High Plains. Poultry operations continued to suffer from the heat.

UTAH: Days suitable for fieldwork 6. Topsoil 12% very short, 21% short, 67% adequate. Subsoil 13% very short, 19% short, 68% adequate. Range, pasture feed 1% very poor, 10% poor, 32% fair, 51% good, 6% excellent. Corn 54% in dough stage, 62% 1998, 40% avg.; 7% dent stage, 20% 1998, 11% avg. Corn 2% silage harvested, 4% 1998, 3% avg. Barley 97% harvested (grain), 95% 1998, 97% avg. Alfalfa hay 52% 3rd cutting, 53% 1998, 50% avg.; 10% seed harvested, 9% 1998, 10% avg. Oats 82% harvested for grain, 80% 1998, 77% avg. Peaches 57% picked, 39% 1998, 65% avg. Pears 48% picked, 31% 1998, 45% avg. Apples 1% picked, 3% 1998, 11% avg. Potatoes 4% harvested, 3% 1998, 5% avg. Onions 16% harvested, 14% 1998, 17% avg. Cattle moved from summer range 5%, 4% 1998, 10% avg. Sheep moved from summer range 2%, 1% 1998, 6% avg. Irrigation water supply 8% very short, 16% short, 69% adequate 7% surplus. Stock water supplies 3% very short, 18% short, 77% adequate, 2% surplus. Major activities included: Harvesting small grains, hay, fruit, vegetables, preparing land for fall planting.

VIRGINIA: Days suitable for fieldwork 5.7. Topsoil 16% very short, 30% short, 46% adequate, 8% surplus. Subsoil 38% very short, 33% short, 26% adequate, 3% surplus. Temperatures across the Commonwealth were several degrees cooler than normal over the past week. Many localities benefitted from increased precipitation resulting from Tropical Storm Dennis. Pastures feed 20% very poor, 25% poor, 32% fair, 20% good, 3% excellent. Livestock 11% poor, 36% fair, 46% good, 7% excellent. Hay, Other 19% very poor, 44% poor, 24% fair, 13% good. Alfalfa 4% very poor, 26% poor, 43% fair, 21% good, 6% excellent. Corn for grain 91% dough, 86% 1998, 89% avg.; 75% dented, 63% 1998, 65% avg.; 41% mature, 43% 1998, 44% avg.; 7% harvested, 17% 1998, 10% avg.; 16% very poor, 32% poor, 21% fair, 22% good, 9% excellent. Corn for silage 40% harvested, 39% 1998, 30% avg. Soybeans 95% blooming, 96% 1998, 93% avg.; 73% setting pods, 83% 1998, 77% avg.; 2% dropping leaves, 7% 1998, 3% avg.; 6% very poor, 17% poor, 34% fair, 36% good, 7% excellent. Tobacco, flue cured 50% harvested, 42% 1998, 48% avg.; 5% poor, 24% fair, 51% good, 20% excellent. Tobacco, burley 45% harvested, 37% 1998, 29% avg.; 5% very poor, 5% poor, 19% fair, 45% good, 26% excellent. Tobacco, Dark fire cured 70% harvested, 62% 1998, 65% avg. Tobacco, sun cured 50% harvested 45% 1998, 49% avg. Peanuts 0% dug, 1% 1998, 0% avg.; 0% combined, 0% 1998, 0% avg.; 9% fair, 55% good, 36% excellent. Cotton 30% bolls opening, 44% 1998, 42% avg.; 9% fair, 43% good, 48% excellent. Apples, all 2% very poor, 11% poor, 34% fair, 45% good, 8% excellent. Apples, summer 98% harvested, 98% 1998, 89% avg. Peaches 90% harvested, 95% 1998, 95% avg. Virginia's hay crop improved as a result of recent weather patterns. Livestock producers are hopeful that the increased moisture will enable some fescue, other annual grasses to be stockpiled for feed this winter. Some producers will still need to re-seed due to two years of extremely hot, dry conditions. Soybean development remains slightly behind schedule but should progress as a result of the recent showers. Seventy-seven percent of the state's crop remains in fair or better condition. Double-cropped acres need additional precipitation in order to reach full yield potential. Harvest of corn and tobacco continues but will be slowed somewhat until fields are dry enough for equipment to move about freely without causing damage. Some fall vegetable plantings will be delayed 1-2 weeks. The peanut crop remains in mostly good to excellent condition in spite of limited disease, worm problems. While cotton progress is slightly behind schedule producers expect a good crop. Few producers have reported broken stems due to a heavy boll load.

WASHINGTON: Days suitable for fieldwork 6.4. Topsoil 15% very short, 51% short, 34% adequate. Subsoil 16% very short, 58% short, 26% adequate. Winter wheat 95% harvested, 99% 1998, 97% avg.; 28% planted, 30% 1998, 22% avg. Harvest neared completion last week and planting for the 2000 crop was well underway. Late morning starts due to the cool temperatures, some precipitation delayed harvest and seeding of winter wheat in areas of eastern Washington. Yields were still being reported around average. Spring wheat 83% harvested, 97% 1998, 94% avg. Barley 80% harvested, 98% 1998, 94% avg. Potatoes 25% harvested, 20% 1998, 22% avg.; 5% fair, 60% good, 35% excellent. Hay, other roughage 75% adequate, 25% surplus. Range, pasture feed 19% very poor, 36% poor, 25% fair, 12% good, 8% excellent. Precipitation also delayed harvest of other cereal grains. Harvest continued for potatoes, onions, alfalfa seed, mint, dry beans. Buckwheat was blooming and growers were preparing for sugar beet harvest. Early pumpkins were also being harvested. Variety of vegetables were still being harvested. Some producers were concerned that some sweet corn would not mature by the end of the season. Apples, peaches, nectarines were being picked as well as blueberries.

WEST VIRGINIA: Days suitable for fieldwork 5.9. Topsoil 36% very short, 50% short, 14% adequate. Cooler temperatures, rainfall improved crop, livestock, pasture conditions across much of the State, more rain is needed to replenish soil moisture and ground water supplies. Producers in some localities continue to haul water to livestock, feed hay. Hay 34% very poor, 39% poor, 26% fair, 1% good; 69% 2nd cut, 90% 1998, 84% avg.; 25% 3rd cut 25%, 39% 1998, 40% avg. Corn 22% very poor, 49% poor, 25% fair, 4% good; 98% silked, 95% 1998; 84% doughing, 73% 1998, 80% avg.; 48% dent, 40% 1998; 32% mature, 15% 1998, 25% avg. Oats 98% harvested, 100% 1998, 97% avg. Soybeans 6% very poor, 31% poor, 42% fair, 21% good; 88% setting pods, 87% 1998, 96% avg.; 20% dropping leaves, 34% 1998. Tobacco 17% very poor, 15% poor, 39% fair, 29% good; 84% topped, 80% 1998, 95% avg.; 9% harvested. Apples 16% very poor, 24% poor, 52% fair, 8% good. Peaches 16% very poor, 25% poor, 51% fair, 8% good. Cattle 3% very poor, 16% poor, 48% fair, 33% good. Sheep 1% very poor, 17% poor, 57% fair, 24% good, 1% excellent.

