

WEEKLY WEATHER AND CROP BULLETIN

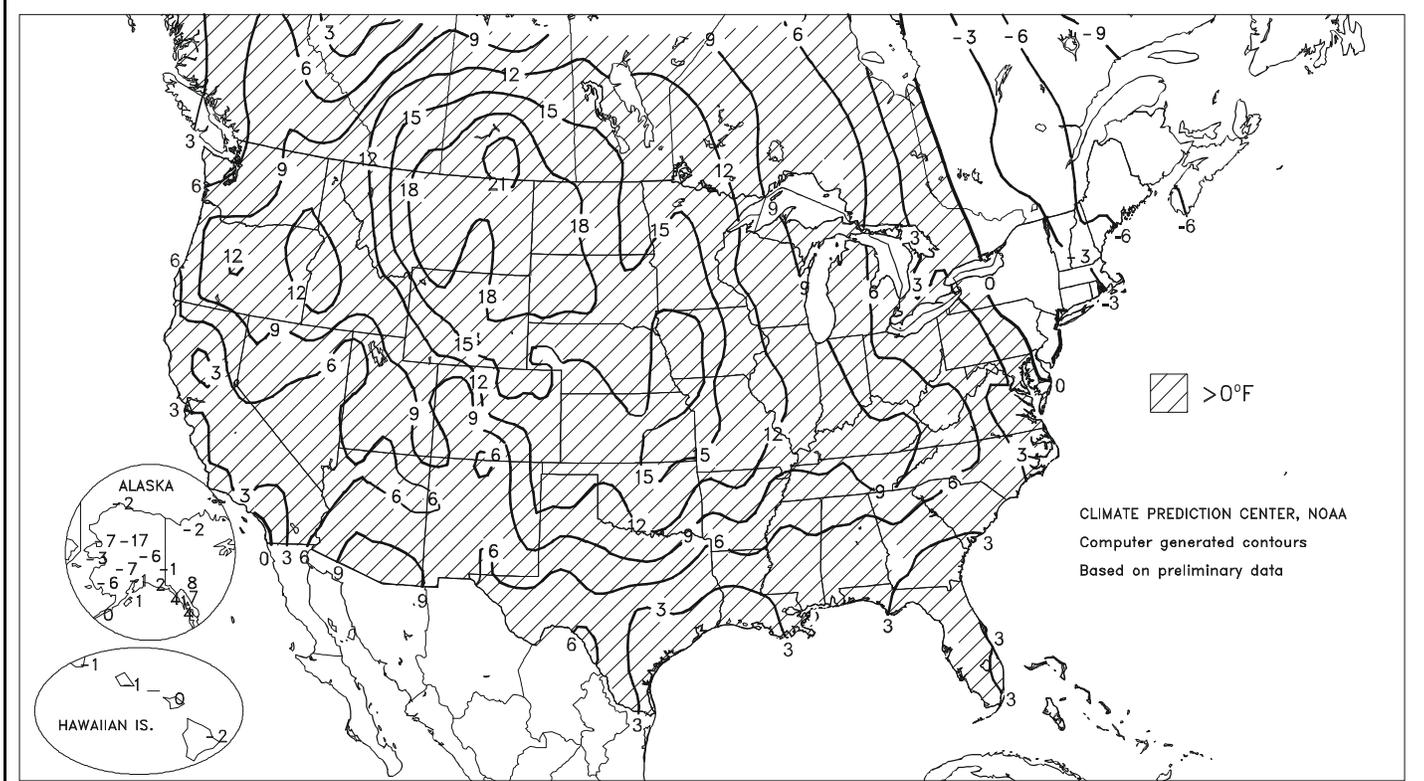
U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service

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



Departure of Average Temperature from Normal (°F)

NOV 7 - 13, 1999



HIGHLIGHTS

November 7 - 13, 1999

Record warmth dominated the Nation, especially from the **northern and central Plains** to the **upper Midwest**, favoring final summer crop harvesting, but further hampering winter wheat establishment. Weekly temperatures averaged 10 to 20°F above normal across the **Plains and Midwest**, and highs soared to 80°F as far north as **western North Dakota** and **eastern Montana**. During the last 6 weeks, dry weather has prevailed throughout most of the **Plains**, although a late-October storm system provided some moisture to **northeastern Texas**, **southeastern Kansas**, and most of **Oklahoma**. In early November, the same storm temporarily dampened topsoils

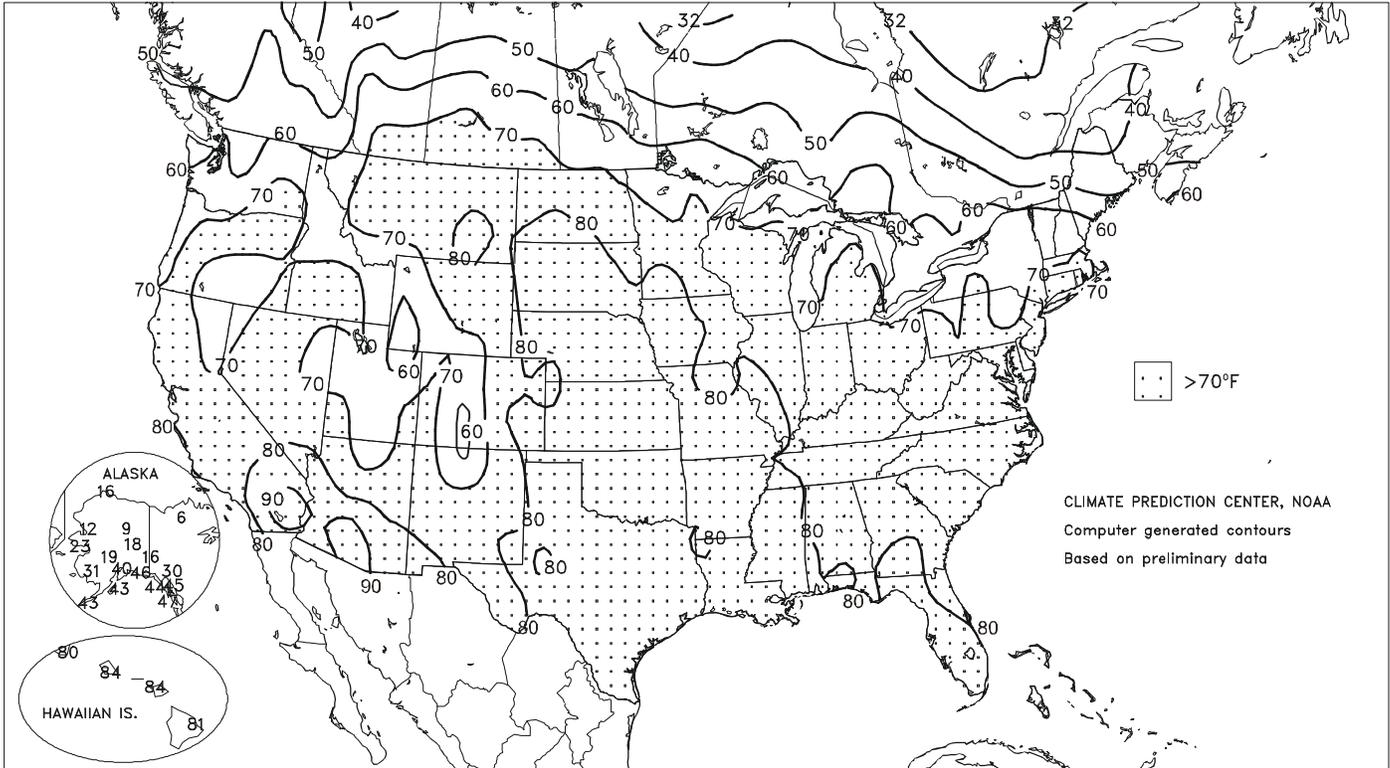
(Continued on page 5)

Contents

Extreme Maximum & Minimum Temperature Maps	2
Monthly Record Highs, November 1-15	3
Weather Data for the Delta & Total Precipitation Map	4
U.S. Crop Production Highlights	5
National Weather Data for Selected Cities	6
National Agricultural Summary	9
Crop Progress and Condition Tables	10
Snow Cover Map	11
State Agricultural Summaries	12
International Weather and Crop Summary	18
La Niña Impacts on the U.S. Winter Forecast ...	22
Dry Conditions Prevail Across Central U.S.	23
Subscription Information & La Niña Advisory	24

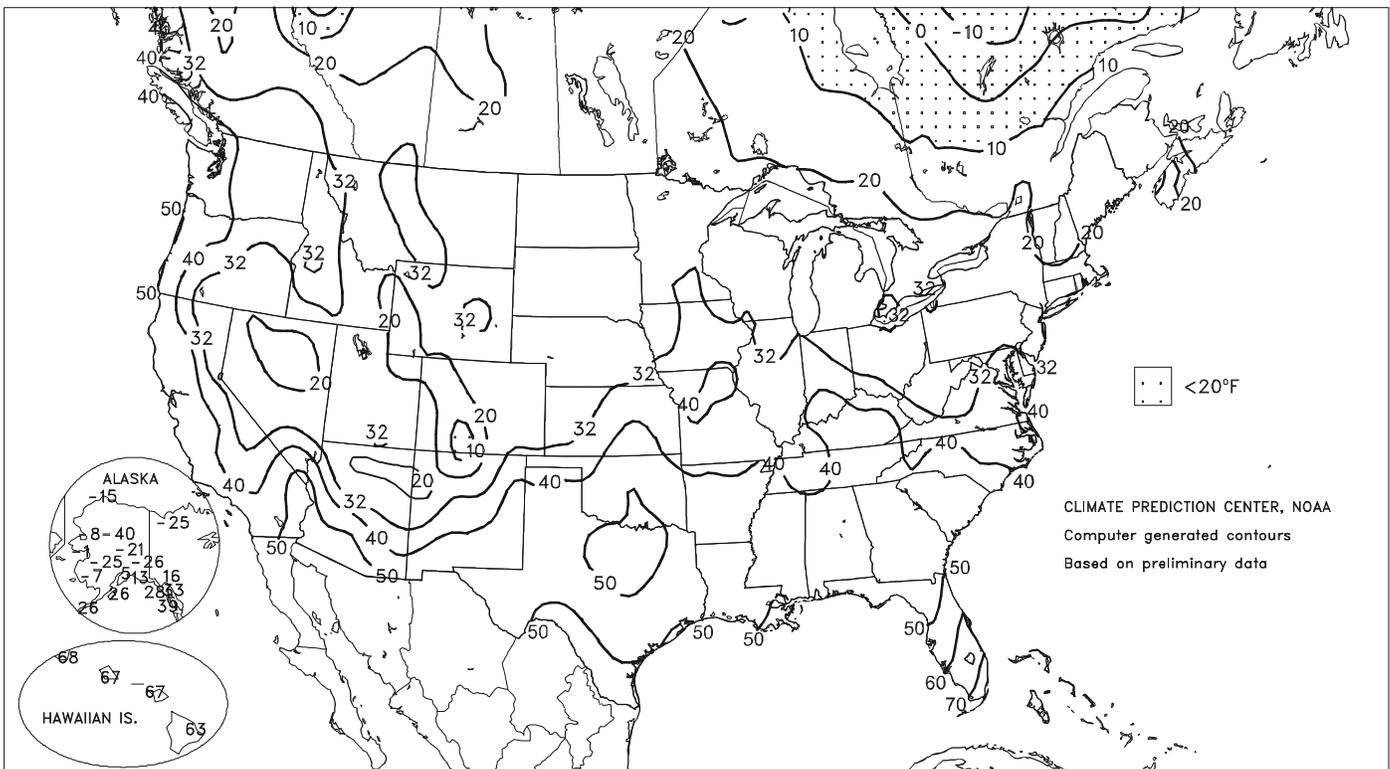
Extreme Maximum Temperature (°F)

NOV 7 - 13, 1999



Extreme Minimum Temperature (°F)

NOV 7 - 13, 1999



Monthly Record Highs (°F), November 1-15, 1999

<u>Location/Date</u>	<u>High</u>	<u>Former Record/Date</u> *	<u>Location/Date</u>	<u>High</u>	<u>Former Record/Date</u> *
November 1			November 9		
Douglas, AZ	87	87 on November 11, 1989	Green Bay, WI	74	74 on November 1, 1933
November 4			Marquette, MI	73	71 on November 3, 1978
Rapid City, SD	79	79 on November 14, 1894	November 11		
November 5			O.P. Cactus, AZ ^S	94	94 on November 5, 1988
Rawlins, WY	65	64 on November 5, 1975	Douglas, AZ	87	87 on November 1, 1999
November 6			Safford, AZ	87	86 on November 6, 1999
Safford, AZ	86	86 on November 3, 1952	November 12		
Boise, ID	78	74 on November 1, 1988	O.P. Cactus, AZ ^S	95	94 on November 11, 1999
Worland, WY	77	75 on November 1, 1988	Walla Walla, WA	81	80 on November 4, 1975
Salt Lake City, UT	75	75 on November 12, 1967	Sheridan, WY	81	78 on November 5, 1975
Gillette, WY	75	74 on November 1, 1965	Pendleton, OR	80	77 on November 4, 1975
Pocatello, ID	75	71 on November 1, 1965	Glasgow, MT	79	75 on November 2, 1965
Casper, WY	72	71 on November 1, 1965	Billings, MT	77	77 on November 7, 1999
Rawlins, WY	70	65 on November 5, 1999	Lewiston, ID	77	74 on November 5, 1934
November 7			Laramie, WY	68	68 on November 4, 1977
Valentine, NE	86	82 on November 2, 1965	November 13 ^X		
Winner, SD	85	84 on November 14, 1953	O.P. Cactus, AZ ^S	95	95 on November 12, 1999
Rapid City, SD	83	79 on November 4, 1999	Lincoln, NE	85	82 on November 6, 1980
Wheatland, WY	81	79 on November 11, 1945	Atlantic, IA	83	not available
Alliance, NE	80	80 on November 14, 1953	Shenandoah, IA	83	not available
Dickinson, ND	80	79 on November 2, 1965	Sidney, IA	83	82 on November 6, 1980
Bismarck, ND	79	75 on November 2, 1978	Omaha, NE	83	82 on November 8, 1999
Minot, ND	79	74 on November 5, 1975	Springfield, MO	81	81 on November 1, 1937
Billings, MT	77	77 on November 4, 1983	November 14		
Jamestown, ND	77	77 on November 2, 1978	O.P. Cactus, AZ ^S	96	95 on November 13, 1999
Gillette, WY	76	75 on November 6, 1999	Rawlins, WY	70	70 on November 6, 1999
Williston, ND	76	73 on November 3, 1981	November 15		
Casper, WY	72	72 on November 6, 1999	O.P. Cactus, AZ ^S	97	96 on November 14, 1999
Saratoga, WY	68	68 on November 5, 1975	Heber City, UT	78	77 on November 3, 1924
November 8 ^X			Cheyenne, WY	75	75 on November 5, 1891
Kennebec, SD	89	not available	Coalville, UT	74	74 on November 12, 1967
Pierre, SD	87	81 on November 8, 1931	Saratoga, WY	70	68 on November 7, 1999
Valentine, NE	86	86 on November 7, 1999	Laramie, WY	70	68 on November 12, 1999
Huron, SD	86	79 on November 8, 1931	* In many cases, former records were also noted on earlier dates.		
Winner, SD	85	85 on November 7, 1999	^X In addition, South Dakota and Iowa reported State-record maximum temperatures for the month. On November 8, Kennebec, SD recorded 89°F, breaking Academy's State record of 86°F, set on November 1, 1990. In Iowa, highs reached 83°F in Logan (on the 8 th) and Atlantic, Shenandoah, and Sidney (on the 13 th), tying a State record most recently observed in Bloomfield on November 1, 1950.		
Kimball, NE	83	not available	^S Due to space limitations, Organ Pipe Cactus National Monument was shortened to O.P. Cactus.		
Logan, IA	83	not available	<i>Compiled from National Weather Service record reports. Data are preliminary and subject to change.</i>		
Rapid City, SD	83	83 on November 7, 1999			
Omaha, NE	82	80 on November 8, 1931			
Sioux City, IA	81	81 on November 3, 1978			
Sioux Falls, SD	81	79 on November 4, 1909			
Alliance, NE	80	80 on November 7, 1999			
Miles City, MT	78	76 on November 3, 1909			
Watertown, SD	77	77 on November 8, 1931			
Minneapolis, MN	77	77 on November 1, 1933			
Gillette, WY	76	76 on November 7, 1999			
St. Cloud, MN	75	74 on November 3, 1978			

Weather Data for Selected Locations in the Delta

Weather Data for the Week Ending November 13, 1999

Data provided by the Mississippi State Delta Research and Extension Center (DREC) and the Southern Regional Climate Center (SRCC).