WISCONSIN: Days suitable for fieldwork 6.6. Soil moisture 2% very short, 23% short, 71% adequate, 4% surplus. Sunshine and warm temperatures for the week helped farmers finish harvesting their second crop, make great progress on the third crop, get started on the fourth crop of hay. Third crop hay 76% harvested, 83% 1998, 56% avg.; 15% 4th crop harvested, 16% 1998. Heavy morning dew slowed hay curing, lack of showers helped the quality. Quality of the third, fourth crops of hay should improve, since the rains have let up. Corn crop continued to mature ahead of normal, and was drying down very rapidly. Silage began last week on many farms as early planted corn matured quickly in the full week of sunshine. Early maturing soybeans were rapidly turning color with the warm nights, dry weather. Soybean 29% leaves turned, 45% 1998, 22% avg.; 2% poor, 10% fair, 51% good, 37% excellent. Apple crop in Waushara, Rock, Kenosha counties was reported as being plentiful with good quality. Potato, snap bean harvest progressed well last week. Fall tillage has begun on harvested fields. Some winter wheat has been sown, has started to emerge. Fall sweet corn harvest is progressing with yields varying from fair to excellent. Farmers finished up oats remaining for harvest in the north last week. Pasture feed 1% very poor, 7% poor, 21% fair, 58% good, 13% excellent.

WYOMING: Days suitable for fieldwork 4.6. Topsoil 2% very short, 32% short, 65% adequate, 1% surplus. Temperatures remained warm with above normal precipitation over the State. Spring wheat 84% harvested, 87% 1998, 80% avg. Barley 94% mature, 98% 1998, 98% avg.; 79% harvested, 84% 1998, 85% avg. Oats 88% mature, 96% 1998, 95% avg.; 60% harvested, 79% 1998, 71% avg. Corn 5% fair, 94% good, 1% excellent; 91% dough, 90% 1998, 90% avg.; 31% dented, 61% 1998, 51% avg. Corn 6% harvested for silage, 0% 1998; 12% avg. Dry bean 4% fair, 95% good, 1% excellent. Dry bean 100% leaves turning, 85% 1998, 96% avg.; 52% windrowed, 32% 1998, 50% avg.; 12% combined, 3% 1998, 18% avg. Sugar beet 10% fair, 89% good, 1% excellent. Alfalfa 86% 2nd cutting, 80% 1998, 83% avg.; 12% 3rd cutting, 15% 1998, 14% avg. Other hay 95% cut, 95% 1998, 96% avg. Winter wheat 26% planted, 33% 1998, 40% avg.; 8% emerged, 9% 1998, 8% avg. Range, pasture feed 2% poor, 27% fair, 61% good, 10% excellent. Cattle, calves both 93% good, 7% excellent. Sheep, lamb both 96% good, 4% excellent.

International Weather and Crop Summary

August 29 - September 4, 1999

HIGHLIGHTS

EUROPE: Dry weather helped harvest activities in the west and north.

FSU-WESTERN: Drier weather continued to improve conditions for small grain harvesting and winter grain planting in northern Russia.

FSU-NEW LANDS: Cool, wet weather continued to delay spring grain maturation in Urals, Russia, while several days of dryness helped harvest activities in Kazakstan.

EASTERN ASIA: In the North China Plain, variable showers increased topsoil moisture for upcoming winter wheat planting, but had little impact on drought stressed summer crops.

AUSTRALIA: Conditions remained generally favorable for winter grain development.

SOUTH ASIA: Drought continued in western India but rain brought some relief to the main soybean areas in central India.

SOUTHEAST ASIA: Widespread showers boosted moisture supplies across the Philippines and northern and southern Vietnam. Drier, sunnier weather favored filling rice across Thailand.

CANADA: Cool weather, with isolated frost, slowed grain and oilseed maturation in the western Prairies.

MEXICO: Seasonal showers continued to favor corn across the Southern Plateau.

SOUTH AMERICA: Rain benefited winter wheat in the southern wheat areas of Argentina and southern Brazil.

August 1999

MONTHLY DATA FROM SELECTED FOREIGN CITIES
CLIMATE PREDICTION CENTER-NCEP-NWS-NOAA
****** DATA NOT AVAILABLE***

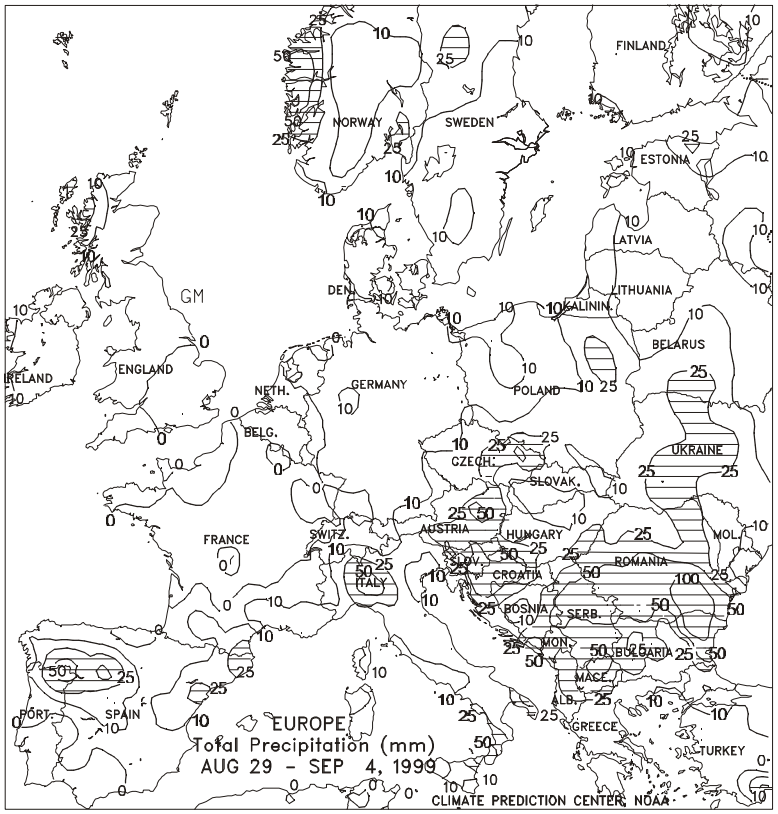
COUNTRY	*CITY*	*TEMPERATURE (C)*						*PRECIPITATION (MM)*	
		AVG MAX	*AVG MIN*	*HI MAX*	*LO MIN*	*AVG*	*DPART F/NRM*	*TOTAL*	*DPART F/NRM*
NORWAY	OSLO	20	9	28	0	15	0.7	54	-35
FINLAND	HELSINKI	20	10	29	5	15	-0.1	65	-15
UKINGDOM	GLASGOW	**	**	**	15	**	***	**	**
	EDINBURGH	18	10	21	2	14	-0.5	36	-29
IRELAND	DUBLIN	18	11	22	7	15	-0.4	108	37
ICELAND	REYKJAVIK	14	10	18	6	12	1.3	71	9
DENMARK	COPENHAGEN	21	13	28	8	17	-0.4	118	52
LUXEMBOR	LUXEMBOURG	22	14	29	10	18	1.1	75	4
SWITZERL	ZURICH	22	15	29	11	19	1.6	134	-2
	GENEVA	25	16	31	11	20	2.2	124	44
FRANCE	PARIS/ORLY	25	14	32	10	20	***	73	**
	STRASBOURG	25	14	30	9	19	1.0	59	-9
	BOURGES	25	15	33	11	20	1.5	90	30
	BORDEAUX	27	17	35	12	22	2.3	84	30
	TOULOUSE	29	18	33	14	23	2.5	22	-25
	MARSEILLE	30	20	34	16	25	2.3	9	-19
SPAIN	VALLADOLID	30	15	36	12	22	1.2	27	15
	MADRID	32	18	38	13	25	1.0	1	-9
	SEVILLE	35	21	40	18	28	-0.1	1	-4
PORTUGAL	LISBON	28	18	34	16	23	0.5	16	9
GERMANY	HAMBURG	23	13	31	9	18	1.4	50	-20
	BERLIN	24	14	31	10	19	0.8	42	-19
	DUSSELDORF	24	14	31	6	19	0.6	92	14
	LEIPZIG	23	13	29	10	18	0.8	45	-14
	DRESDEN	23	13	29	6	18	0.3	35	-37
	STUTTGART	24	13	29	8	18	1.5	65	-33
	NURNBERG	24	12	29	6	18	0.2	49	-16
AUSTRIA	VIENNA	24	14	31	8	19	-0.1	97	35
	INNSBRUCK	23	14	28	8	18	1.0	181	62
CZECHREP	PRAGUE	23	11	30	5	17	0.0	20	-49
POLAND	WARSAW	24	12	30	8	18	0.6	27	-33
	LODZ	23	12	30	7	17	0.7	17	-50
	KATOWICE	23	11	30	6	17	0.6	67	-24
	PRZEMYSL	22	13	31	7	18	0.3	70	-6
HUNGARY	BUDAPEST	26	16	32	10	21	0.4	53	1
YUGOSLAV	BELGRADE	28	18	37	11	23	1.6	49	-5
ROMANIA	BUCHAREST	29	16	36	9	22	0.0	136	83
BULGARIA	SOFIA	29	16	36	10	23	4.3	9	-29
ITALY	MILAN	29	20	34	16	25	2.5	159	67
	VERONA	28	19	33	16	24	0.8	52	-40
	VENICE	28	19	31	16	24	1.2	45	-37
	GENOA	28	23	31	19	26	1.4	99	45
	ROME	30	21	37	16	26	1.7	3	-28
	NAPLES	30	**	35	18	**	***	0	-45
GREECE	THESSALONIKA	33	21	40	18	27	1.3	1	-20
	LARISSA	34	20	41	16	27	1.0	7	-9
	ATHENS	34	24	40	20	29	1.6	0	-4
TURKEY	ISTANBUL	30	22	33	16	26	2.5	27	6
	ANKARA	29	15	37	8	22	-1.4	48	11
CYPRUS	LARNACA	33	24	35	22	28	0.7	0	-1
ESTONIA	TALLINN	20	10	27	4	15	-0.3	37	-40
LITHUANI	KAUNAS	22	12	28	7	17	0.5	85	19
BELARUS	MINSK	23	12	30	6	18	1.3	48	-26
RUSSIA	KAZAN	20	13	25	8	17	-0.6	110	42
	MOSCOW	21	13	28	6	17	0.5	82	8
	YEKATERINBUR	20	12	27	5	16	0.4	59	-6
	OMSK	23	12	35	4	18	1.7	28	-27
	NOVOSIBIRSK	23	11	32	6	17	0.9	23	-30
	BARNAUL	25	12	35	0	18	1.6	53	1
	KHABAROVSK	24	15	32	9	20	0.2	108	-41
	VLADIVOSTOK	23	18	29	14	21	1.1	119	-38
	SARATOV	25	16	32	10	21	1.9	36	-5
	VOLGOGRAD	29	18	36	12	23	1.0	20	-10
	ASTRAKHAN	32	20	38	12	26	2.9	83	64
	KRASNODAR	30	18	36	11	24	0.9	110	54
	ORENBURG	29	16	40	6	22	2.5	7	-25
KAZAKHST	TSELINOGRAD	27	14	36	6	20	2.5	10	-30
	KARAGANDA	28	14	35	5	21	3.0	0	-33
GEORGIA	TBILISI	34	22	40	16	28	4.4	1	-45
UZBEKIST	TASHKENT	36	20	40	15	28	2.6	5	3