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						4-INCH SOIL TEMP. °F		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN. SINCE Sep 1	PCT. NORMAL SINCE Sep 1	TOTAL IN. SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. °F		PRECIP.	
																90 AND ABOVE	32 AND BELOW	0.1 INCH OR MORE	5.0 INCH OR MORE
MS BATESVILLE ^x	78	49	81	44	64	13	0.00	-1.27	0.00	4.00	45	--	--	--	--	0	0	0	0
BELZONI ^x	79	49	81	45	64	9	0.00	-1.02	0.00	--	--	--	--	--	--	0	0	0	0
CLARKSDALE ^x	77	51	81	44	64	11	0.00	-1.19	0.00	8.64	113	--	--	--	--	0	0	0	0
CLEVELAND ^x	78	49	81	44	64	11	0.00	-0.91	0.00	4.34	68	--	--	--	--	0	0	0	0
GREENVILLE ^x	77	51	81	45	64	9	0.00	-1.03	0.00	--	--	--	--	--	--	0	0	0	0
GREENWOOD ^x	79	47	84	40	63	8	0.01	-0.93	0.01	3.96	48	--	--	--	--	0	0	1	0
INDIANOLA 1S	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
INVERNESS 5E	77	51	80	45	64	--	0.00	--	0.00	6.10	--	40.71	--	69	60	0	0	0	0
LYON	78	50	81	44	64	--	0.00	--	0.00	6.17	--	--	--	--	--	0	0	0	0
MOORHEAD ^x	77	52	80	45	65	10	0.00	-0.99	0.00	8.42	104	--	--	--	--	0	0	0	0
ONWARD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ROLLING FORK ^x	78	49	81	46	64	9	0.00	-0.85	0.00	2.34	29	--	--	--	--	0	0	0	0
SIDON	79	52	85	45	66	--	0.00	--	0.00	4.77	--	--	--	68	62	0	0	0	0
TUNICA ^x	76	50	81	44	63	11	0.00	-1.14	0.00	6.82	88	--	--	--	--	0	0	0	0
VICKSBURG ^x	77	48	79	43	63	6	0.00	-0.99	0.00	3.43	39	--	--	--	--	0	0	0	0
YAZOO CITY ^x	76	49	79	45	63	7	0.00	-0.91	0.00	--	--	--	--	--	--	0	0	0	0
STONEVILLE [*]	79	51	81	46	65	10	0.00	-1.10	0.00	6.59	79	45.98	106	72	57	0	0	0	0

Compiled by USDA/OCE/WAOB's Stoneville Field Office.

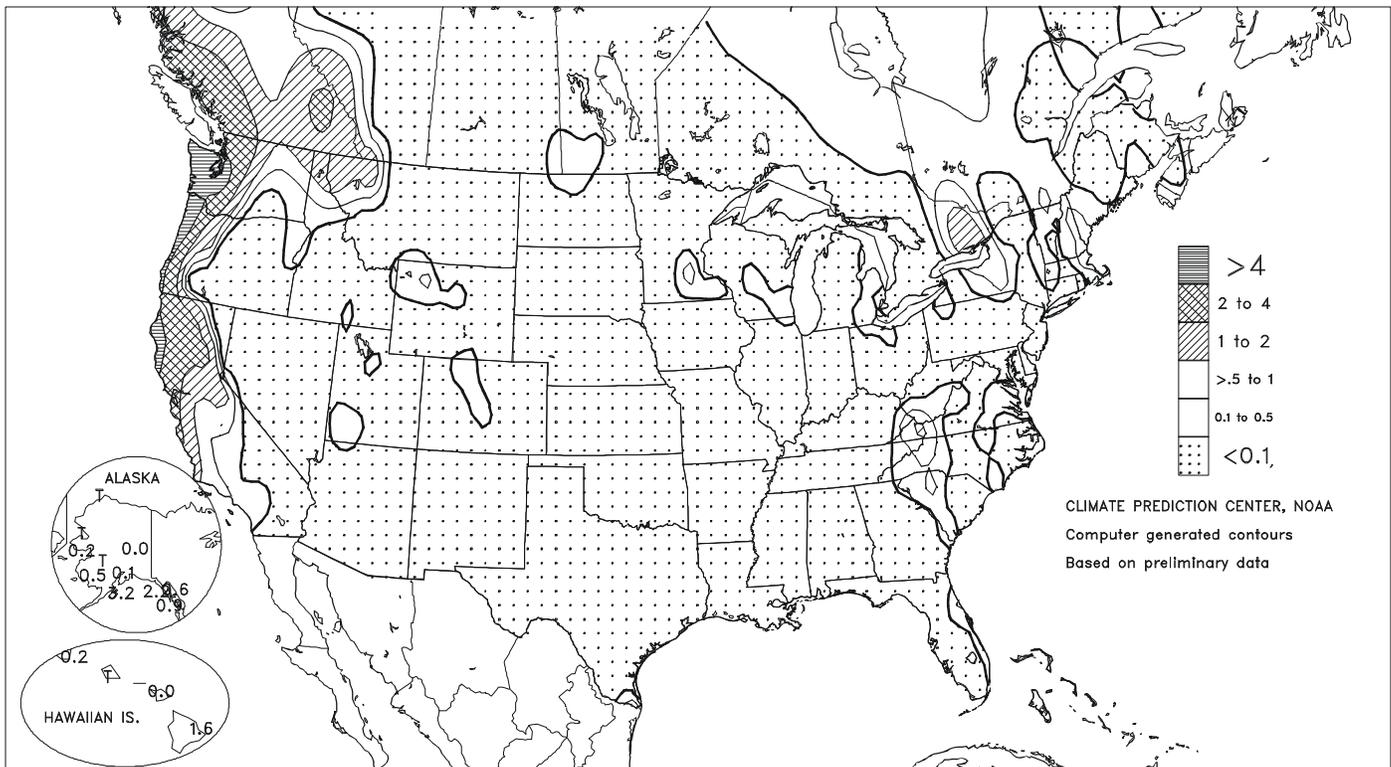
* Based on 1964-93 normals.

x Based on 1961-90 normals.

Delta Weather and Crop Summary: Above-normal temperatures aided winter wheat development throughout the region. In addition, the warm, dry conditions favored fieldwork, including final cotton, soybean, and rice harvesting. However, topsoils began to dry again, as little or no rain fell. Insects remained active due to above-normal soil temperatures.

Total Precipitation (Inches)

NOV 7 - 13, 1999



U.S. Crop Production Highlights

The following information was released by USDA's Agricultural Statistics Board on November 10, 1999. Forecasts refer to November 1.

Corn grain production is forecast at 9.54 billion bushels, up 1 percent (%) from last month but down 2% from 1998. Yields are expected to average 134.5 bushels per acre, up 1.0 bushel from last month and up 0.1 bushel from a year ago. If realized, this would be the third-largest production and second-highest yield on record. Acreage for harvest is estimated at 70.9 million acres, unchanged from last month. Ideal weather conditions allowed rapid harvest progress and limited harvest loss throughout the Corn Belt.

Soybean production is forecast at 2.67 billion bushels, down 1% from October 1, and down 2% from last year's record of 2.74

billion bushels. The yield forecast, at 36.7 bushels per acre, decreased 0.3 bushel from last month and is 2.2 bushels below the 1998 final yield. Acreage for harvest is estimated at a record 72.8 million acres, unchanged from October 1, but up 3% from 1998.

All cotton production is forecast at 16.5 million 480-pound bales, up 100,500 bales from last month, and up 19% from 1998. Yield is expected to average 592 pounds per harvested acre, down 33 pounds from last year. Lower production forecasts of Upland cotton in Alabama, North Carolina, and South Carolina were more than offset by increased production forecasts in Arizona, Arkansas, California, Louisiana, Missouri, and Tennessee.

(Continued from front cover)

in portions of the drought-affected **Ohio Valley**. Elsewhere, significant rain last fell in **eastern Nebraska** during August and in parts of **central and southeastern Texas** during July. Exceptions to last week's warm, dry pattern included **New England**, where weekly temperatures averaged as much as 8°F below normal, and from the **Cascades** and **Sierra Nevada** westward to the coast, where locally heavy precipitation fell. Early- to midweek showers briefly slowed fieldwork as far south as **California's Central Valley**.

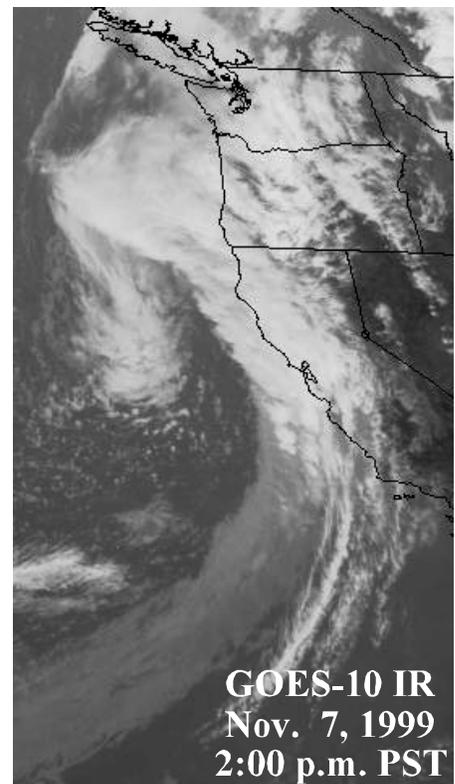
Exceptional late-season warmth resulted in nearly 500 daily-record highs and more than four dozen November records. Since November 1, more than 550 daily records and at least 60 monthly records have been set or tied nationwide. The week featured the latest calendar-date reading on record above 70°F on record in **Duluth, MN** (71°F on November 9), and at or above 75°F in **Eau Claire, WI** (76°F on November 8), **South Bend, IN** (75°F on November 9), and **Detroit, MI** (75°F on November 9). In **Oregon**, **Astoria** (71°F on Thursday), **Portland** (71°F on Saturday), and **Corvallis** (73°F on Saturday) all posted their latest temperatures higher than 70°F. With a high of 81°F on November 13, **Des Moines, IA** notched their latest reading above 80°F. State-record maximum temperatures for the month were observed in **Iowa** (83°F in **Logan** on November 8 and in **Atlantic, Shenandoah**, and **Sidney** on November 13) and **South Dakota** (89°F in **Kennebec** on November 8). In **South Dakota** on November 8, former monthly records were shattered by 7°F in **Huron** (86°F) and 6°F in **Pierre** (87°F). **Rawlins, WY** (70°F on November 6 and 14) and **Minot, ND** (79°F on November 7), eclipsed previous November records by 5°F apiece. **Rawlins** noted 10 daily- or monthly-record highs during the 11 days ending November 14, while **Glasgow, MT** collected 8 records--including a monthly-record high of 79°F on the 12th--from November 6-14.

Persistent dryness accompanied the warmth, causing significant reductions in topsoil moisture nearly nationwide and allowing drought to begin intensifying again across the **Ohio Valley**. **Iowa** reported a 6th consecutive week (and 11th in the past 12) with below-normal rainfall. In **Texas**, **Houston** remained dry through the first 2 weeks of November, following their driest August-October (2.43 inches) since only 2.33 inches fell in 1924.

Houston's January-October rainfall, 24.35 inches (63 percent of normal) was their lowest during the first 10 months of a year since 1988, when 21.26 inches was observed.

In contrast, warmth in **Oregon** and **Washington** aided winter wheat development following recent rainfall. Soil moisture shortages remained, however, across winter wheat areas in **Idaho's Snake River Plain**. Closer to the **West Coast**, early-week showers produced daily-record rainfall totals on November 8 as far south as **Bakersfield, CA** (0.31 inch) and **Los Angeles, CA** (0.27 inch). At midweek, additional precipitation overspread **northern California**, where **Redding** (1.68 inches on Wednesday) collected a daily-record total. Farther north, **Seattle, WA** observed a daily-record rainfall (1.52 inches) on Friday, propelling their November 1-13 total to 5.24 inches (226 percent of normal). Meanwhile, unusually cold air streamed into **New England**. On Friday morning, **Bangor, ME** (14°F) registered a daily record-tying low.

For the 4th consecutive week, bitterly cold air continued to build across much of **Alaska**, where temperatures averaged as much as 17°F below normal in the interior. **Bettles** recorded a low of -40°F on November 10. Meanwhile in **Hawaii**, mostly dry weather returned following recent beneficial showers.



GOES-10 IR
Nov. 7, 1999
2:00 p.m. PST

National Weather Data for Selected Cities

Weather Data for the Week Ending November 13, 1999

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

STATES AND STATIONS	TEMPERATURE EF						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN. SINCE Sep 1	PCT. NORMAL SINCE Sep 1	TOTAL IN. SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. EF		PRECIP.		
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
AL	BIRMINGHAM	75	48	78	43	61	7	0.00	-0.95	0.00	7.02	83	44.98	96	96	42	0	0	0	0
	HUNTSVILLE	76	46	80	41	61	8	0.00	-1.07	0.00	4.93	54	40.89	85	99	44	0	0	0	0
	MOBILE	78	51	80	44	65	3	0.03	-0.84	0.01	9.85	95	44.93	80	94	48	0	0	3	0
	MONTGOMERY	77	45	80	41	61	3	0.03	-0.84	0.01	6.22	77	37.91	83	97	41	0	0	3	0
AK	ANCHORAGE	28	16	40	5	22	-1	0.05	-0.22	0.04	5.80	111	16.56	116	91	64	0	7	2	0
	BARROW	4	-6	16	-15	-1	-2	0.03	-0.03	0.03	0.67	58	3.55	87	77	67	0	7	1	0
	FAIRBANKS	6	-7	18	-21	0	-6	0.00	-0.19	0.00	2.81	130	9.30	97	86	75	0	7	0	0
	JUNEAU	43	37	45	33	40	7	0.56	-0.66	0.18	25.85	152	65.89	139	98	80	0	0	6	0
	KODIAK	41	33	43	26	37	1	3.15	1.76	1.17	24.65	147	64.67	113	90	58	0	3	6	3
	NOME	20	9	23	-1	15	-3	0.21	-0.04	0.13	4.32	101	15.12	112	84	61	0	7	2	0
AZ	FLAGSTAFF	65	24	69	19	45	6	0.00	-0.43	0.00	4.55	103	16.11	84	77	16	0	6	0	0
	PHOENIX	87	58	93	53	72	8	0.00	-0.14	0.00	1.31	74	6.63	105	50	17	3	0	0	0
	TUCSON	88	53	92	48	70	9	0.00	-0.14	0.00	0.97	32	9.67	92	42	14	2	0	0	0
	YUMA	86	60	92	55	73	6	0.00	-0.06	0.00	0.02	3	4.35	169	62	30	2	0	0	0
AR	FORT SMITH	80	48	84	44	64	12	0.01	-0.95	0.01	7.50	86	34.22	96	97	35	0	0	1	0
	LITTLE ROCK	77	50	82	46	64	10	0.02	-1.17	0.01	5.15	52	31.71	74	99	51	0	0	2	0
CA	BAKERSFIELD	70	47	75	43	59	1	0.27	0.10	0.25	0.35	47	5.77	123	91	45	0	0	2	0
	EUREKA	64	56	70	49	60	8	1.67	0.22	0.94	3.28	54	31.03	112	79	70	0	0	4	1
	FRESNO	72	47	76	45	59	4	0.15	-0.16	0.13	0.15	12	6.10	74	100	47	0	0	3	0
	LOS ANGELES	66	54	70	51	60	-2	0.33	-0.06	0.28	0.34	25	7.48	81	93	66	0	0	4	0
	REDDING	65	48	77	43	57	3	2.31	1.15	1.61	3.34	65	20.50	83	98	55	0	0	5	1
	SACRAMENTO	69	46	74	43	58	2	0.50	-0.12	0.42	0.66	26	10.60	79	98	52	0	0	4	0
	SAN DIEGO	68	56	71	53	62	-1	0.00	-0.31	0.00	0.02	2	5.13	69	92	62	0	0	0	0
	SAN FRANCISCO	66	52	72	47	59	3	0.65	0.01	0.52	1.41	56	14.34	97	90	58	0	0	3	1
CO	ALAMOSA	62	13	65	10	37	5	0.00	-0.11	0.00	1.33	74	7.54	110	78	12	0	7	0	0
	CO SPRINGS	70	37	75	31	54	14	0.00	-0.11	0.00	1.62	68	24.00	155	42	9	0	2	0	0
	DENVER	73	40	78	33	56	15	0.00	-0.22	0.00	1.50	57	20.23	141	34	10	0	0	0	0
	GRAND JUNCTION	66	34	73	28	50	7	0.00	-0.17	0.00	1.18	55	7.62	99	41	17	0	4	0	0
	PUEBLO	77	28	83	22	52	10	0.00	-0.11	0.00	0.93	56	13.78	131	63	11	0	6	0	0
CT	BRIDGEPORT	56	37	67	30	47	-1	0.00	-0.89	0.00	11.16	143	36.53	101	82	45	0	2	0	0
	HARTFORD	54	34	74	25	44	-1	0.01	-0.93	0.01	16.19	179	39.56	104	85	43	0	4	1	0
DC	WASHINGTON	63	44	76	38	54	2	0.00	-0.72	0.00	12.70	165	36.19	107	84	48	0	0	0	0
DE	WILMINGTON	60	38	74	33	49	0	0.00	-0.74	0.00	16.80	219	43.42	122	83	48	0	0	0	0
FL	DAYTONA BEACH	77	60	79	58	69	1	0.28	-0.41	0.25	16.77	142	43.53	99	96	55	0	0	3	0
	JACKSONVILLE	77	52	79	45	64	1	0.01	-0.49	0.01	16.59	152	40.25	85	100	54	0	0	1	0
	KEY WEST	80	73	82	71	76	0	0.00	-0.71	0.00	20.71	177	46.41	128	85	65	0	0	0	0
	MIAMI	82	72	82	71	77	3	0.12	-0.58	0.11	22.52	153	61.38	116	82	58	0	0	2	0
	ORLANDO	80	61	81	59	71	1	0.10	-0.42	0.09	16.43	175	51.59	116	96	52	0	0	2	0
	PENSACOLA	77	53	81	50	65	3	0.05	-0.76	0.02	4.71	43	42.76	76	93	54	0	0	4	0
	TALLAHASSEE	79	48	82	42	63	2	0.00	-0.83	0.00	9.62	96	47.49	81	97	45	0	0	0	0
	TAMPA	81	61	82	59	71	3	0.00	-0.39	0.00	10.08	116	32.69	80	90	50	0	0	0	0
	WEST PALM BEACH	81	74	82	73	77	4	0.00	-1.20	0.00	20.62	118	59.44	106	69	51	0	0	0	0
GA	ATHENS	74	48	78	43	61	6	0.00	-0.83	0.00	7.82	96	36.91	85	99	51	0	0	0	0
	ATLANTA	73	51	77	45	62	7	0.00	-0.87	0.00	8.30	103	35.18	80	94	43	0	0	0	0
	AUGUSTA	76	44	79	39	60	3	0.01	-0.54	0.01	8.83	128	35.17	88	100	45	0	0	1	0
	COLUMBUS	75	50	79	48	62	4	0.00	-0.75	0.00	4.70	69	25.83	59	92	43	0	0	0	0
	MACON	75	46	79	42	61	3	0.00	-0.57	0.00	6.98	117	33.11	86	100	47	0	0	0	0
	SAVANNAH	77	48	80	41	62	2	0.00	-0.48	0.00	8.64	112	47.87	106	98	48	0	0	0	0
HI	HILO	79	66	81	63	73	-2	1.66	-1.70	0.83	13.09	54	98.78	91	92	61	0	0	5	1
	HONOLULU	82	70	84	67	76	-1	0.02	-0.65	0.02	2.30	54	9.43	57	83	55	0	0	1	0
	KAHULUI	83	69	84	67	76	0	0.00	-0.56	0.00	0.43	17	7.21	45	82	51	0	0	0	0
	LIHUE	79	71	80	68	75	-1	0.19	-1.08	0.12	8.09	89	28.28	81	85	62	0	0	5	0
ID	BOISE	67	45	76	42	56	14	0.00	-0.34	0.00	0.12	6	6.70	68	55	21	0	0	0	0
	LEWISTON	62	45	77	41	54	11	0.02	-0.24	0.01	1.37	62	9.06	85	81	51	0	0	2	0
	POCATELLO	65	31	70	25	48	10	0.00	-0.28	0.00	0.41	18	9.88	96	72	20	0	5	0	0
IL	CHICAGO/O'HARE	64	41	74	31	52	10	0.00	-0.68	0.00	4.35	58	35.17	111	86	48	0	1	0	0
	MOLINE	68	41	79	31	54	12	0.00	-0.60	0.00	5.27	65	30.94	87	79	44	0	1	0	0
	PEORIA	68	44	78	34	56	12	0.00	-0.63	0.00	2.89	38	27.47	85	76	38	0	0	0	0
	ROCKFORD	65	36	75	28	50	10	0.00	-0.61	0.00	6.25	80	35.13	107	88	48	0	3	0	0
	SPRINGFIELD	71	44	79	33	57	12	0.00	-0.58	0.00	4.22	60	26.48	85	76	34	0	0	0	0
IN	EVANSVILLE	71	48	79	43	60	11	0.00	-0.85	0.00	3.21	43	33.70	90	89	48	0	0	0	0
	FORT WAYNE	64	37	74	28	51	7	0.00	-0.63	0.00	3.41	54	25.44	84	94	59	0	3	0	0
	INDIANAPOLIS	66	44	76	38	55	10	0.00	-0.73	0.00	2.64	39	29.22	84	85	52	0	0	0	0
	SOUTH BEND	65	40	75	29	52	9	0.00	-0.75	0.00	3.28	41	27.21	80	84	44	0	1	0	0
IA	BURLINGTON	70	44	82	34	57	14	0.00	-0.56	0.00	6.13	76	34.03	104	78	37	0	0	0	0
	CEDAR RAPIDS	67	40	78	34	54	13	0.00	-0.47	0.00	2.62	37	29.95	96	85	44	0	0	0	0
	DES MOINES	70	44	81	40	57	15	0.00	-0.44	0.00	2.48	35	29.98	97	82	39	0	0	0	0
	DUBUQUE	64	39	75	33	51	12	0.00	-0.63	0.00	3.03	35	33.63	97	81	47	0	0	0	0
	SIoux CITY	70	36	81	30	53	14	0.00	-0.28	0.00	0.74	14	29.64	121	87	35	0	2	0	0
	WATERLOO	67	39	80	32	53	14	0.00	-0.45	0.00	1.82	26	41.91	133	80	41	0	1	0	0
KS	CONCORDIA	76	44	83	36	60	16	0.00	-0.28	0.00	1.16	21	24.24	89	79	25	0	0	0	0
	DODGE CITY	78	41	80	33	59	14	0.00	-0.20	0.00	2.73	76	21.05	103	74	24	0	0	0	0
	GODDLAND	76	35	79	25	55	14	0.00	-0.17	0.00	0.88	32	19.88	115	60	15	0	2	0	0
	TOPEKA	76	43	84	37	60	14	0.00	-0.48	0.00	5.31	68	31.67	97	92	39	0	0	0	0

Weather Data for the Week Ending November 13, 1999

STATES AND STATIONS	TEMPERATURE EF						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN, SINCE Sep 1	PCT. NORMAL SINCE Sep 1	TOTAL IN, SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. EF		PRECIP	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
KY WICHITA	76	48	79	44	62	15	0.00	-0.39	0.00	10.85	168	39.99	146	88	37	0	0	0	0
KY JACKSON	70	51	73	47	60	11	0.00	-0.95	0.00	5.37	63	36.06	84	84	44	0	0	0	0
KY LEXINGTON	66	47	73	43	57	9	0.00	-0.75	0.00	4.16	59	28.91	75	91	56	0	0	0	0
KY LOUISVILLE	69	51	77	47	60	11	0.00	-0.84	0.00	4.03	55	34.50	89	78	47	0	0	0	0
KY PADUCAH	74	49	81	37	61	11	0.01	-0.95	0.01	4.93	58	36.49	87	89	46	0	0	1	0
LA BATON ROUGE	78	50	81	45	64	2	0.00	-0.94	0.00	9.88	99	41.39	78	99	45	0	0	0	0
LA LAKE CHARLES	81	48	83	43	65	3	0.00	-0.95	0.00	3.26	29	31.87	67	98	37	0	0	0	0
LA NEW ORLEANS	78	55	82	46	66	4	0.00	-0.95	0.00	8.33	81	42.25	79	97	47	0	0	0	0
LA SHREVEPORT	78	47	81	44	63	4	0.01	-1.03	0.01	8.13	93	50.22	127	95	40	0	0	1	0
ME CARIBOU	32	20	38	12	26	-8	0.02	-0.81	0.01	12.81	159	33.78	108	86	48	0	7	2	0
ME PORTLAND	46	27	63	21	37	-4	0.43	-0.77	0.35	13.43	146	37.42	102	79	43	0	5	2	0
MD BALTIMORE	62	39	75	30	51	2	0.00	-0.76	0.00	14.55	187	39.73	112	86	45	0	1	0	0
MA BOSTON	52	35	72	29	43	-4	0.50	-0.48	0.34	15.50	190	35.57	101	74	41	0	3	4	0
MA WORCESTER	49	32	67	26	40	-1	0.18	-0.87	0.13	13.81	134	36.83	89	80	43	0	5	3	0
MI ALPENA	56	33	75	26	45	7	0.00	-0.52	0.00	4.19	68	18.42	72	89	57	0	5	0	0
MI GRAND RAPIDS	59	37	72	28	48	8	0.13	-0.64	0.13	4.67	55	29.78	95	90	52	0	2	1	0
MI HOUGHTON LAKE	54	34	69	22	44	6	0.00	-0.52	0.00	5.12	78	25.81	103	89	55	0	4	0	0
MI LANSING	59	35	73	24	47	7	0.12	-0.48	0.12	3.87	57	26.08	98	89	52	0	4	1	0
MI MARQUETTE	--	--	--	--	--	--	0.00	-0.70	0.00	6.67	75	33.92	109	--	--	--	--	--	--
MI MUSKEGON	58	37	65	26	48	6	0.08	-0.64	0.08	3.55	44	26.91	97	90	55	0	3	1	0
MN DULUTH	57	36	71	28	46	15	0.00	-0.45	0.00	8.17	114	37.97	137	89	43	0	3	0	0
MN INT'L FALLS	54	31	72	26	43	14	0.00	-0.29	0.00	6.56	115	28.77	125	87	49	0	6	0	0
MN MINNEAPOLIS	62	40	77	35	51	15	0.03	-0.36	0.03	3.68	65	29.43	111	82	46	0	0	1	0
MN ROCHESTER	62	38	75	30	50	14	0.25	-0.15	0.24	1.91	29	36.30	131	92	55	0	1	2	0
MS ST. CLOUD	62	33	75	27	47	15	0.00	-0.32	0.00	3.97	66	25.66	99	88	44	0	3	0	0
MS JACKSON	77	46	79	42	61	4	0.00	-1.06	0.00	8.37	96	38.74	83	100	43	0	0	0	0
MS MERIDIAN	78	43	82	40	61	4	0.01	-0.95	0.01	6.69	81	33.67	70	98	38	0	0	1	0
MS TUPELO	78	47	81	43	62	8	0.02	-1.04	0.01	2.61	29	45.16	97	95	38	0	0	2	0
MO COLUMBIA	75	47	82	39	61	15	0.00	-0.69	0.00	2.96	35	23.99	69	91	44	0	0	0	0
MO KANSAS CITY	74	48	79	40	61	15	0.00	-0.48	0.00	5.99	66	36.42	104	88	40	0	0	0	0
MO SAINT LOUIS	74	50	82	41	62	13	0.00	-0.76	0.00	3.15	44	31.50	97	91	48	0	0	0	0
MO SPRINGFIELD	77	45	81	35	61	13	0.00	-0.88	0.00	3.01	31	32.84	87	94	39	0	0	0	0
MT BILLINGS	69	45	77	34	57	20	0.00	-0.20	0.00	2.85	98	12.54	90	40	16	0	0	0	0
MT BUTTE	63	31	70	26	47	17	0.00	-0.14	0.00	0.58	26	10.99	96	66	22	0	4	0	0
MT GLASGOW	67	37	79	33	52	20	0.17	0.11	0.17	1.64	94	14.18	136	71	23	0	0	1	0
MT GREAT FALLS	67	44	76	32	56	19	0.00	-0.14	0.00	2.50	110	11.94	85	58	23	0	1	0	0
MT KALISPELL	52	37	69	30	45	12	0.19	-0.09	0.10	2.45	93	11.93	86	97	63	0	1	3	0
MT MILES CITY	69	39	80	33	54	19	0.00	-0.13	0.00	1.22	50	10.79	82	56	19	0	0	0	0
MT MISSOULA	57	33	73	30	45	11	0.03	-0.14	0.02	2.15	99	10.83	92	94	48	0	4	2	0
NE GRAND ISLAND	76	37	82	28	57	16	0.00	-0.25	0.00	0.61	13	25.74	109	81	24	0	2	0	0
NE LINCOLN	75	36	85	30	56	14	0.00	-0.32	0.00	1.25	20	25.78	96	89	28	0	3	0	0
NE NORFOLK	75	37	82	29	56	17	0.00	-0.25	0.00	1.83	40	24.46	102	82	23	0	2	0	0
NE NORTH PLATTE	76	26	81	24	51	13	0.00	-0.17	0.00	1.42	49	19.16	104	88	15	0	6	0	0
NE OMAHA	72	39	83	33	56	14	0.00	-0.37	0.00	1.67	25	37.04	132	91	37	0	0	0	0
NE SCOTTSBLUFF	75	27	79	22	51	12	0.00	-0.14	0.00	2.45	112	16.43	114	64	15	0	5	0	0
NE VALENTINE	77	32	86	25	55	18	0.00	-0.15	0.00	3.44	126	19.19	110	69	15	0	3	0	0
NV ELY	63	26	71	21	45	8	0.16	-0.01	0.16	0.71	32	6.68	74	69	19	0	6	1	0
NV LAS VEGAS	75	51	79	47	63	6	0.00	-0.10	0.00	0.35	53	3.73	108	45	22	0	0	0	0
NV RENO	67	35	72	30	51	9	0.00	-0.19	0.00	0.49	46	4.31	72	67	19	0	3	0	0
NV WINNEMUCCA	65	28	75	19	47	7	0.02	-0.20	0.02	0.38	27	5.18	76	60	21	0	4	1	0
NH CONCORD	48	27	69	17	38	-2	0.53	-0.32	0.39	13.04	171	37.48	120	85	38	0	5	3	0
NJ NEWARK	59	38	73	32	49	-1	0.00	-0.91	0.00	13.27	159	39.92	104	73	41	0	1	0	0
NM ALBUQUERQUE	70	40	71	38	55	9	0.00	-0.11	0.00	0.80	38	8.26	102	54	20	0	0	0	0
NY ALBANY	49	30	69	21	39	-3	0.12	-0.63	0.12	14.03	195	35.68	114	79	45	0	4	1	0
NY BINGHAMTON	47	31	64	26	39	-1	0.40	-0.36	0.40	9.38	123	29.39	92	86	50	0	4	1	0
NY BUFFALO	51	36	64	29	44	1	0.34	-0.54	0.34	8.89	108	30.57	93	87	54	0	3	1	0
NY ROCHESTER	53	35	74	28	44	1	0.36	-0.31	0.36	6.54	98	29.25	106	84	50	0	4	1	0
NY SYRACUSE	51	32	70	25	42	-1	0.31	-0.56	0.29	8.79	102	27.21	81	88	54	0	4	2	0
NC ASHEVILLE	69	42	74	38	56	7	0.11	-0.72	0.11	6.82	76	35.88	85	98	49	0	0	1	0
NC CHARLOTTE	72	47	76	42	59	5	0.08	-0.66	0.08	10.85	132	32.79	87	96	48	0	0	1	0
NC GREENSBORO	70	47	77	43	59	7	0.00	-0.69	0.00	11.21	134	39.65	105	89	42	0	0	0	0
NC HATTERAS	66	52	72	40	59	0	0.04	-1.15	0.04	11.57	93	47.77	98	89	59	0	0	1	0
NC RALEIGH	71	43	77	37	57	4	0.02	-0.67	0.01	24.74	339	47.65	131	98	44	0	0	2	0
NC WILMINGTON	75	49	80	43	62	4	0.01	-0.68	0.01	28.87	321	68.06	139	88	40	0	0	1	0
ND BISMARCK	64	31	79	24	48	16	0.04	-0.07	0.04	1.78	68	26.22	178	88	38	0	4	1	0
ND DICKINSON	68	38	80	29	53	20	0.02	-0.09	0.02	2.92	102	17.78	115	65	23	0	1	1	0
ND FARGO	59	33	71	28	46	15	0.00	-0.19	0.00	7.54	186	22.74	123	79	43	0	4	0	0
ND GRAND FORKS	56	29	73	24	43	13	0.00	-0.16	0.00	2.67	69	21.39	123	84	47	0	6	0	0
ND JAMESTOWN	61	33	77	29	47	16	0.00	-0.12	0.00	2.99	101	22.25	138	84	40	0	3	0	0
ND WILLISTON	67	32	76	22	49	19	0.00	-0.11	0.00	1.75	75	14.63	114	76	26	0	4	0	0
OH AKRON-CANTON	59	37	72	29	48	4	0.00	-0.68	0.00	8.54	124	33.02	103	93	54	0	3	0	0
OH CINCINNATI	64	42	73	33	53	6	0.00	-0.80	0.00	4.22	59	28.38	79	90	57	0	0	0	0
OH CLEVELAND	58	38	73	28	48	3	0.00	-0.72	0.00	7.76	106	28.44	90	86	52	0	3	0	0
OH COLUMBUS	63	40	74	32	52	7	0.00	-0.74	0.00	4.36	68	24.39	73	91	49	0	2	0	0
OH DAYTON	64	41	74	31	52	7	0.00	-0.70	0.00	3.23	51	26.66	84	84	47	0	1	0	0
OH MANSFIELD	59	38	72	28	49	5	0.00	-0.80	0.00	5.71	80	30.91	90	88	49	0	3	0	0