Based on Preliminary Reports

August 1999

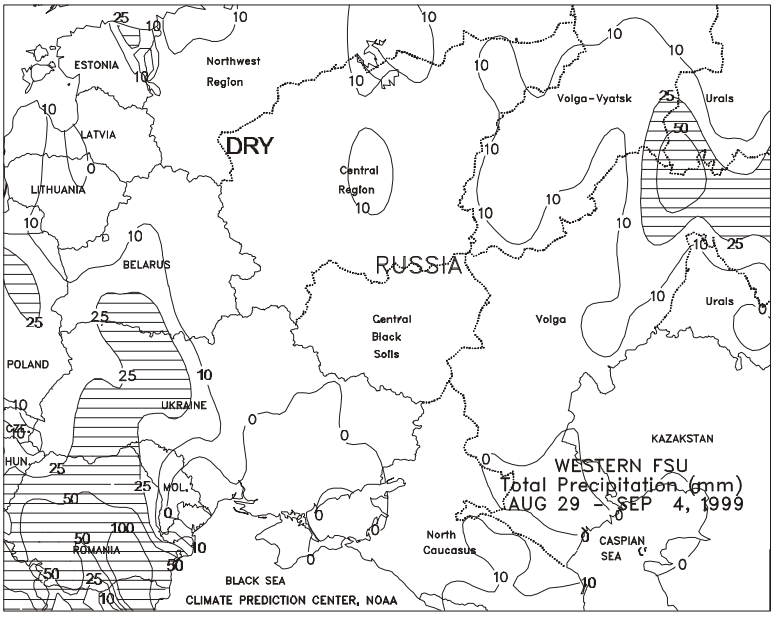
COUNTRY	CITY	TEMPERATURE (C)						PRECIPITATION (MM)	
		AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DPART F/NRM	TOTAL	DPART F/NRM
TURKMENI	ASHKHABAD	39	26	44	16	33	3.9	0	-1
SYRIA	DAMASCUS	38	18	41	12	28	1.6	0	0
ISRAEL	JERUSALEM	31	19	35	17	25	2.1	0	0
PAKISTAN	KARACHI	32	27	33	25	29	0.0	0	-64
INDIA	AMRITSAR	34	27	37	22	31	0.9	199	20
	NEW DELHI	35	27	37	23	31	1.6	63	-192
	AHMEDABAD	32	25	35	25	29	0.4	17	-233
	INDORE	30	22	34	20	26	0.6	54	-259
	CALCUTTA	32	26	34	23	29	0.0	452	163
	VERAVAL	30	26	31	25	28	0.7	25	-154
	BOMBAY	30	26	31	24	28	1.2	165	-496
	POONA	27	21	30	19	24	-0.3	36	-89
	BEGAMPET	30	22	34	21	26	0.0	94	-66
	VISHAKHAPATNA	31	26	34	23	29	***	167	**
	MADRAS	34	26	37	22	30	0.1	180	23
	MANGALORE	29	23	31	22	26	0.0	506	-71
HONGKON	KINGS PEAK	30	26	35	23	28	***	939	**
N KOREA	PYONGYANG	28	19	33	17	24	-0.7	44	-188
S KOREA	SEOUL	30	23	35	19	27	1.1	606	382
JAPAN	SAPPORO	29	22	35	17	25	3.6	103	-43
	NAGOYA	32	25	35	22	28	1.0	173	27
	TOKYO	32	26	35	24	29	2.1	303	155
	YOKOHAMA	31	26	34	23	28	2.2	142	10
	KYOTO	33	25	35	21	29	1.3	103	-73
	OSAKA	34	26	37	22	30	1.3	159	64
THAILAND	PHETCHABUN	30	24	33	22	27	-0.2	131	-68
	BANGKOK	33	26	39	24	29	0.7	158	-38
MALAYSIA	KUALA LUMPUR	33	24	35	22	28	1.7	78	-58
VIETNAM	HANOI	33	27	36	25	30	1.3	166	-177
CHINA	HARBIN	26	16	32	11	21	-0.6	128	24
	HAMI	34	18	42	11	26	0.9	3	-2
	LANCHOW	29	18	37	11	24	2.5	17	-57
	BEIJING	31	21	34	16	26	1.2	66	-116
	TIENTSIN	31	22	34	17	27	0.6	40	-118
	LHASA	20	10	25	7	15	-0.4	170	38
	KUNMING	23	17	28	14	20	1.1	370	165
	CHENGCHOW	31	22	34	17	26	0.8	94	-19
	YEHCHANG	32	23	37	20	28	0.5	53	-132
	HANKOW	31	25	36	19	28	-0.7	143	16
	CHUNGKING	32	24	38	20	28	***	186	**
	CHIHKIANG	31	23	36	20	27	-0.4	174	56
	WU HU	30	24	36	21	27	***	355	**
	SHANGHAI	30	25	33	22	27	***	274	**
	NANCHANG	31	25	36	22	28	-1.3	426	327
	TAIPEI	33	26	35	24	29	1.3	330	45
	CANTON	32	25	36	22	28	-0.2	492	283
	NANNING	32	25	36	24	28	-0.3	193	-25
CANARY I	LAS PALMAS	29	23	35	22	26	1.9	3	3
MOROCCO	CASABLANCA	26	21	28	20	24	1.1	0	0
	MARRAKECH	36	22	40	18	29	0.3	0	-3
ALGERIA	ALGER	33	23	46	18	28	2.9	3	0
	BATNA	**	**	42	15	**	***	**	**
TUNISIA	TUNIS	36	25	45	21	31	3.9	6	-1
NIGER	NIAMEY	32	24	35	21	28	0.0	140	-26
MALI	TIMBUKTU	33	25	38	20	**	***	104	41
	BAMAKO	28	22	32	20	25	-0.6	343	63
MAURITAN	NOUAKCHOTT	32	26	38	21	29	0.6	49	20
SENEGAL	DAKAR	30	26	32	23	28	0.8	101	-61
CHAGOS A	DIEGO GARCIA	**	25	31	23	**	***	275	92
LIBYA	TRIPOLI	39	26	44	19	32	6.2	0	0
	BENGHAZI	33	24	38	22	29	2.0	0	0
EGYPT	CAIRO	35	24	38	22	30	1.6	0	0
	ASWAN	40	**	44	24	**	***	0	0
ETHIOPIA	ADDIS ABABA	**		31	6	**			
KENYA	NAIROBI	24	13	32	9	18	1.0	53	39
TANZANIA	DAR ES SALAAM	28	18	30	18	23	-0.3	12	-15
GABON	LIBREVILLE	28	23	30	22	26	1.0	32	26
TOGO	LOME	**	**	31	21	**	***	**	**
BURKINA	OUAGADOUGOU	29	23	34	21	26	-0.3	193	-27
COTE D'I	ABIDJAN	**	**	30	21	**	***	30	-10
MOZAMBIQ	MAPUTO	26	15	35	11	21	0.8	15	2
ZAMBIA	LUSAKA	25	13	31	8	**	***	0	0
ZIMBABWE	HARARE	23	10	27	6	16	1.0	29	27
S AFRICA	PRETORIA	24	7	28	4	16	1.1	0	-5
	JOHANNESBURG	19	5	23	0	12	-0.4	4	-2
	BETHAL	20	3	26	-5	12	0.4	0	-9
	DURBAN	24	13	30	9	19	1.0	12	-50
	CAPE TOWN	19	9	30	4	14	1.9	96	18
CANADA	TORONTO	25	16	32	10	20	0.7	60	-25
	MONTREAL	25	15	31	9	20	0.5	70	-31
	WINNIPEG	25	12	31	4	18	-0.2	51	-25
	REGINA	25	11	31	4	18	-0.4	29	-11
	SASKATOON	25	10	33	3	18	0.3	50	14
	LETHBRIDGE	26	10	35	4	18	0.2	48	5
	CALGARY	22	9	28	4	16	0.1	89	40
	EDMONTON	24	12	29	6	18	1.4	59	-9
	VANCOUVER	22	14	25	10	18	1.0	33	-5
MEXICO	GUADALAJARA	27	16	30	14	22	0.9	284	72
	MEXICO CITY	**	14	26	12	**	***	146	42
	ACAPULCO	33	24	35	23	29	0.1	306	62
BERMUDA	ST. GEORGES	31	25	32	17	28	0.2	123	-23
BAHAMAS	NASSAU	33	25	34	23	29	1.1	147	-79
CUBA	HAVANA	31	24	34	22	28	0.2	190	90
JAMAICA	KINGSTON	33	26	34	23	30	1.0	42	-44
P RICO	SAN JUAN	31	25	34	24	28	0.0	163	35
GUADELOU	RAIZET	32	25	33	24	28	1.0	173	42
MARTINIQ	LAMENTIN	31	24	33	23	28	1.3	188	-54
BARBADOS	BRIDGETOWN	31	25	32	22	28	0.4	118	-28
TRINIDAD	PORT OF SPAIN	32	24	35	18	28	1.2	174	-61
COLOMBIA	BOGOTA	19	9	21	5	14	0.7	51	11
VENEZUEL	CARACAS	31	24	33	21	28	0.8	77	25
F GUIANA	CAYENNE	32	22	33	21	27	1.0	187	21
BRAZIL	RECIFE	27	20	28	16	24	-0.1	133	-69
	BELO	25	15	32	10	20	0.0	0	-16
	FRANCA	26	15	31	4	20	2.6	0	-23
	LONDRINA	27	12	33	2	20	1.3	0	-56
	SANTA MARIA	22	11	33	1	16	1.8	51	-86
	PORTO ALEGRE	22	10	31	4	16	0.6	0	-114
PERU	LIMA	20	16	21	15	18	0.9	0	-1
BOLIVIA	LA PAZ	14	-2	17	-7	6	-0.9	4	-12
CHILE	SANTIAGO	16	5	24	-1	10	0.9	92	43
ARGENTIN	IGUAZU	26	12	34	-2	19	***	18	**
	FORMOSA	25	12	38	0	19	1.1	4	-57
	CERES	22	8	34	-2	15	0.8	2	-21
	CORDOBA	21	7	34	-6	14	1.8	3	-8
	RIO CUARTO	18	6	30	-4	12	1.2	14	-2
	ROSARIO	20	7	28	-5	13	1.8	21	-16
	BUENOS AIRES	18	7	28	-3	12	1.7	66	8
	SANTA ROSA	17	4	25	-9	11	1.3	2	-21
	TRES ARROYOS	15	5	25	-3	10	1.6	56	13
NEW CAL	NOUMEA	23	17	27	14	20	0.2	87	17
FIJI	NAUSORI	26	21	30	17	24	1.2	380	241
SAMOA	PAGO PAGO	30	24	32	21	27	0.8	147	-24
TAHITI	PAPEETE	29	22	31	19	25	1.1	13	-36
AUSTRALI	DARWIN	31	20	34	17	25	-0.7	0	-8
	BRISBANE	21	11	24	6	16	-0.1	67	21
	PERTH	18	9	23	3	13	0.3	161	50
	CEDUNA	21	7	31	-2	14	1.3	16	-19
	ADELAIDE	17	7	24	1	12	0.2	19	-31
	MELBOURNE	16	7	24	2	11	0.7	48	-3
	WAGGA	16	4	22	-3	10	0.6	41	-18
	CANBERRA	14	1	20	-6	8	0.7	46	-5
INDONESI	DJAKARTA	31	24	33	20	27	0.6	0	**
PHILIPPI	MANILA	30	26	33	24	28	0.5	543	-21

Based on Preliminary Reports



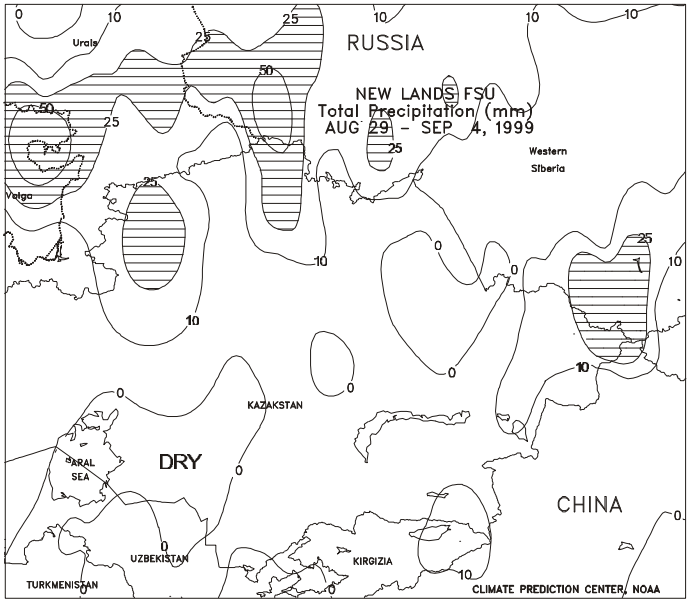
EUROPE

Mostly dry weather prevailed from England and France eastward across most of Germany, helping small grain harvesting and field preparations for winter wheat planting. Rain was needed in Germany to boost topsoil moisture for winter crop germination. In southern France, dry weather favored corn maturation and early harvest activities. Typically, the corn harvest in France is well underway in October. Farther south, although dry weather in southern Spain allowed corn and cotton harvesting to advance without delay, a lack of topsoil moisture hampered winter grain planting. In eastern Europe, showers and thunderstorms (15-50 mm or more) fell from southern Poland, southward through Hungary and Romania, into Greece. Although the rain slowed early summer crop harvesting, it provided abundant topsoil moisture for winter grain planting, which usually occurs in September. Locally heavy showers (75-100 mm) in southern Romania and northern Bulgaria caused some flooding. Elsewhere, light to moderate showers (10-35 mm or more) in Italy continued to slow corn and sunflower harvesting. Weekly temperatures averaged 1 to 3 degrees C above normal in western and northern Europe and 1 to 3 degrees C below normal in southeastern Europe.