Based on 1

Weather Data for the Week Ending November 13, 1999

STATES AND STATIONS	TEMPERATURE EF						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN. SINCE Sep 1	PCT. NORMAL SINCE Sep 1	TOTAL IN. SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. EF		PRECIP.	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	50 INCH OR MORE
OK TOLEDO	61	36	74	26	48	6	0.16	-0.47	0.16	4.05	66	26.43	93	85	44	0	3	1	0
OK YOUNGSTOWN	58	38	72	26	48	5	0.00	-0.72	0.00	8.38	113	37.26	114	86	45	0	4	0	0
OK OKLAHOMA CITY	79	50	81	48	65	13	0.00	-0.50	0.00	7.10	88	35.61	115	97	42	0	0	0	0
OK TULSA	80	53	83	44	66	14	0.00	-0.76	0.00	11.50	117	41.81	114	82	33	0	0	0	0
OR ASTORIA	63	55	71	53	59	12	5.17	2.91	1.52	10.49	83	66.08	133	83	67	0	0	7	5
OR BURNS	58	32	67	23	45	10	0.07	-0.21	0.07	0.58	32	6.50	80	85	32	0	4	1	0
OR EUGENE	62	49	71	43	55	8	1.38	-0.46	0.42	5.17	62	33.36	94	97	71	0	0	7	0
OR MEDFORD	66	46	75	38	56	11	0.38	-0.34	0.28	2.11	59	14.13	104	85	39	0	0	2	0
OR PENDLETON	63	45	80	37	54	11	0.07	-0.28	0.03	1.95	94	7.61	80	83	57	0	0	4	0
OR PORTLAND	60	49	71	42	55	7	1.96	0.79	0.83	5.68	88	31.85	118	97	74	0	0	7	1
PA SALEM	61	50	70	45	56	9	1.50	0.11	0.51	5.18	74	36.76	129	99	75	0	0	6	1
PA ALLENTOWN	57	32	68	26	44	-1	0.00	-0.90	0.00	15.16	178	34.29	91	79	40	0	4	0	0
PA ERIE	56	41	73	33	49	3	0.23	-0.71	0.23	11.07	112	35.22	99	90	53	0	0	1	0
PA MIDDLETOWN	60	38	72	33	49	3	0.00	-0.81	0.00	12.14	153	34.59	98	75	34	0	0	0	0
PA PHILADELPHIA	61	40	73	35	50	2	0.00	-0.76	0.00	17.53	237	44.06	122	83	45	0	0	0	0
PA PITTSBURGH	61	39	74	28	50	6	0.03	-0.62	0.03	5.38	83	32.33	100	82	42	0	3	1	0
PA WILKES-BARRE	52	34	65	28	43	0	0.00	-0.72	0.00	12.13	163	32.79	103	73	41	0	5	0	0
PA WILLIAMSPORT	55	33	68	27	44	0	0.02	-0.86	0.01	15.04	181	40.48	114	81	41	0	5	2	0
RI PROVIDENCE	53	35	73	29	44	-2	0.10	-0.92	0.07	13.77	153	39.31	102	74	36	0	3	2	0
SC BEAUFORT	75	51	78	46	63	2	0.12	-0.40	0.12	9.61	113	46.38	99	97	52	0	0	1	0
SC CHARLESTON	75	50	78	46	63	3	0.01	-0.54	0.01	15.61	180	40.71	87	99	57	0	0	1	0
SC COLUMBIA	75	47	79	42	61	5	0.22	-0.44	0.22	6.16	78	28.32	63	99	49	0	0	1	0
SC GREENVILLE	73	50	77	45	62	8	0.10	-0.74	0.10	9.85	103	31.57	70	94	48	0	0	1	0
SD ABERDEEN	63	30	77	26	47	13	0.00	-0.15	0.00	4.42	135	22.11	124	93	41	0	5	0	0
SD HURON	70	35	86	30	53	17	0.00	-0.19	0.00	2.79	78	16.64	86	85	30	0	4	0	0
SD RAPID CITY	74	38	83	30	56	18	0.00	-0.14	0.00	1.11	42	18.07	114	48	14	0	1	0	0
SD SIOUX FALLS	70	33	81	28	52	16	0.00	-0.27	0.00	1.21	23	21.11	93	90	31	0	3	0	0
TN BRISTOL	69	42	72	37	56	7	0.06	-0.60	0.05	3.89	55	31.15	88	89	44	0	0	2	0
TN CHATTANOOGA	77	47	80	44	62	10	0.00	-1.02	0.00	7.09	77	44.12	97	98	40	0	0	0	0
TN KNOXVILLE	73	49	76	45	61	10	0.00	-0.83	0.00	4.78	65	46.55	115	97	50	0	0	0	0
TN MEMPHIS	76	51	81	45	64	9	0.00	-1.12	0.00	3.63	43	39.41	91	92	45	0	0	0	0
TN NASHVILLE	74	48	79	42	61	9	0.00	-0.91	0.00	5.74	75	37.06	92	93	45	0	0	0	0
TX ABILENE	77	53	80	50	65	8	0.00	-0.37	0.00	3.27	51	16.43	73	82	38	0	0	0	0
TX AMARILLO	77	44	81	41	61	12	0.00	-0.18	0.00	2.92	78	26.06	139	84	26	0	0	0	0
TX AUSTIN	81	46	83	42	64	1	0.01	-0.58	0.01	2.05	26	24.57	85	99	36	0	0	1	0
TX BEAUMONT	79	52	82	47	65	3	0.03	-1.08	0.01	7.08	56	31.41	63	98	35	0	0	3	0
TX BROWNSVILLE	84	60	85	55	72	2	0.15	-0.22	0.12	4.83	51	20.09	82	97	47	0	0	3	0
TX CORPUS CHRISTI	81	57	83	51	69	2	0.04	-0.36	0.01	5.75	62	28.48	101	98	51	0	0	4	0
TX DEL RIO	80	57	83	54	69	6	0.00	-0.25	0.00	0.39	7	15.31	99	93	47	0	0	0	0
TX EL PASO	77	47	80	45	62	8	0.00	-0.11	0.00	2.50	94	7.50	93	71	31	0	0	0	0
TX FORT WORTH	81	57	83	53	69	11	0.00	-0.57	0.00	4.56	57	20.85	68	85	37	0	0	0	0
TX GALVESTON	76	61	79	58	69	3	0.05	-0.71	0.02	7.00	69	26.17	71	96	54	0	0	4	0
TX HOUSTON	81	49	83	44	65	2	0.00	-0.90	0.00	1.93	18	24.55	61	98	38	0	0	0	0
TX LUBBOCK	75	45	81	42	60	8	0.00	-0.20	0.00	3.88	79	19.13	108	91	36	0	0	0	0
TX MIDLAND	75	45	78	43	60	6	0.00	-0.18	0.00	1.23	26	6.69	47	90	42	0	0	0	0
TX SAN ANGELO	77	49	81	45	63	6	0.00	-0.28	0.00	1.70	27	13.39	70	91	40	0	0	0	0
TX SAN ANTONIO	80	52	83	46	66	4	0.00	-0.66	0.00	1.35	17	16.15	57	90	33	0	0	0	0
TX VICTORIA	83	53	86	46	68	3	0.00	-0.59	0.00	4.93	48	24.45	72	100	37	0	0	0	0
TX WACO	80	51	83	50	65	6	0.00	-0.60	0.00	2.44	30	17.43	60	94	42	0	0	0	0
TX WICHITA FALLS	79	53	82	51	66	12	0.00	-0.38	0.00	5.26	72	28.79	107	92	45	0	0	0	0
UT SALT LAKE CITY	65	38	72	29	51	8	0.00	-0.30	0.00	0.47	14	11.12	79	73	25	0	1	0	0
VT BURLINGTON	46	28	64	19	37	-2	0.11	-0.63	0.08	13.91	184	30.05	99	79	46	0	4	3	0
VA LYNCHBURG	68	40	76	31	54	5	0.00	-0.74	0.00	14.25	171	35.91	100	92	47	0	1	0	0
VA NORFOLK	65	48	77	41	56	2	0.13	-0.53	0.13	22.08	267	53.12	134	93	52	0	0	1	0
VA RICHMOND	65	41	76	32	53	2	0.16	-0.58	0.16	19.69	238	46.32	122	97	51	0	1	1	0
VA ROANOKE	69	45	77	36	57	8	0.01	-0.75	0.01	9.90	113	32.95	90	90	50	0	0	1	0
VA WASH/DULLES	62	38	74	29	50	3	0.00	-0.77	0.00	12.70	160	40.01	114	88	47	0	2	0	0
WA OLYMPIA	55	46	61	43	50	7	5.12	3.31	1.39	9.70	99	49.49	132	98	83	0	0	7	5
WA QUILLAYUTE	53	45	55	39	49	4	8.54	5.19	3.28	28.34	132	102.33	126	100	90	0	0	7	6
WA SEATTLE-TACOMA	57	47	61	45	52	6	4.49	3.18	1.75	7.68	103	32.60	117	99	81	0	0	6	4
WA SPOKANE	56	44	67	36	50	13	0.53	0.06	0.23	1.87	74	11.53	90	95	65	0	0	5	0
WA YAKIMA	57	42	72	37	50	9	0.12	-0.10	0.10	0.63	52	5.48	92	92	51	0	0	3	0
WV BECKLEY	63	42	69	31	53	7	0.03	-0.66	0.03	7.22	96	32.31	90	89	47	0	1	1	0
WV CHARLESTON	68	42	76	29	55	6	0.00	-0.83	0.00	6.37	83	31.20	84	95	45	0	1	0	0
WV ELKINS	63	33	69	20	48	5	0.01	-0.75	0.01	7.27	88	31.89	81	96	43	0	3	1	0
WV HUNTINGTON	67	45	74	32	56	8	0.00	-0.76	0.00	6.37	89	29.16	81	90	48	0	1	0	0
WI EAU CLAIRE	61	33	76	24	47	12	0.00	-0.38	0.00	1.99	28	28.09	94	86	47	0	3	0	0
WI GREEN BAY	60	34	74	20	47	10	0.00	-0.52	0.00	1.91	29	21.43	82	87	49	0	4	0	0
WI LA CROSSE	63	40	75	29	51	13	0.02	-0.40	0.02	3.84	56	31.65	111	82	48	0	1	1	0
WI MADISON	62	37	74	23	50	12	0.28	-0.22	0.28	2.71	42	30.07	108	87	50	0	2	1	0
WI MILWAUKEE	63	40	75	30	52	11	0.31	-0.27	0.31	5.43	79	36.27	124	84	39	0	2	1	0
WY CASPER	67	42	72	36	55	20	0.00	-0.19	0.00	1.53	67	8.49	74	34	14	0	0	0	0
WY CHEYENNE	69	37	73	32	53	16	0.00	-0.14	0.00	2.38	105	15.67	115	35	14	0	1	0	0
WY LANDER	63	36	68	32	49	16	0.00	-0.20	0.00	2.66	102	13.57	113	53	19	0	1	0	0
WY SHERIDAN	71	34	81	25	52	18	0.00	-0.20	0.00	3.48	118	12.46	93	61	19	0	3	0	0

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

National Agricultural Summary

November 8 - 14, 1999

HIGHLIGHTS

The end of the harvest season approached with virtually no rain delays. Harvest remained active in the Atlantic Coastal Plains and parts of the southern and central Great Plains, but was nearly complete in the Corn Belt, lower Mississippi Valley, and northern Great Plains. Farmers made rapid progress on fall tillage and fertilizer applications, but dry soils limited

drilling of wheat and other winter grains, particularly in the southern Great Plains. Record warmth stimulated winter wheat growth where moisture was available, but was detrimental in areas that had moisture shortages. Coastal areas of the Pacific Northwest received additional rainfall, saturating already wet soils.

Winter Wheat: Ninety-five percent of the acreage was planted, equal to this time last year and the 5-year average. Planting was complete in the Corn Belt and central and northern Great Plains. In the southern Great Plains, planting was delayed due to severe moisture shortages. Dry weather aided planting progress in California, Arkansas, and North Carolina, although progress remained well behind normal in North Carolina. Eighty-three percent of the acreage was emerged, behind last year's 87 percent and the 5-year average of 88 percent. Dry soils hindered germination and limited vegetative growth in many areas of the Corn Belt, Great Plains, and Pacific Northwest. Despite excessive dryness, emergence advanced 10 percentage points or more in Arkansas, Illinois, Missouri, and Oregon. Emergence lagged far behind normal in Oregon and well behind normal in Texas. Poor stands and slow growth limited livestock grazing in Kansas, Oklahoma, and Texas. Conditions significantly deteriorated in Montana, Nebraska, and South Dakota due to a combination of severe moisture shortages and record heat.

Corn: Harvest was 98 percent complete, more than 1 week ahead of last year's 93 percent and 2 weeks ahead of the 91-percent average for this date. Dry weather provided excellent harvest conditions in the Corn Belt and Great Plains, although very few unharvested fields remained in the Corn Belt. Harvest was active in Colorado, South Dakota, and Pennsylvania.

Soybeans: Ninety-seven percent of the soybean crop was harvested, compared with 96 percent last year and more than a week ahead of the 94-percent average for this date. The harvest rapidly progressed in the Southeast, advancing 20 percentage points in Georgia and 13 percentage points in South Carolina. The end of the harvest season approached well ahead of normal in Tennessee and Kentucky.

Cotton: The cotton harvest advanced to 77 percent complete, behind last year's 81-percent pace, but slightly ahead of the 76-percent average for this date. Dry weather aided harvest progress, especially in New Mexico, where picking advanced 25 percentage points. Picking was also active in the Southeast, advancing 10 percentage points or more in North and South Carolina and Georgia. Despite the rapid harvest pace, progress remained far behind normal in North Carolina. Harvest also lagged in Arizona.

Other Crops: The sorghum crop was 97 percent harvested, 6 percentage points ahead of last year and the 5-year average. Harvest remained active in parts of the Great Plains, especially in New Mexico, where growers combined a fifth of their crop. The end of the harvest season rapidly approached in Oklahoma, Colorado, and South Dakota. The peanut harvest advanced to 92 percent complete, slightly ahead of last year and the average for this date. Digging accelerated in the Atlantic Coastal Plains, advancing more than 20 percentage points in North Carolina.

Crop Progress and Condition

Week Ending November 14, 1999

Winter Wheat Percent Planted				
	Nov 14 1999	Prev Week	Prev Year	5-Yr Avg
AR	86	77	88	79
CA	35	25	39	32
CO	100	100	100	100
GA	22	16	21	23
ID	99	97	99	99
IL	99	98	98	99
IN	100	99	99	99
KS	100	99	98	99
MI	100	100	100	100
MO	96	91	85	91
MT	100	99	100	99
NE	100	100	100	100
NC	43	35	68	63
OH	100	100	100	100
OK	97	95	95	98
OR	90	85	96	94
SD	100	100	100	100
TX	87	82	91	92
WA	100	98	100	98
19 Sts	95	92	95	95

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

Soybeans Percent Harvested				
	Nov 14 1999	Prev Week	Prev Year	5-Yr Avg
AL	80	75	87	70
AR	93	86	94	84
GA	60	40	68	50
IL	100	99	97	98
IN	100	100	100	99
IA	100	100	99	99
KS	99	96	90	93
KY	95	90	94	83
LA	100	100	100	98
MI	100	97	100	97
MN	100	99	99	99
MS	98	97	99	92
MO	98	96	91	89
NE	100	100	96	98
NC	35	30	44	34
OH	100	98	99	97
SC	37	24	53	34
SD	99	98	99	99
TN	94	87	94	71
19 Sts	97	95	96	94

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

Cotton Percent Harvested				
	Nov 14 1999	Prev Week	Prev Year	5-Yr Avg
AL	89	83	93	82
AZ	61	53	70	77
AR	100	98	97	93
CA	88	80	44	76
GA	74	64	74	69
LA	100	100	99	98
MS	100	99	100	97
MO	100	98	92	89
NM	60	35	42	61
NC	45	35	89	74
OK	82	78	79	54
SC	72	61	88	74
TN	100	98	98	88
TX	62	56	74	64
14 Sts	77	72	81	76

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

Winter Wheat Percent Emerged				
	Nov 14 1999	Prev Week	Prev Year	5-Yr Avg
AR	61	47	69	63
CA	10	6	14	13
CO	99	98	97	98
GA	11	9	11	14
ID	83	77	91	87
IL	96	85	93	94
IN	94	88	92	93
KS	92	91	94	95
MI	98	92	96	96
MO	76	66	68	77
MT	86	86	92	89
NE	100	100	100	100
NC	25	23	48	43
OH	99	94	100	93
OK	83	77	84	87
OR	50	36	88	81
SD	95	94	100	99
TX	67	61	78	82
WA	92	91	99	92
19 Sts	83	79	87	88

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

Corn Percent Harvested				
	Nov 14 1999	Prev Week	Prev Year	5-Yr Avg
CO	94	85	82	88
GA	100	100	100	100
IL	99	98	95	93
IN	100	99	97	88
IA	100	98	95	94
KS	100	99	98	98
KY	100	100	99	95
MI	94	88	92	72
MN	98	96	97	95
MO	99	96	90	89
NE	98	94	89	91
NC	98	94	100	100
OH	96	90	91	78
PA	78	69	83	74
SD	95	86	81	89
TX	100	99	100	100
WI	96	90	90	80
17 Sts	98	95	93	91

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

Sorghum Percent Harvested				
	Nov 14 1999	Prev Week	Prev Year	5-Yr Avg
AR	100	100	100	100
CO	84	76	65	69
IL	99	98	96	91
KS	99	95	95	93
LA	100	100	100	100
MS	100	100	100	100
MO	98	96	91	89
NE	99	93	93	94
NM	69	49	58	63
OK	93	83	87	74
SD	95	82	87	91
TX	96	94	88	92
12 Sts	97	93	91	91

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

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 6.9. Topsoil 15% very short, 48% short, 36% adequate, 1% surplus. Soybeans 80% harvested, 87% 1998, 70% avg. Wheat 48% planted, 51% 1998, 56% avg. Livestock 12% very poor, 16% poor, 39% fair, 31% good, 2% excellent.

ALASKA: DATA NOT AVAILABLE UNTIL 2000

ARIZONA: Cotton harvest increased pace slightly with the continuing dry weather, but still remains 1 week behind 1998, 2 weeks behind the 5-year avg. Alfalfa harvest activity was reported as 49% not being harvested, 10% light, 18% moderate, 23% active. Alfalfa 7% poor, 28% fair, 55% good, 10% excellent. Sheeping off was reported as being light to moderate. Range, Pasture feed was reported as 1% poor, 15% fair, 58% good, 26% excellent. Small grains planting is behind normal. As of November 14, there were no reported plantings of Durum Wheat, Barley, Other Wheat, or Other Small Grains. Last week central Areas producers shipped bok choy, cabbage, cantaloupes, cilantro, dandelion, dill, endive, escarole, leaf lettuce, green onions, head lettuce, honeydew, kale, mixed greens, napa, parsley, spinach, swiss chard. Eastern Areas producers shipped apples, chile peppers, hot house tomatoes, head lettuce. Producers in western Areas shipped bok choy, cantaloupes, honeydews, kale, orange flesh melons, parsley, spinach. Western lettuce shipments included iceberg, romaine. Central Areas citrus producers harvested fairchild tangerines, grapefruit, lemons, western citrus producers harvested grapefruit, lemons last week.

ARKANSAS: Days suitable for fieldwork: 7. Topsoil 16% very short, 43% short, 41% adequate, 0% surplus. Temperatures for the state were well above normal for the entire state. Most areas were below normal precipitation for the month. Livestock were reported in fair condition. Many farmers were feeding supplemental hay early this year because of the summer drought conditions. The main farm activities were: Finishing harvesting cotton (some second pickings), harvesting soybeans, planting wheat. Other activities included: Liming, fertilizing pastures, harvesting hay, bush hogging, land leveling, overseeding small grains, preparing fall pastures, spraying fields for insects, weeds, preparing land for planting of annual forages such as rye, ryegrass, fields were being subsoiled, plowed, shredding cotton stalks, cleaning poultry houses, Brucellosis vaccinations, fall calving, pregnancy checking spring bred cows, selling cull cows, weaning calves. Corn 100% harvest; Cotton 100% harvested; Soybeans 100% shedding, 93% harvested; Sorghum 100% harvested; Wheat 86% planted, 61% emerged, 1% poor, 23% fair, 54% good, 22% excellent; Alfalfa 17% very poor, 30% poor, 41% fair, 12% good, Other Hay 22% very poor, 35% poor, 31% fair, 12% good, Range, pastures feed 19% very poor, 37% poor, 37% fair, 7% good.

CALIFORNIA: Field activities were slowed somewhat by rains from the previous weekend. Seeding of small grains, winter forages, new alfalfa continued in the San Joaquin, Sacramento, coastal valleys. The additional soil moisture allowed dryland wheat, barley growers to begin planting. The rice harvest was complete, stubble was burned, incorporated. Straw decomposition methods were applied in rice fields where burning was not allowed. Cotton harvest was delayed a few days by the rain, but resumed in most fields by midweek. Plowdown of harvested cotton fields for pink bollworm control was ongoing. Blackeye bean harvest neared the end.

Harvests of corn for grain, silage were nearly completed. Sugarbeet harvest progressed in the San Joaquin Valley, new crop sugarbeets were being planted. Imperial Valley sugarbeets were treated for armyworms. Alfalfa, oat fields were sprayed for weeds. Alfalfa, sudangrass were cut for hay or greenchopped. Pruning, tree removal, planting of cover crops, other such work was active in the harvested stone fruit orchards. Growers were fumigating ground in preparation for new plantings of peach, prune, walnut, almond trees. The kiwifruit harvest was in full swing; some fruit was exhibiting problems related to late frost during the early growing stage. Pomegranate, persimmon, quince harvests were active in the San Joaquin Valley. Pecan harvest was also active. Grapes destined for wineries were still being harvested, mainly in the coastal areas. The olive harvest remained active. Grapefruit and lemons were picked in southern areas. In the San Joaquin Valley, picking of early variety new crop navel oranges, tangerines gained momentum. Fresh market tomato harvest was complete, with the exception of a few fields. A few strawberry growers were still picking, selling fruit. Broccoli, cauliflower were being harvested. Some broccoli sets were moved from hothouses to the fields. Brussels sprouts, cabbage were developing normally, with the recent cool temperatures. The end of season was rapidly approaching for Asian vegetables. Vegetable growers have started preparing hothouses for the winter season. Cucumber, eggplant picking continued, but packout volume was tapering off. Red pepper harvest was winding down. Taro root harvest will begin soon. The fall lettuce harvest peaked in volume. Growers continued to prepare fields for planting lettuce, garlic, onions. Some fields of lettuce, broccoli, cauliflower in southern areas were treated for loopers, aphids. Some additional vegetable crops harvested included sweet potatoes, cilantro, pumpkins, mushrooms, parsley, snap peas, sugar cane, mint, okra, radishes, squash, turnips, yam leaves. Water supplies remained plentiful, yet ranchers were anticipating the precipitation that will spur grass growth. Lower elevation pastures were declining under normal grazing. Supplemental feeding of cattle with hay, nutrient supplements continued. Cows were calving. Dairymen were stockpiling hay. The weather has been ideal for milk production. Sheep were grazing alfalfa fields. Beekeepers were preparing hives for the winter.

COLORADO: Days suitable for fieldwork 6.9. Topsoil 7% very short, 38% short, 54% adequate, 1% surplus. Subsoil moisture 6% very short, 31% short, 63% adequate, 0% surplus. Unseasonable warm, mild weather conditions last week allowed the harvest of late season crops to advance rapidly towards completion. Sugar beets 95% harvested, 86% 1998, 92% avg. Pasture, range feed 3% very poor, 8% poor, 32% fair, 50% good, 7% excellent.

DELAWARE: Days suitable for fieldwork 5.7. Topsoil 3% short, 94% adequate, 3% surplus. Subsoil moisture 5% short, 94% adequate, 1% surplus. Soybeans 69% harvested, 74% 1998, 60% avg. Sorghum 83% harvested, 74% 1998, 69% avg. Alfalfa hay 96% 4th cutting, 100% 1998, 98% avg.; 52% 5th cutting, 76% 1998, 65% avg. Hay supplies 23% short, 77% adequate. Pasture 3% poor, 9% fair, 80% good, 8% excellent. Barley 3% fair, 94% good, 3% excellent; 97% seeded, 100% 1998, 98% avg. Wheat 4% fair, 94% good, 2% excellent; 80% seeded, 80% 1998, 79% avg. Activities: Slightly drier weather allowed for wheat planting, soybean harvesting to make good progress.

FLORIDA: Warmer temperatures returned, averaging normal to 4° above. Daily highs averaged 70s, 80s at major stations. Lows mostly 50s Panhandle, northern Peninsula areas; 60s central Peninsula; 70s southern Peninsula. Tallahassee lows averaged 48°. Most localities received no rain. Ft. Pierce recorded about 0.33 in.; Pierson, Daytona Beach about 0.25 in.; Orlando area about 0.10 to 0.20 in. Moisture is mostly short to adequate with some areas very short or surplus. Winter wheat for grain planting starting. Sugarcane grinding active. Cotton harvest winding down. Peanut harvest is finished. Strong winds tossed some Dade County, East Coast vegetables; some plants stressed. Harvesting of endive, escarole, lettuce, radishes getting underway, Everglades. Fall tomato crop picking, Quincy, near end. Vegetables marketed: tomatoes, peppers, cucumbers, pickles, snap beans, squash, sweet corn, okra, eggplant, watermelons. Cool temperatures all citrus areas, very little rain, some irrigation. New growth slowed, good natural on-tree fruit coloring. Picking crews moving Navels, Ambersweet, Hamlin oranges, white, colored grapefruit, tangelos, a few K-Early Citrus Fruit. Caretakers cutting cover crops, spraying, fertilizing, pushing, burning dead trees, some resets being planted. Pasture feed 5% poor, 55% fair, 40% good. Cattle 40% fair, 60% good. Small grain winter pastures throughout State, especially Panhandle, held back by dry weather. Hay feeding active. North, Central; small grain forage, permanent pasture grass grew slower due to seasonally cooler weather, shorter days. Some locations received early frost. Central, south; hay production this season reduced due to poor weather.

GEORGIA: Days suitable for field work 6.7. Soil moisture 16% very short, 49% short, 34% adequate, 1% surplus. Rye 79% planted, 82% 1998, 84% avg. Sorghum 88% harvested for grain, 92% 1998, 88% avg. Soybeans 24% very poor, 35% poor, 28% fair, 12% good, 1% excellent. Other small grains 67% planted, 70% 1998, 67% avg. Onions 6% transplanted, 19% 1998, 17% avg. Pecans 6% very poor, 15% poor, 29% fair, 43% good, 7% excellent; 50% harvested, 53% 1998, 49% avg. Dry weather returned to the State last week. The dry weather helped crop harvesting, but hurt soil moisture. Soybean harvest remained behind 1998 pace. Condition declined from the previous week. Sorghum harvest progressed at the five year average pace. The cotton picking continued at 1998 pace. Peanut combining wrapped up. Winter wheat planting was active last week. Planting progress was slightly behind the five year average pace. Wheat was emerging at 1998 pace. The wheat condition changed slightly from the previous week. Rain is needed for small grains. Rye planting was behind both 1998. small grain planting was at the five year average pace. The dry conditions slowed some pasture planting. Pasture feed declined from the previous week. Farmers purchased hay to feed cattle. The pecan harvest was active last week, was slightly ahead of the five year average pace. The pecan condition changed slightly from the previous week. Other activities included: Mowing cotton, tobacco stalks, harvesting fall vegetables.

HAWAII: Weather conditions remained fair for agriculture. Skies were generally partly cloudy. Rainfall was light with moderate amounts at the start and middle portion of the week. Crops made mostly fair to good progress. Variable temperatures caused uneven maturing in some crops. Banana, papaya harvesting active. Cloudy skies and cooler temperatures slowed development of both crops. Head cabbage harvesting steady. Overall crop condition fair to good. Ginger root crop hampered by cloudy skies and rain showers.

IDAHO: Days suitable for fieldwork 6.1. Topsoil 15% very short, 52% short, 33% adequate. Weather across Southern Areas continues dry with above normal temperatures. Winter wheat emergence has lagged behind 1998, the five year average since late September. Corn harvested 56% for grain, 63% 1998, 68% avg. Sugarbeets 100% harvested, 98% 1998, 98%

avg. Winter wheat 99% planted, 99% 1998, 99% avg.; 83% emerged, 91% 1998, 87% avg. Activities: Fall ground preparation, wrapping up fall harvest, marketing yearling cattle.

ILLINOIS: Days suitable for fieldwork 6.9. Topsoil 38% very short, 54% short, 80% adequate. The dry weather has caused poor wheat stands, fire concerns, in addition to producers having to haul water to livestock. Other activities for last week included: Storing equipment, finishing fall tillage, fertilizer application.