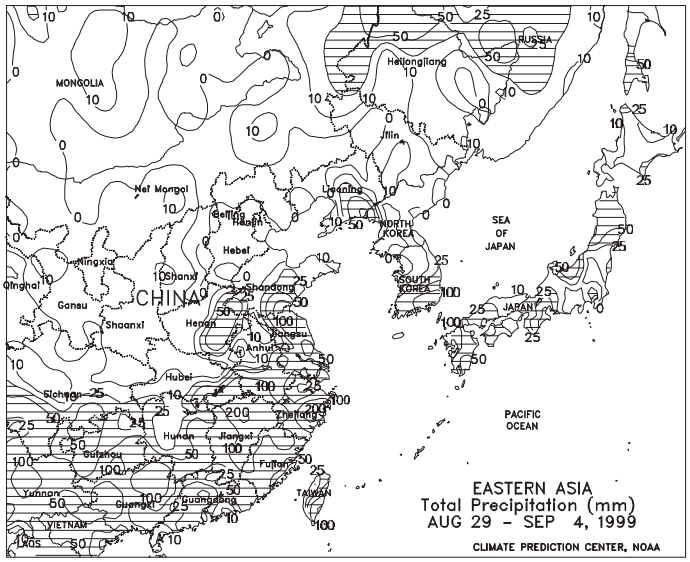
FSU-WESTERN

In Russia, small grain harvesting continued in the north, while winter grain planting progressed southward. Significant precipitation (10-23 mm) was confined to the Volga Vyatsk region and the upper Volga Valley, maintaining wet soils. However, most of the moisture fell early in the week, with drier weather improving conditions for fieldwork as the week progressed. Farther south, generally dry weather (precipitation amounts less than 10 mm), prevailed in the Central Black Soils Region, the middle and lower Volga Valley, and the North Caucasus, allowing fieldwork for winter grain planting to progress without delay. The optimum month for planting winter grains in these areas is September, with planting progressing southward during the month. Unseasonably cool weather (weekly temperatures averaging 1 to 3 degrees C below normal) prevailed in Russia, slowing winter grain germination in the north and summer crop maturation in the south. In Ukraine, dry weather and seasonable temperatures prevailed over southern and eastern areas, favoring summer crop maturation and fieldwork in preparation for winter grain planting. Typically, winter grain planting begins in northern Ukraine in early September and progresses southward during the month. Summer crops were likely maturing in Ukraine, with harvest activities just beginning in the south. In western Ukraine, wet weather (15-44 mm) provided abundant topsoil moisture for winter grain planting and favored immature summer crops.



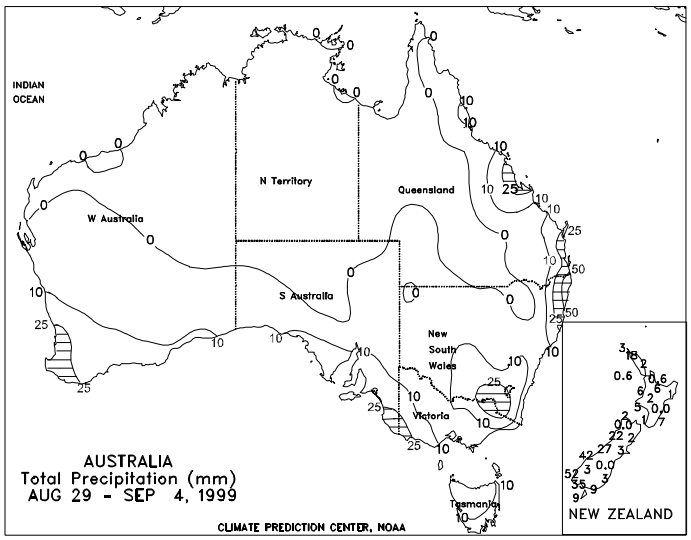
FSU-NEWLANDS

In Russia, periodic showers (10-50 mm or more) fell in the northern Urals region during the week, slowing spring grain maturation and harvesting. At weeks' end, the precipitation spread eastward, interrupting harvest activities in parts of Western Siberia. Weekly temperatures averaged 1 to 3 degrees C below normal in the Urals and northern areas in Western Siberia, slowing spring grain maturation. In Russia, reports as of August 30 indicated the harvest of spring grains and pulses, excluding corn, was about 58 percent completed, similar to last year's pace. In Kazakstan, several days of dry weather helped spring grain harvesting, which was well underway in most areas. However, by week's end, scattered light to moderate showers (10-43 mm) overspread principal growing areas in north-central Kazakstan, interrupting the harvest. Weekly temperatures averaged 1 to 3 degrees C below normal in western Kazakstan and 1 to 3 degrees C above normal in eastern spring wheat areas. In cotton growing areas of Central Asia, dry weather and above-normal temperatures (weekly temperatures averaging 1 to 4 degrees C above normal) continued to favor boll maturation and early harvest activities.



EASTERN ASIA

In the North China Plain, variable showers (10-90 mm, with isolated amounts greater than 125 mm) increased topsoil moisture for upcoming winter wheat planting. The rain had little impact on corn and soybeans yield prospects since the crops were nearing maturation. Since autumn rainfall typically declines rapidly across the region, the seasonal moisture deficits from this summer's drought will likely remain until next spring. Mostly dry weather (less than 15 mm) aided corn and soybean maturation across Manchuria. Heavier rain (20-60 mm) fell across northwestern Heilongjiang, slowing late spring wheat harvesting. Temperatures averaged 2 to 3 degrees C above normal across the North China Plain and Manchuria, aiding filling to maturing summer crops. Across southern China, moderate to heavy showers (30-100 mm) maintained moisture supplies for late double-crop rice but slowed single-crop rice harvesting, especially across the lower Yangtze Valley (southern Anhui, southern Jiangsu, and Zhejiang). Tropical Storm Wendy made landfall on September 4 near the border of Guangdong and Fujian, with sustained winds of 50 knots (58 mph). Wendy's remnants helped to produce heavy showers (80-150 mm, with isolated amounts greater than 200 mm) and possible flooding in Jiangxi. Temperatures averaged 1 to 3 degrees C below normal across southern China. Moderate showers (25-75 mm) covered most of Japan and South Korea, maintaining adequate moisture supplies for rice. Heavier showers (80-125 mm) likely caused flooding across extreme southern South Korea. Continued mostly dry weather stressed filling summer crops across North Korea. Temperatures averaged 1 to 2 degrees C above normal across Japan and the Korean Peninsula.