INDIANA: Days suitable for fieldwork 7.0. Topsoil 43% very short, 44% short, 13% adequate, 0% surplus. Subsoil 55% very short, 36% short, 9% adequate, 0% surplus. Conditions are very dry again in some counties. Winter wheat seeding is virtually complete. Winter wheat 3% very poor, 7% poor, 40% fair, 43% good, 7% excellent. Wheat 94% emerged, 92% 1998, 93% avg. Corn harvest is virtually complete, except for scattered fields in some counties. Soybean harvest complete, except for scattered fields around the state. Tobacco stripping is going slow. Activities: Applying fertilizer, nitrogen, spreading lime, seeding winter wheat, tillage of soils, chopping stalks, equipment cleaning, repair, hauling grain, feeding hay, caring for livestock.

IOWA: Days suitable for field work 7.0. Topsoil very short 57%, short 39%, adequate 4%. Subsoil moisture very short 48%, short 44%, adequate 8%. With harvest virtually complete, producers working on fall tillage, fertilizer application, machinery repair. Dry, dusty conditions continue after another week without measurable rainfall. Winter 95% wheat planted, 95% 1998, 97% avg. Fall 58% tillage, 43% 1998, 39% avg.; fall 48% fertilizer applied, 37% 1998, 34% avg. Grain movement 28% none, 44% light, 24% moderate, 4% heavy. Off-farm grain storage availability 32% short, 67% adequate, 1% surplus; on-farm storage 31% short, 68% adequate, 1% surplus. Use of stubble fields for grazing 31% none, 26% limited, 35% moderate, 8% extensive. Hay, roughage availability 5% short, 84% adequate, 11% surplus quality of hay, roughage supplies 7% poor, 46% fair, 47% good.

KANSAS: Days suitable for fieldwork 6.9. Topsoil 25% very short, 57% short, and 18% adequate. Subsoil moisture 14% very short, 49% short, 37% adequate. Warm, dry weather across the State last week resulted in another drop in wheat condition. Insect pressure from grubs, cutworms, greenbugs, aphids has been reported in some areas, is also contributing to the decline in wheat condition. Some farmers may have to replant a portion of their wheat due to insect loss. Wheat 6% pastured, 3% 1998, 6% avg. With poor stands caused by the dry weather, the wheat crop is very marginal for grazing in some areas of the State. Sunflowers 98% harvested, 95% 1998. Range, pasture feed 2% very poor, 19% poor, 49% fair, 29% good, 1% excellent. Stock water supplies dropped from 78% adequate to surplus last week to 69% adequate this week. The continued lack of rainfall is causing water levels in stock ponds to become very low in some areas of the State. Major livestock activities last week included: Moving cattle to row crop stubble or wheat pasture, weaning, marketing spring calves, working fall calves. Some sickness has been reported in weaned spring calves due to extremely dusty conditions.

KENTUCKY: Day suitable for fieldwork 6.0. Topsoil 22% very short, 53% short, 25% adequate. For the week, temperatures averaged 60°, 12° above normal, 6° warmer than previous week. Rainfall Statewide was 0.0 inches, 0.92 below normal for the week. Corn harvest is complete. Soybean harvest is nearing completion.

LOUISIANA: Days suitable for fieldwork 6.8. Soil moisture 28% very short, 41% short, 31% adequate, 0% surplus. Pecans 1% very poor, 16% poor, 45% fair, 35% good, 3% excellent; 50% harvested, 54% 1998, 42% avg. Sugarcane 3% poor, 16 fair, 46% good, 35% excellent; 42% harvested, 38% 1998, 41% avg. Sweet potatoes 99% harvested, 96% 1998, 92% avg. Sweet potato harvest edged closer to completion. Wheat 89% planted, 82% 1998, 68% avg.; 59% emerged, 64% 1998, 44% avg. Wheat planting was slow, due to the lack of soil moisture. Livestock 3% very poor, 11% poor, 33% fair, 46% good, 7% excellent. Vegetables 5% very poor, 19% poor, 36% fair, 37% good, 3% excellent. Pastures 15% very poor, 23% poor, 39% fair, 22% good, 1% excellent.

MARYLAND: Days suitable for fieldwork 6.2. Topsoil 6% short, 89% adequate, 5% surplus. Subsoil moisture 10% very short, 7% short, 76% adequate, 7% surplus. Corn 95% harvested for grain, 93% 1998, 91% avg. Soybeans 73% harvested, 84% 1998, 74% avg. Sorghum 89% harvested, 94% 1998, 77% avg. Tobacco 21% stripped, 27% 1998, 21% avg. Clover, other hays 93% 4th cutting, 96% 1998, 92% avg. Alfalfa 73% 5th cutting, 79% 1998, 73% avg. Wheat 1% poor, 11% fair, 78% good, 10% excellent; 84% seeded, 93% 1998, 87% avg. Barley 15% fair, 80% good, 5% excellent; 96% seeded, 100% 1998, 99% avg. Rye 10% fair, 84% good, 6% excellent; 90% seeded, 93% 1998, 90% avg. Pasture feed 1% very poor, 3% poor, 22% fair, 64% good, 10% excellent. Hay 10% very short, 31% short, 58% adequate, 1% surplus. Activities: Corn harvesting nearing completion, wheat seeding making good progress.

MICHIGAN: Days suitable for fieldwork 7.0. Topsoil 9% very short, 39% short, 52% adequate, 0% surplus; subsoil 28% very short, 40% short, 32% adequate, 0% surplus. Near record highs beginning week, but temperatures cooled going into weekend. Scattered rains welcomed in middle of week, but not enough fell to make a big impact on soils or crops. Great harvest weather continued as harvest neared completion. Corn harvest winding down as scattered fields still left to be harvested. Fourth cutting of hay completed. Sugarbeet harvest completed with good yields reported. Winter wheat germination, stand establishment would improve with more rains.

MINNESOTA: Days suitable for fieldwork 6.0. Topsoil 18% very short, 34% short, 43% adequate, 5% surplus. Average temperatures for the week were over 13° above normal, only spotty rainfall was received. Substantial rains before the ground freezes would be welcome in most areas. Nearly all field work is completed. Crop producers have been busy with grain, oilseed hauling, other fall chores, with LDP paperwork. Livestock in outdoor facilities are generally benefitting from the mild, dry weather, but blowing dust has produced some respiratory problems.

MISSISSIPPI: Days suitable for fieldwork 6.9. Soil moisture, 18% very short, 40% short, 38% adequate, 4% surplus. Soybeans 98% harvested, 99% 1998, 92% avg. Wheat 91% planted, 94% 1998, 87% avg.; 69% emerged, 68% 1998, 72% avg.; 2% very poor, 5% poor, 34% fair, 51% good, 8% excellent. Hay 51% short, 48% adequate, 1% surplus. Cattle 1% very poor, 12% poor, 34% fair, 47% good, 6% excellent. All row crop harvests are virtually complete. Many farmers are making preparations for next year.

MISSOURI: Topsoil moisture remains very short to short. Dry weather continues throughout the State. Row crops are all harvested. Fall wheat seedings are in need of rain before freeze-up. Pasture are mostly in very poor to poor condition and stock ponds in many areas are short of water.

MONTANA: Days suitable for fieldwork 6.4. Topsoil 44% very short, 33% short, 23% adequate. Subsoil moisture 28% very short, 54% short, 18% adequate. Cattle, calves moved from summer 88% ranges, 93% 1998, 90% avg. Sheep, lambs moved from summer 92% ranges, 94% 1998, 93% avg. Lack of moisture is damaging the winter wheat crop. There are some reports of producers having to replant to spring wheat next spring if moisture isn't received soon. Other farming activities: fencing, shipping cattle to market, getting equipment ready for winter.

NEBRASKA: Days suitable for field activities 7.0. Topsoil 54% very short, 36% short, 10% adequate. Subsoil moisture 38% very short, 37% short, 25% adequate. Temperatures across areas averaged 12 to 17° above normals for the week. There were no measurable precipitation reported. Corn 98% harvest, 89% 1998, 91% avg. Sorghum 99% harvest, 93% 1998, 94% avg. Wheat 11% very poor, 15% poor, 33% fair, 29% good, 12% excellent. Pasture, range feed 16% very poor, 26% poor, 41% fair, 16% good, 1% excellent. Dust in lots was a big problem as well as concerns of water supplies for those that were not on rural water lines. Livestock enjoyed the mild fall, good grazing weather. Main activities included: Cattle processing, caring for livestock, fencing, cleaning harvest equipment, moving hay to farmsteads, ordering seeds for next crop year, reviewing yield data from fall harvest, loans, LDP processing.

NEVADA: DATA NOT AVAILABLE

NEW ENGLAND: Days suitable for fieldwork 6.0. Topsoil 5% short, 70% adequate, 25% surplus. Subsoil 8% short, 67% adequate, 25% surplus. Pasture feed 19% very poor, 13% poor, 37% fair, 29% good, 2% excellent. Rhode Island potatoes 99% harvested, 100% 1998, 100% avg.; Field corn 100% harvested, 100% 1998, 100% avg.; Second cut hay 100% harvested, 100% 1998, 100% avg.; Third cut hay 100% harvested, 95% 1998, 99% avg.; Apples 100% harvested, 100% 1998, 100% avg.; size average to below average. Cranberries 100% harvested, 100% 1998, 100% avg. Major farm activities included: Chopping hay, corn; harvesting corn for grain; digging potatoes; picking apples; harvesting cranberries; spreading manure, lime, preparing equipment for winter storage.

NEW JERSEY: Days suitable for field work averaged 7. Temperatures averaged 44° North, 48° Central, 51° South. Extremes were 76° at Pomona on the 11th, 20° at Charlotteburg on the 12th. No measurable rainfall was received during the week. Adequate topsoil moisture was reported in most areas. Pastures are between fair, poor condition. Farmers are busy cleaning up their fields after finishing harvesting their crops. Planting of cover crops (wheat, rye) is underway in many areas of the state. Harvest of corn, soybeans is winding down in the southern areas but still very active in the rest of the state. The remaining soybean fields are between fair, poor condition. Harvest of pumpkins, fall cabbage, lettuce, spinach, other minor fall vegetables is decreasing. Harvest of apples is also decreasing. Harvest of cranberries is near completion.

NEW MEXICO: Days suitable for field work 6.9. Topsoil moisture declined further across the state from the warm, dry weather conditions. All areas experienced an unseasonably warm, dry week with temperatures at or near record-breaking levels. Afternoon temperatures topped 70° even at high-

elevation stations such as Chama, Red River. Main farm activities were: Harvesting sorghum, red chile, cotton. Corn for grain harvest has been completed for the year. Cotton, sorghum harvest did increase during the week, but a hard freeze is still needed. Peanut harvest continued with excellent yields reported. Sorghum was in mostly good condition, while wheat conditions declined due to the dry conditions. Ranchers were busy with marketing calves, culling cows, maintenance activities. Pasture, Range feed 4% very poor, 11% poor, 32% fair, 50% good, 3% excellent. Cattle, sheep conditions continued in fair to good condition. Some supplemental feeding was reported.

NEW YORK: Days suitable: 5.5. Soil moisture 95% adequate, 5% surplus. Pasture feed fair to good. Corn for grain, soybean harvest progressed under ideal conditions. Producers preparing machinery for winter storage, doing routine maintenance. Orchard clean-up continued. Apples, onions, potatoes moving from storage, graded, packed. Mild weather easy on livestock. Growers attending meetings, taking time off for hunting.

NORTH CAROLINA: Days suitable for fieldwork 6, compared to 4.6 last week. Seasonably warmer weather combined with relatively little rainfall made for a productive week for areas farmers. Major gains were made in harvesting cotton, peanuts, although quality of both are a concern. After recent rains in the west, consecutive warm, dry weeks in the east, soil moisture levels have returned to near normal. Currently soil moisture across the State is rated 12% short, 70% adequate, 18% surplus. The harvest of corn is nearly finished. Limited progress was made in soybean harvest, wheat planting. Sweetpotato, sorghum harvest is drawing to a close with both at or near their respective five-year avg. Other activities during the week included: Shearing, marketing Christmas trees, marketing tobacco, harvesting vegetable crops, field equipment service, repairs.

NORTH DAKOTA: Days suitable for fieldwork 7. Topsoil 10% very short, 33% short, 55% adequate, 2% surplus. Dry conditions allowed producers to move toward the completion of the corn, sunflower harvest.

OHIO: Days suitable for fieldwork 6.6. Topsoil 17% very short, 44% short, 38% adequate, 1% surplus. Soybeans 100% harvested, 100% 1998, 97% avg. Corn 96% harvested for grain, 91% 1998, 78% avg. Winter wheat 99% emerged, 100% 1998, 93% avg. Tobacco 32% stripped, 34% 1998. Winter wheat 0% very poor, 3% poor, 22% fair, 60% good, 15% excellent. Activities for the week include: Fall tillage, harvesting; land leveling; tiling; applying lime, fertilizer, manure; cleaning equipment; working on LDP loans; winterizing buildings; fencing corn fields for animal grazing; digging nursery stock; cutting firewood; inspecting livestock waste tanks; sowing cover crops hauling grain; building water sources; hauling water, hay to livestock; weaning, selling calves.

OKLAHOMA: Days suitable for fieldwork 6.7. Topsoil 36% very short, 37% short, 27% adequate. Subsoil moisture 21% very short, 54% short, 25% adequate. Warm weather encouraged growth of newly emerged wheat. Oats 14% very poor, 10% poor, 35% fair, 40% good, 1% excellent; 82% planted, 87% 1998, 81% avg.; 43% up-to-stand, 71% 1998, 61% avg. Soybeans 88% harvested, 77% 1998, 77% avg. Peanuts 90% combined, 73% 1998, 81% avg. Alfalfa Hay 2% very poor, 10% poor, 29% fair, 57% good, 2% excellent; 90% 4th cutting, 89% 1998, 98% avg.; 34% 5th cutting, 33% 1998, 71% avg.; Livestock 5% poor, 25% fair, 67% good, 3% excellent; Pasture, range 7% very poor, 17% poor, 46% fair, 29% good, 1% excellent.

OREGON: Activities: Winter wheat planting about finished. Still some fertilizing of grass seed fields as weather permits. Winter barley planting finished. Christmas tree harvest continued. Hazelnut harvest wrapping up. Livestock continued to be fed. Movement off rangeland nearly completed. Beginning to cleanup the barns, mend fences, other repairs as needed for next season.

PENNSYLVANIA: Days suitable for field work 5.7. Soil moisture 2% very short, 15% short, 74% adequate, 9% surplus. Corn 78% harvested, 83% 1998, 74% avg. Soybeans 79% harvested, 83% 1998, 77% avg. Fall 89% plowing, 85% 1998, 88% avg. Wheat 97% planted, 96% 1998, 96% avg. Wheat 86% emerged, 85% 1998. Barley 99% emerged, 95% 1998. Apple 92% harvest, 99% 1998, 98% avg. Activities include: Harvesting corn, soybeans, apples, cool weather vegetables; planting wheat, cover crops; machinery maintenance; hauling, pumping, spreading manure; caring for livestock; cutting hay; plowing for the fall; spraying for weeds in alfalfa fields.

SOUTH CAROLINA: Days suitable for fieldwork 6.0. Soil moisture 5% very short, 26% short, 67% adequate, 2% surplus. Apples 100% harvested, 100% 1998, 99% avg. Livestock 4% poor, 27% fair, 56% good, 13% excellent. Pasture feed 2% very poor, 13% poor, 41% fair, 39% good, 5% excellent. Sorghum 87% harvested, 97% 1998, 89% avg. Sweet Potatoes 96% harvested, 100% 1998, 80% avg. Winter Grazings 89% planted, 88% 1998, 86% avg.; 81% emerged, 69% 1998, 73% avg.; 3% poor, 36% fair, 54% good, 7% excellent. Winter Wheat 38% planted, 39% 1998, 38% avg.; 24% emerged, 28% 1998, 24% avg.; 42% fair, 52% good, 6% excellent. Barley 79% planted, 98% 1998, 81% avg.; 60% emerged, 70% 1998, 68% avg.; 22% fair, 36% good, 42% excellent. Oats 80% planted, 77% 1998, 78% avg.; 56% emerged, 60% 1998, 63% avg.; 44% fair, 41% good, 15% excellent. Rye 80% planted, 76% 1998, 73% avg.; 69% emerged, 59% 1998, 59% avg.; 45% fair, 42% good, 13% excellent. Pecans 38% harvested, 52% 1998, 47% avg.; 58% fair, 42% good.

SOUTH DAKOTA: Days suitable for fieldwork, 6.7. Topsoil 25% very short, 46% short, 25% adequate, 4% surplus. Subsoil moisture 10% very short, 41% short, 41% adequate, 8% surplus. Sunflower 96% harvested, 92% 1998, 95% avg. Sorghum 95% harvested, 87% 1998, 91% avg. Sorghum 98% harvested for silage, 100% 1998, 100% avg. Winter rye 2% poor, 25% fair, 64% good, 9% excellent; 99% emerged, 100% 1998, 100% avg. Range, pasture 3% very poor, 10% poor, 33% fair, 45% good, 9% excellent. Stock water supplies 4% very short, 15% short, 73% adequate, 8% surplus. Cattle 1% poor, 10% fair, 67% good, 22% excellent. Sheep 11% fair, 58% good, 31% excellent. Extremely dry conditions are putting stress on livestock health, fall seeded crops. These conditions are generating concern for winter wheat survival, grass/field fires throughout the state.

TENNESSEE: Days suitable for fieldwork 7.0. Topsoil 24% very short, 35% short, 40% adequate, 1% surplus. Subsoil moisture 30% very short, 34% short, 36% adequate. Burley 62% stripped, 66% 1998, 62% avg. Winter wheat 87% seeded, 89% 1998, 81% avg.; 65% emerged; 1% very poor, 4% poor, 22% fair, 63% good, 10% excellent. Record high temperatures, coupled with mostly dry conditions allowed the State's soybean growers to make good progress with harvest. Harvest is currently running more than two weeks ahead of normal. In addition to soybean harvest, many producers were busy trying to wrap-up winter wheat seeding. The tobacco stripping process continues to be delayed by dry weather. Cattle producers

continued feeding hay with many buying additional supplies for the winter.

TEXAS: Harvest continued under generally dry, unseasonably warm, open conditions. South Areas received a few scattered showers. Land preparation continued slowly in most areas. Livestock forage conditions remained unfavorable, supplemental feeding continued to expand. General livestock condition continued to decline. Herd reduction continued to increase in many areas while herd sell out possibilities increased as hay supplies decreased. An application for drought declaration was submitted to the Governor by the Houston County commissioners court. Citrus harvest continued to gain momentum in the Rio Grande Valley while carrot, turnip harvest continued on the Plains.

Crops: Small Grains: Seeding of wheat, oats remained slow in most areas. Seedling death, poor stands continued as a result of inadequate moisture while germination has not occurred in many other locations. Statewide wheat condition was rated at 51% of normal compared with 70% 1998. Corn: Harvest was complete on the High Plains, land preparation for the 2000 crop began. Cotton: Harvest continued under generally dry, open conditions. On the High Plains spraying to aid in harvest was resumed in a few locations as some regrowth was occurring. Cotton stalk destruction remained active in many locations. Bolls 99% Opening Published, 99% 1998, 98% Avg. Peanuts: Harvest continued to be active on the Plains but was nearing completion in Central, South Areas. Rice: Harvest of the second crop was completed. Sorghum: Harvest continued active on the High Plains. Elevator capacity problems remained in a few locations. Growers that delayed on sorghum harvest while cotton was completed are beginning to harvest sorghum again. However, as a result of the delay, sprouting in the head became a problem in a few locations. Mature, 100% Published, 100% 1998, 100% Avg. Soybeans: Harvest of remaining fields on the High Plains neared completion. Yields remained favorable. Published 96%, 95% 1998, 94% Avg.

Commercial Vegetables, Fruit and Pecans: Rio Grande Valley, harvest remained active for bell peppers, greens, fall melons. Onions were progressing well while spinach planting was mostly completed, cabbage harvest began in a few locations. Citrus continued to ripen, harvest of early fruit continued. Quality was good, yields were average. Preparation for later planting of vegetables continued. Harvesting of sugar cane continued. San Antonio-Winter Garden, cabbage, onion planting was mostly completed, preparation for winter vegetables continued. East Areas, planting of fall crops, gardens remained slow. Planting of many fall garden vegetables has been discontinued as the conditions remain dry. Sweet potato harvest was completed. Pine tree harvest continued. A Pine saw fly outbreak was discovered. High Plains, bean harvest remained mostly completed. Generally good yields were reported. Carrot, turnip harvest continued to escalated. The pecan crop continued to mature and harvest activities continued to increase. Quality remained variable.

Range and Livestock: General livestock conditions remained poor in most areas. Herd reduction continued to increase and supplemental feeding increased in many areas as forage conditions continued to decline. Livestock sickness, mainly pneumonia, continued to increase as a result of the dry, dusty conditions. Some producers are close to heard liquidation. The market remained steady to slightly weakened. Statewide, fall grazing from wheat, oats was minimal. Hay supplies remained minimal and were decreasing in many areas as supplemental feeding began early. Native deer herds remained in poor condition as hunting season has started.

UTAH: Days suitable for field work 7. Topsoil 30% very short, 47% short, 23% adequate. Corn 96% harvested for grain, 75% 1998, 86% avg. Weather throughout the state continues to be unseasonably warm and dry.

VIRGINIA: Days suitable for fieldwork 6.3. Topsoil 10% very short, 20% short, 65% adequate, 5% surplus. Subsoil moisture 15% very short, 21% short, 59% adequate, 5% surplus. Beef Cattle Forage Obtained from Pastures 68%. Milk Cow Forage Obtained from Pastures 11%. Sheep Forage Obtained from Pastures 69%. Pastures 7% very poor, 14% poor, 36% fair, 36% good, 7% excellent. Livestock 0% very poor, 5% poor, 26% fair, 61% good, 8% excellent. Small Grain, Winter Grazing Crops 0% very poor, 3% poor, 30% fair, 56% good, 11% excellent. Corn for Grain 93% harvested, 97% 1998, 91% avg. Soybeans 49% harvested, 69% 1998, 50% avg.; 5% very poor, 12% poor, 31% fair, 41% good, 11% excellent. Winter Wheat 63% seeded, 74% 1998, 67% avg. Barley 97% seeded, 92% 1998, 94% avg. Peanuts 100% dug, 100% 1998, 100% avg.; 97% combined, 99% 1998, 99% avg. Cotton 56% harvested, 94% 1998, 74% avg. Apples, Winter 95% harvested, 97% 1998, 98% avg. Conditions were warm, dry, windy across much of the Commonwealth during the past week. Topsoil moisture levels diminished in many localities as a result of limited showers. Pasture feed remained much the same as the previous week. Some livestock producers reported providing supplemental hay to their herds. However, the majority of beef cattle, sheep, other livestock obtained the majority of forage requirements from grazing pasture acreage. Ninety-three percent of corn for grain has been harvested. The condition of Areas soybean acreage remained virtually unchanged this past week. Soybean producers made good progress this past week harvesting their crop. Forty-nine percent of the acreage has been harvested. Good yields have been reported. Wheat producers still lag behind the five-year average schedule with respect to seeding next year's crop. Much progress was made this week, however, due to favorable field conditions. Nearly all of areas barley acreage has been seeded. Aphid scouting began with a few cases already reported. Small grain producers have reported good emergence of previously seeded acreage. Peanut harvest is nearly complete. The entire crop has been dug, 97% has been combined. While peanut producers got off to a late start harvesting their crop, they were able to finish at the same time as the five-year average. Despite the excessive moisture prevalent during September, the first part of October peanut producers, graders have reported that this year's crop has yielded very well. Minimal frost damage was reported. It is still not determined how many acres will be abandoned as a result of the Hurricanes. Cotton producers were able to make great progress harvesting their crop during the past week. However, producers remain well behind a normal harvest schedule. Fifty-six percent of areas cotton acreage has been picked, compared to the five-year average of 74%. Harvest of winter apples is 95%, slightly behind the previous year, the five-year average. Other activities during the past week included: Grading of tobacco, tending to livestock.

WASHINGTON: Days suitable for fieldwork 3.7. Topsoil was 5% very short, 25% short, 65% adequate, 5% surplus; subsoil moisture 12% very short, 46% short, 41% adequate, 1% surplus. Winter wheat 100% planted, 100% 1998, 98% avg.; 92% emerged, 99% 1998, 92% avg. Winter wheat planting was completed. Emerging winter wheat benefitted from mild temperatures, precipitation that fell across eastern areas last week. Hay, other roughage supplies were 60% adequate, 40% surplus. Range, pasture 15% very poor, 41% poor, 39% fair, 5% good. Soils were saturated due to the heavy rain that fell in western areas. Christmas tree harvest continued as u-cut farms were putting out signs. Nursery plants were being moved into plastic hoop houses for winter protection. CRP land was being planted, fall weaning of calves was almost complete. Carrots, sugar beets, corn for grain were all being harvested.

WEST VIRGINIA: Days suitable for fieldwork 6.0. Topsoil 18% very short, 55% short, 27% adequate. Hay 3rd cut 90%. Inadequate moisture supplies, subsequent hauling of water for livestock continued for most of the State. Less than one quarter inch of precipitation was recorded for all reporting weather stations. Corn 88% harvested, 90% 1998, 81% 5-yr avg. Soybeans 95% harvested, 95% 1998, 76% 5-yr avg. Wheat 98% planted, 92% 1998, 90% 5-yr avg.; 42% emerged, 80% 1998. Cattle 5% poor, 45% fair, 50%

International Weather and Crop Summary

November 7 - 13, 1999

HIGHLIGHTS

FSU-WESTERN: Unseasonably cold weather halted winter grain growth as far south as the Black Sea Coast.

EUROPE: Showers in central Europe helped winter grain establishment in the north, and germination and emergence in the south.

EASTERN ASIA: Rain aided vegetative winter wheat in the North China Plain and slowed late double-crop rice harvesting in southwestern China.

SOUTHEAST ASIA: Drier weather eased flooding in central Vietnam. Showers, however, slowed rice harvesting in the central Philippines and northern and southern Vietnam.

SOUTH ASIA: Seasonably dry, warm weather spurred summer crop harvesting and planting of winter-grown grains and oilseeds.

AUSTRALIA: Untimely rain covered Queensland's mature winter grains, but harvest conditions remained favorable elsewhere.

SOUTH AMERICA: In central Argentina, isolated frost caused localized wheat damage in southern Buenos Aires, Argentina. In southern Brazil, rainfall was confined to the northern and eastern growing areas, benefiting coffee flowering and soybean germination.

MEXICO AND CENTRAL AMERICA: Seasonably dry weather aided corn maturation and harvesting in the Southern Plateau. Heavy showers possibly caused flooding in Belize, northern Honduras, and northern Guatemala.

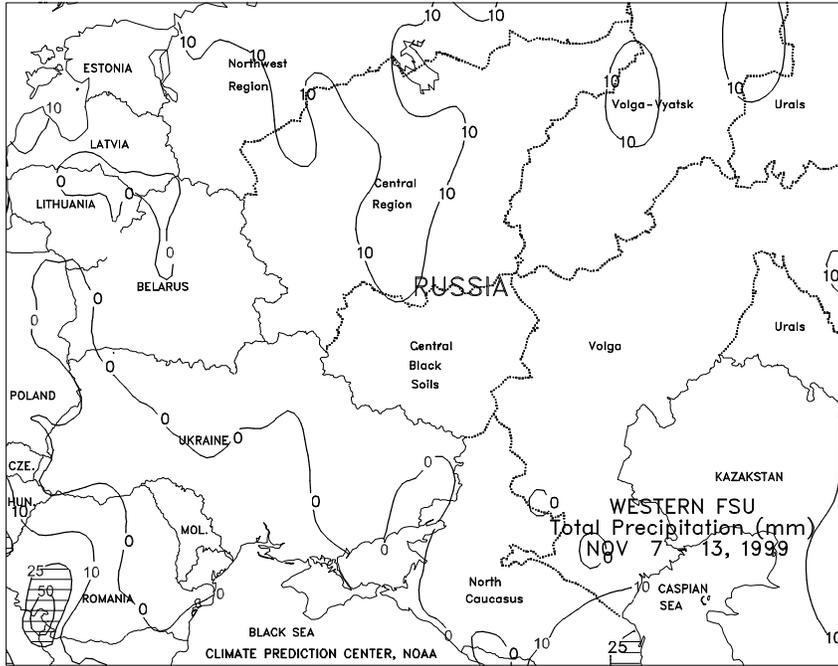
NORTHWESTERN AFRICA: Light to moderate showers in Morocco, Algeria, and Tunisia boosted topsoil moisture for winter grain planting.

SOUTH AFRICA: Planting prospects remained poor in western and southern sections of the corn belt due to dryness.



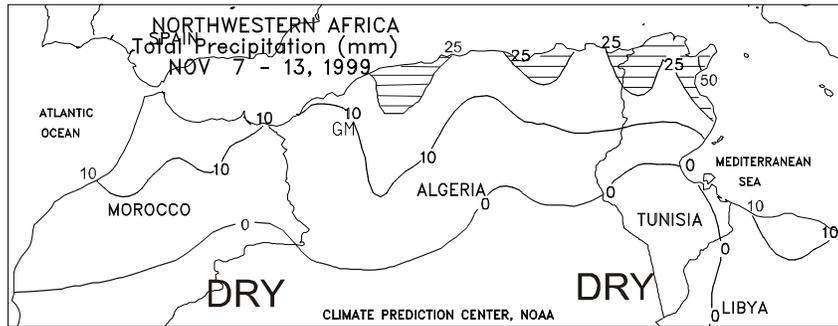
EUROPE

In England, northern France, and the Benelux countries, dry weather helped corn and sugar beet harvesting and winter wheat planting. As of November 10, approximately one-third of the sugar beet crop in England and the Netherlands had reportedly been harvested. Similarly, dry weather favored corn and cotton harvesting and winter wheat planting in Portugal and western Spain. In contrast, showers (10-40 mm) in major crop-producing regions in eastern Spain and southern France slowed late-season summer crop harvesting, but improved soil moisture conditions for winter grain planting. Farther east, showers (15-45 mm) from Germany and southwestern Poland southward through Italy, the Balkans, and Greece helped winter grain establishment in the north and germination and emergence in the south. Soybean harvesting in Italy and cotton harvesting in Greece were likely delayed by this wet weather. Elsewhere, dry weather dominated across extreme northern and extreme eastern Europe. Nevertheless, topsoil moisture was adequate in major crop-producing regions helping winter grain development and establishment. Pockets of unseasonably mild weather (temperatures 1-3 degrees C above normal) dotted Europe, spurring winter grain development in England, northern Italy, northern Poland, and Slovakia. Elsewhere, near-normal or unseasonably cool weather (temperatures 1-3 degrees C below normal) prevailed.



FSU-WESTERN

A cold front pushed southward over the region, ushering in the coldest weather of the season and halting winter grain growth as far south as the Black Sea Coast. Light to moderate snow (4-13 mm, liquid equivalent) accompanied the colder weather in northern Russia, increasing snow cover. Mostly dry weather stretched from Ukraine eastward through southern Russia (lower Volga Valley and North Caucasus), helping late-season fieldwork. Weekly temperatures averaged 2 to 6 degrees C below normal in Russia and most of Ukraine. Extreme minimum temperatures during the week ranged from -13 to -20 degrees C across northern Russia. Extreme minimum temperatures across Ukraine and southern Russia ranged from -5 to -15 degrees C. The combination of a fall drought and recent cold have likely caused spotty emergence and limited plant establishment in south-central Ukraine, making crops more vulnerable to potential winterkill conditions. In cotton-producing areas of Central Asia, the first significant autumn freeze ended the growing season as far south as southern Turkmenistan. Minimum temperatures fell to around -5 degrees C, with some locations in Uzbekistan reporting temperatures as low as -11 degrees C. Widespread precipitation (10-34 mm) fell across the eastern two-thirds of Uzbekistan, interrupting cotton harvesting. In some areas, rain turned to snow as colder air moved in from the north. At week's end, a shallow snow cover existed over northernmost cotton-producing areas in eastern Uzbekistan.