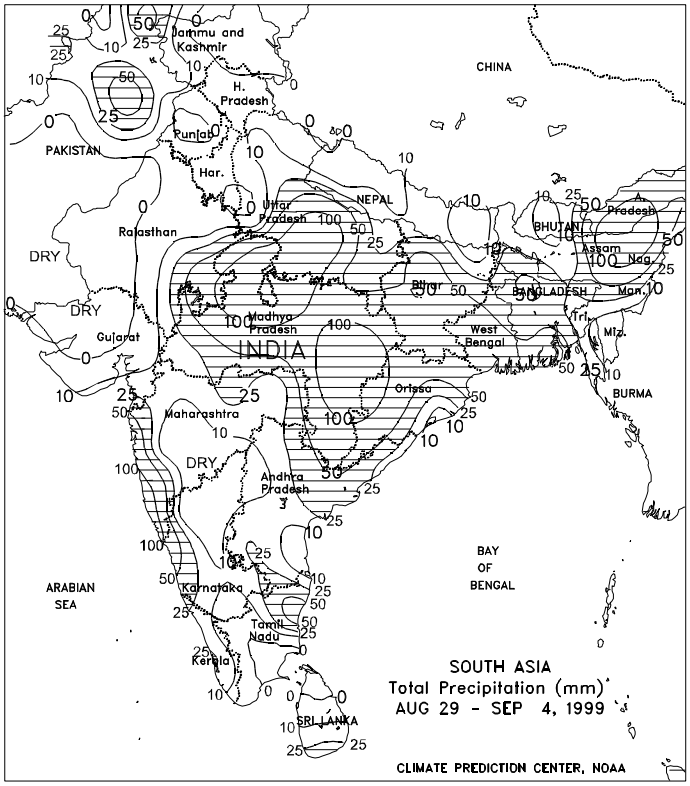


AUSTRALIA

Light to moderate showers (5-25 mm) maintained generally favorable conditions for vegetative winter grains across Western Australia and the southeast. In the west, temperatures were variable with respect to normal, ranging from slightly below normal along the coast to 2 degrees C above normal on the northern and eastern fringes. Lows fell below 5 degrees C over most agricultural districts. In the southeast, unseasonable warmth (temperatures averaging 3-6 degrees C above normal) accelerated growth rates of vegetative winter grains and oilseeds. Farther north, light showers (5 mm or less, most areas) caused only minor harvest delays in Queensland's winter grain areas. Along the coast, however, unseasonable showers (10-50 mm or more) persisted in the main sugarcane areas, hampering fieldwork and threatening a reduction in sugar content. In New Zealand, the main crop and pasture areas received virtually no rain for the second week.

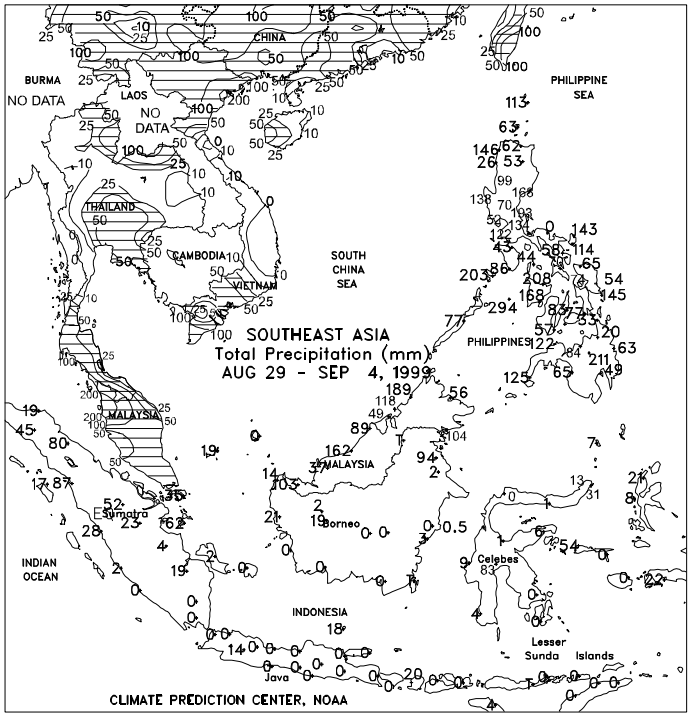
SOUTH ASIA

Hot, dry weather persisted over the western Indian state of Gujarat, placing additional stress on groundnuts and cotton. Highs reached the middle 30's degrees C on a daily basis, exacerbating the effects of the drought on moisture supplies. Drier-than-normal weather also continued over nearby locations in the northwest (Rajasthan, Punjab, and Haryana) and intensified over the southern interior (Maharashtra, Karnataka, Andhra Pradesh), threatening prospects of rainfed summer crops. However, highly beneficial, locally heavy rain (25-50 mm or more) brought some relief to the soybean belt of western Madhya Pradesh. In addition, showers (25-100 mm or more) maintained mostly favorable moisture levels for rice from central Madhya Pradesh eastward through Bangladesh and India's eastern states. The southwest monsoon typically begins its seasonal withdrawal from the northwest during early September. .



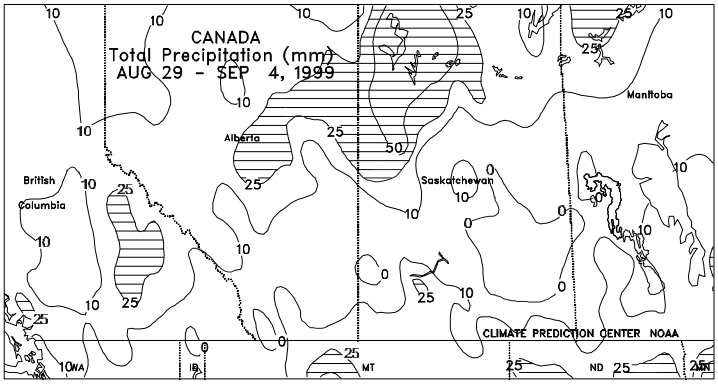
SOUTHEAST ASIA

Somewhat drier, sunnier weather (10-40 mm, scattered amounts greater than 50 mm) favored filling to maturing rice. Moisture supplies are adequate due to abundant rainfall earlier in the season. Tropical Storm Wendy brushed northern Luzon, enhancing the monsoon circulation to produce widespread heavy showers (50-200 mm) across most of the Philippines. In northern and southern Vietnam, moderate to heavy showers (50-150 mm) boosted moisture supplies for rice. Seasonal showers (30-80 mm) aided oil palm across peninsular Malaysia, but locally heavy showers (200-325 mm) caused some flooding along the west coast. Scattered, light showers (less than 20 mm) prevailed across Java, Indonesia, where moisture supplies are adequate for irrigated second-crop rice.



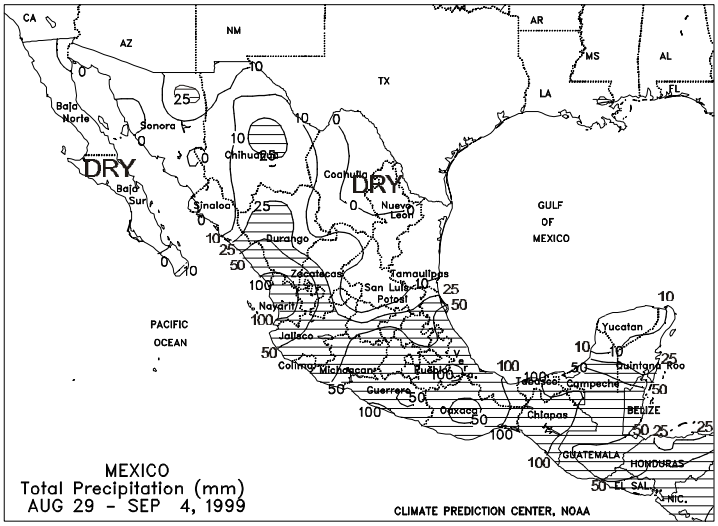
CANADA

Temperatures fell sharply in the western Prairies at week's end as a cool air mass plunged into Alberta. The change from warmer-than-normal weather slowed crop development following nearly ideal dry down conditions during maturation stages of spring grains and oilseeds. Lows dropped below 2 degrees C at a few locations in Alberta and western Saskatchewan, with isolated reports of freezing temperatures. Isolated freeze damage was possible, due to the lateness in development of some grains and oilseeds, but the lack of a widespread, killing freeze was overall favorable. Temperatures averaged near normal in the eastern Prairies, with lows remaining well above normal. Showers (2-15 mm, most areas) were scattered throughout the region, causing some harvest delays. In eastern Canada, dry, warm weather favored summer crop development across Ontario and Quebec.



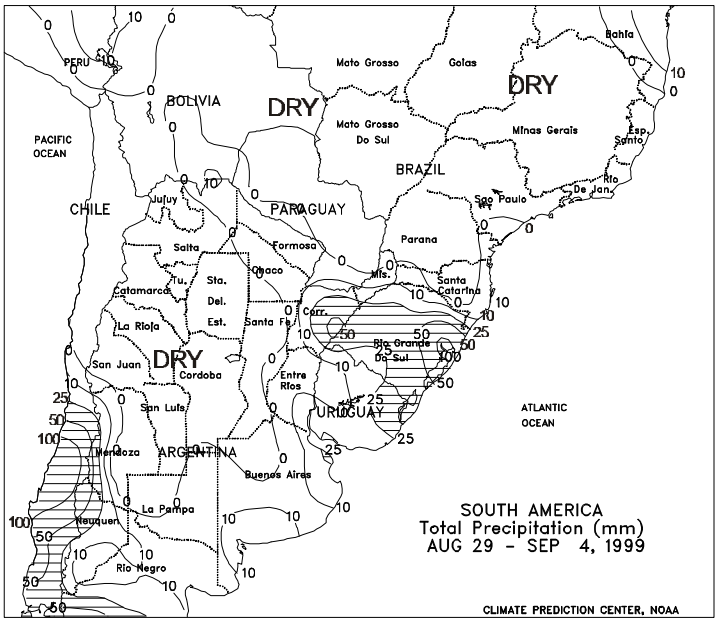
MEXICO

Seasonal showers (10-60 mm, with isolated amounts greater than 105 mm) continued to favor corn across the Southern Plateau. Monsoonal showers (10-45 mm) helped to increase reservoir levels across north-central Mexico (eastern Sonora and Chihuahua). Temperatures averaged 1 to 2 degrees C above normal across the Southern Plateau and northern Mexico.



SOUTH AMERICA

Light to moderate (5-22 mm) rain increased topsoil moisture for germinating and vegetative winter wheat across the major wheat areas of southern Buenos Aires. Dry weather returned to southern Cordoba and southern Santa Fe, after last week's beneficial rainfall. However, rain is still needed for wheat germination and establishment across these areas. According to reports as of August 27, Argentine winter wheat planting was 98 percent complete, compared to 97 percent complete last year. In southern Brazil, light to moderate rain (10-30 mm, with an isolated amount greater than 100 mm) favored vegetative to reproductive winter wheat in Rio Grande do Sul. Dry weather favored reproductive to filling winter wheat in Parana. Temperatures averaged 2 to 3 degrees C above normal in central Argentina and 3 to 6 degrees C above normal in southern Brazil. The warm weather aided crop development and late citrus and coffee harvesting in southern Brazil.



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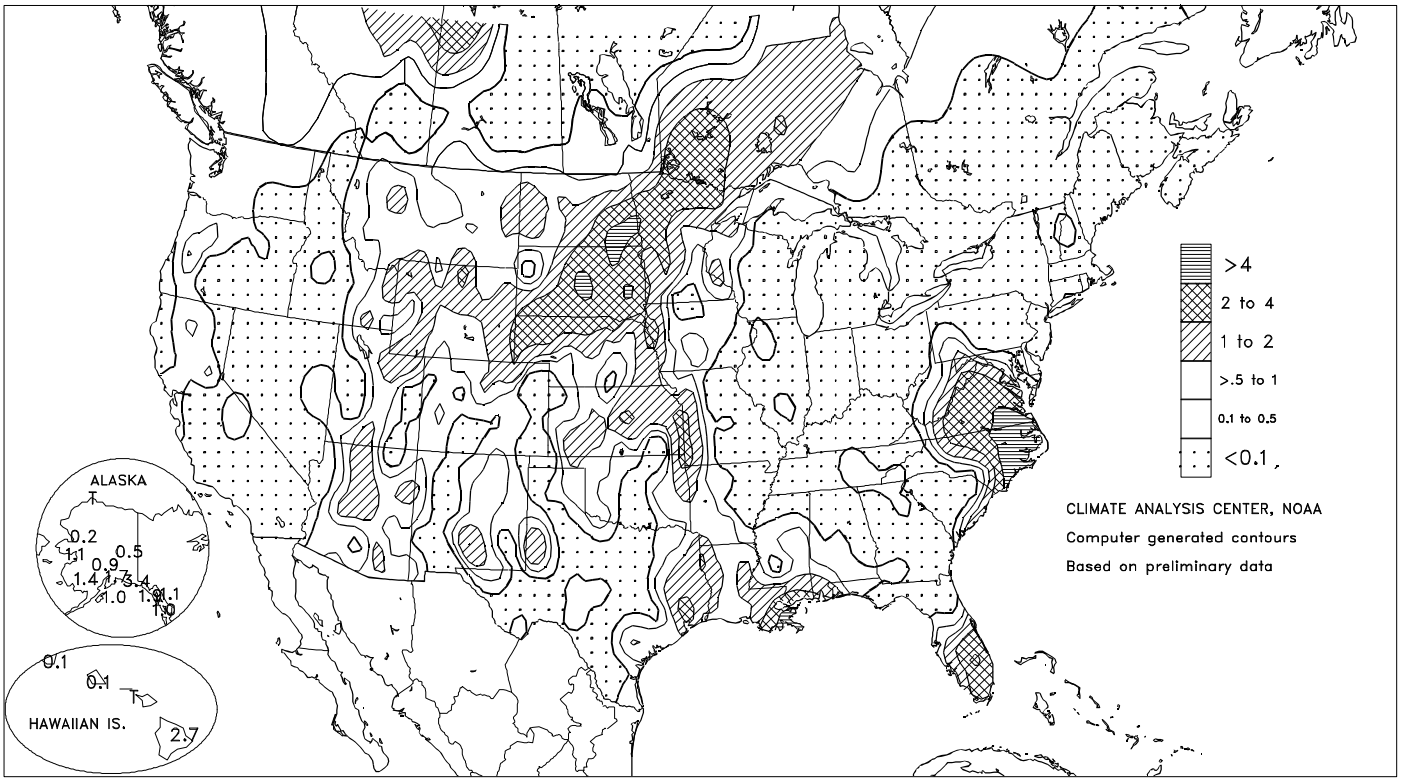
AUG 29 - SEP 4, 1999



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