NORTHWESTERN AFRICA

Light to moderate showers (5-25 mm, with local amounts in excess of 25 mm) spread across most areas, boosting topsoil moisture for winter grain planting. The greatest amounts of precipitation (23-55 mm) fell in northeastern Algeria and northern Tunisia, initiating planting activities. Elsewhere, light rain (around 10 mm) in Morocco kept topsoils favorably moist for planting. In western and central Algeria, the greatest amounts of rain (17-25 mm) fell along the coast, with only light, scattered showers (4-9 mm) falling over major winter grain-producing areas farther inland. Additional rain is needed in these areas before planting can become widespread. Weekly temperatures averaged near normal in Morocco, Algeria, and Tunisia. Plenty of time remains for planting winter grains over the region, as most of the crop is typically planted from mid-November to mid-December.

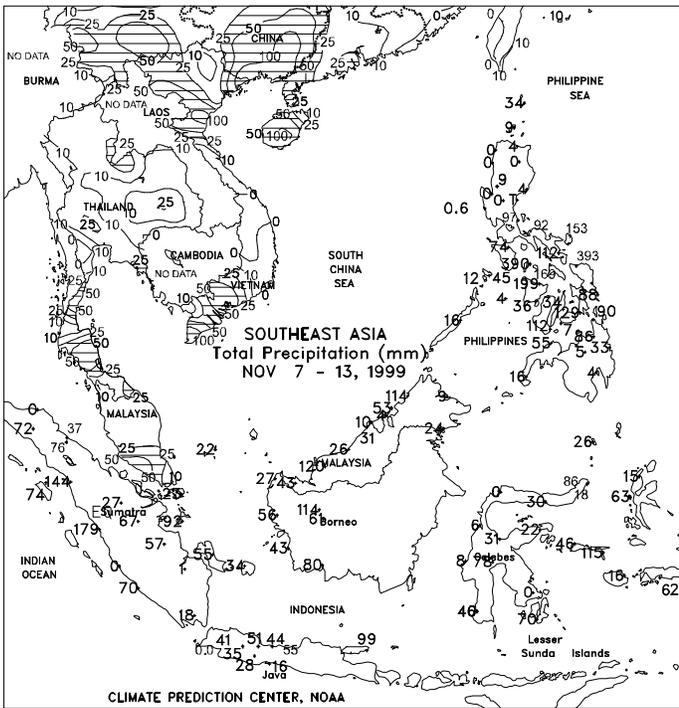


EASTERN ASIA

Seasonable rain (3-10 mm) increased soil moisture for germinating to vegetative winter wheat across the North China Plain. Light rain (5-20 mm) covered most of the Yangtze Valley and southern China, increasing soil moisture for rapeseed planting but causing only minor delays to late double-crop rice harvesting. Heavier rain (40-100 mm) delayed late double-crop rice harvesting in southwestern China (Guangxi). Temperatures averaged 3 to 5 degrees C above normal across most of China, aiding rice harvesting in the south.

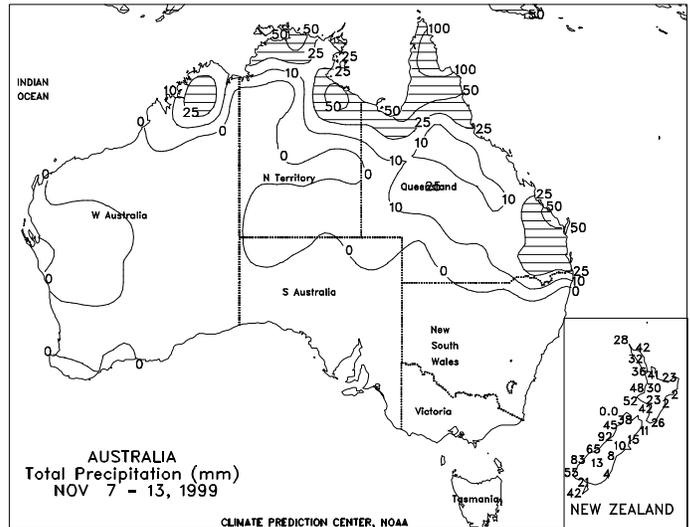
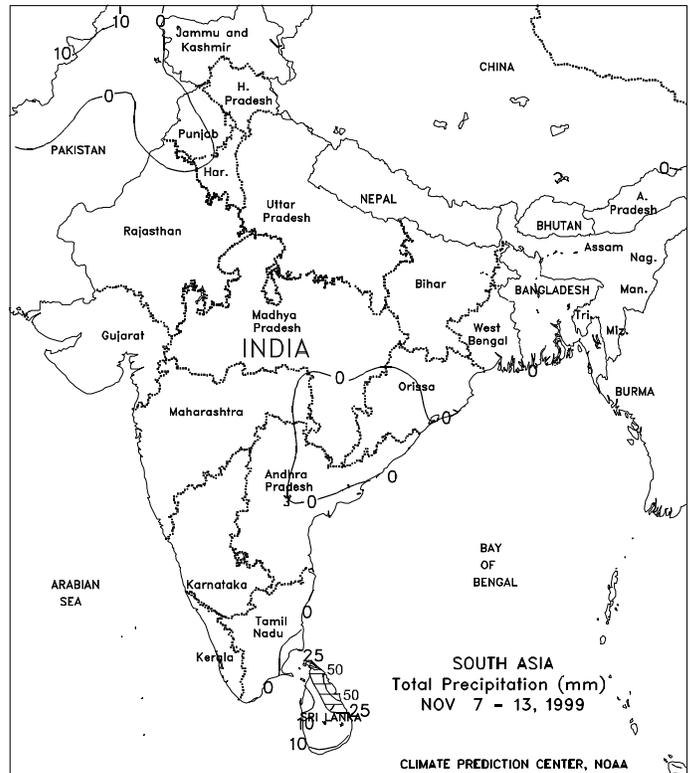
SOUTH ASIA

Seasonably dry weather favored fieldwork throughout the region. Temperatures averaged 2 to 4 degrees C above normal in Pakistan and central and northern sections of India, favoring dry down and harvesting of cotton, oilseeds, coarse grains, and rice. Winter wheat and oilseed planting was also underway across the northern growing areas. In Orissa, typhoon recovery efforts continued, but much of the rice crop is reportedly unsalvageable. Sea water intrusion is also a concern for much of the acreage. Elsewhere in eastern India and Bangladesh, rice harvesting and transplanting of autumn-sown crops is progressing. In southern India, dry, warm weather spurred early development of Rabi (winter grown) grains and oilseeds while hastening cotton and oilseed maturity.



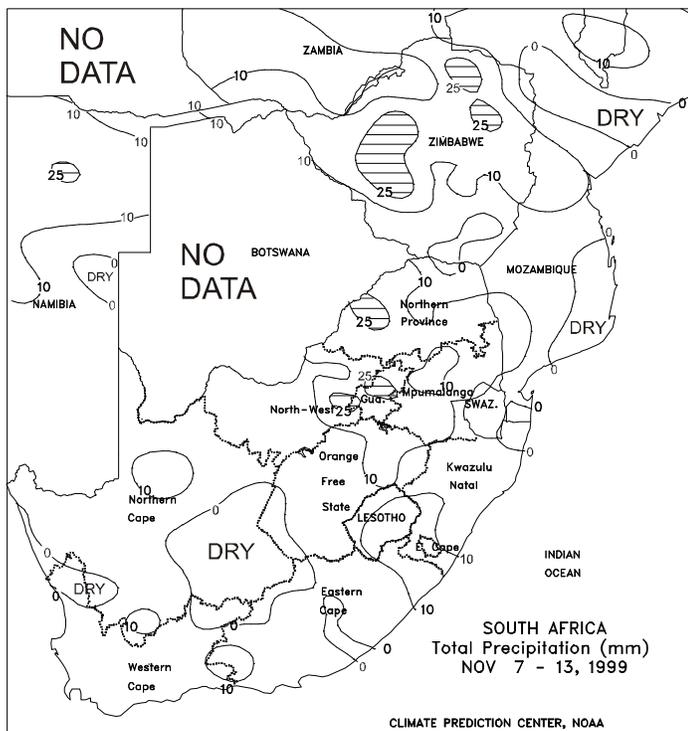
SOUTHEAST ASIA

Drier weather (less than 10 mm) eased flooding across central Vietnam, while moderate showers (30-100 mm) slowed rice harvesting in northern and southern Vietnam's major rice-producing areas. Tropical Storm Frankie moved into the central Philippines on November 10 and promptly stalled and dissipated. Frankie only produced sustained winds of 30 to 35 knots (35-40 mph) but brought heavy rain (100-300 mm) to the east-central Philippines, disrupting rice harvesting. Drier weather (5-20 mm) favored rice harvesting in Thailand. In Java, Indonesia, light to moderate showers (10-60 mm) continued to increase moisture supplies for vegetative main-season rice. In peninsular Malaysia, unseasonably light showers (10-30 mm, with isolated amounts greater than 50 mm) reduced moisture supplies for oil palm.



AUSTRALIA

Light to moderate showers (10-25 mm or more) covered southeastern Queensland, keeping unharvested wheat and barley unfavorably wet. Below-normal temperatures (3-5 degrees C below normal on average) exacerbated the situation. This region is a producer of higher protein Australian prime hard wheat and is experiencing downgrades in quality. The rainfall was beneficial for sorghum and cotton in the eastern half of Queensland's summer growing areas, as well as coastal sugarcane areas that received 25 to 50 mm. Drier weather returned to Queensland's western summer crop and grazing areas and continued over summer crop areas of northern New South Wales. Conditions were generally favorable for maturing winter grains elsewhere, although temperatures averaged below normal across Western Australia (1-3 degrees C below normal) and the southeast (3-4 degrees C below normal in most areas). In New Zealand, moderate showers (25 mm or more) covered the main crop areas of North Island, but lighter rain (8-15 mm) was recorded over small grain and pasture areas of eastern and southern South Island.

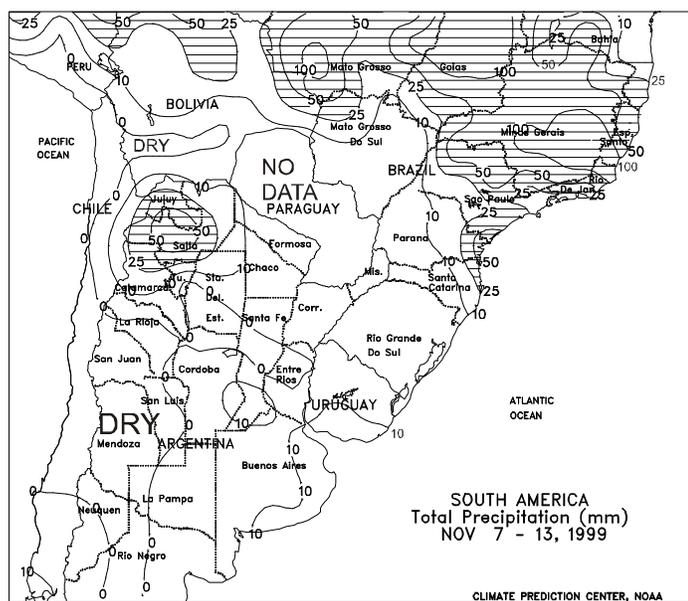


SOUTH AFRICA

Dry, warm weather persisted over western and southern sections of the corn belt, impeding summer crop planting and hastening wheat maturity. Highs in the middle-30's degrees C enhanced evaporative losses over central and western growing areas of Free State and North West. In contrast, scattered showers (10-25 mm or more) maintained generally favorable early growing conditions in the northeastern corner of the corn belt (eastern North West to Mpumalanga). However, summer temperatures maintained high crop moisture demands. Drier-than-normal weather continued over sugarcane areas of KwaZulu-Natal, where irrigation reserves have been generally favorable since the heavy rains of late October. Warm, dry weather continued over crop areas of Western Cape.

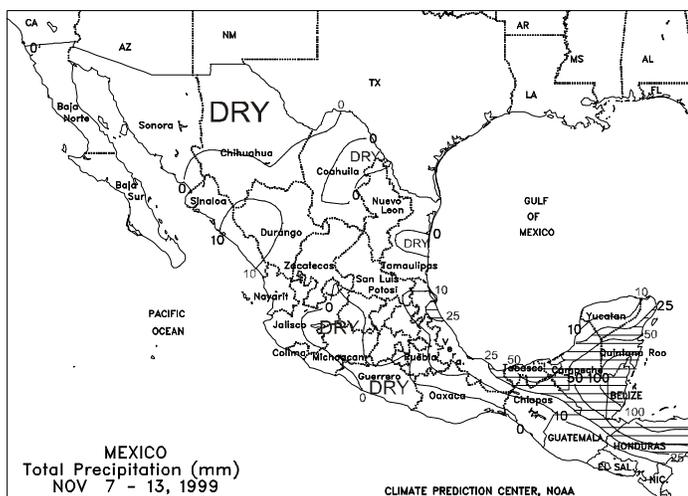
SOUTH AMERICA

In central Argentina, mostly dry weather (5-10 mm of rain) favored summer crop planting and filling to maturing winter wheat. The dry weather eased excessive wetness in Cordoba and La Pampa. Last week's widespread rainfall boosted soil moisture levels throughout the summer crop areas. On November 9-10, isolated frost in southwestern and east-central Buenos Aires caused localized damage to filling and maturing winter wheat. The damage should not significantly reduce national production. Dry weather returned to northern Argentina and southern Paraguay, where long-term moisture deficits have reduced available soil moisture for cotton and soybeans. According to reports as of November 5, corn was 65 percent planted, compared with 61 percent last year, and sunflowerseed was 56 percent planted, compared with 64 percent last year. Winter wheat harvesting and soybean planting were just beginning (less than 5 percent complete). Temperatures averaged 2 to 4 degrees below normal across central Argentina. In southern Brazil, rainfall was confined to the northern and eastern growing areas. Much-needed rainfall (20-90 mm) benefited coffee flowering in Minas Gerais and Sao Paulo. Showers (25-100 mm) also increased soil moisture for soybean planting and germination in Mato Grosso and Goias. Farther south, drier weather prevailed from Mato Grosso do Sul southward in Rio Grande do Sul. Soil moisture is adequate across this region. Temperatures averaged near to 1 to 3 degrees C below normal across southern Brazil. According to reports as of November 12, Brazilian soybeans were 35 percent planted, compared with 32 percent last year, and corn was 48 percent planted, compared with 61 percent last year.



MEXICO AND CENTRAL AMERICA

Seasonably dry weather continued to aid corn harvesting in the Southern Plateau. Moderate rain (25-75 mm) fell across Veracruz, Tabasco, and the eastern Yucatan Peninsula, causing additional concerns about wetness. Temperatures averaged 1 to 2 degrees C below normal across the southern Plateau. In Central America, heavy tropical showers (50-200 mm or more) possibly caused flooding in Belize, northern Honduras, and northern Guatemala. (This is the last summary for Mexico until the spring of 2000. Updates on Mexican and Central American weather will be published as warranted in the highlights section.)



La Niña Impacts on the U.S. Winter Forecast

The following is derived from the 1999-2000 Winter Outlook issued by the Climate Prediction Center/National Centers for Environmental Prediction (NCEP) on November 5, 1999 at www.cpc.ncep.noaa.gov/products/winter_outlook/index.html

Discussion

The winter weather patterns for the United States will be influenced by the moderate La Niña now in progress and expected to continue throughout the winter season. A La Niña occurs when large areas of the eastern equatorial Pacific Ocean experience below-normal sea surface temperatures. La Niña is often accompanied by cooler-than-normal sea surface temperatures off the west coast of North America from the equator northward to the Gulf of Alaska. These unusual ocean temperatures influence the mean atmospheric circulation patterns in the United States.

Under the influence of La Niña, warmer-than-normal temperatures are expected this winter over the Southern and Central United States from the interior Western States eastward to the Atlantic coast and including southern New England. Below-normal temperatures are expected from Alaska southward to far northwestern Washington State, and also along the southern and central California coast. Temperature variability is expected to be higher than normal in the Northern United States, with seasonal temperatures likely to average near normal from the Pacific Northwest to the northern Plains. Temperatures over the North Central States and northern New England depend on the winter jet stream position in the Atlantic Ocean, which is unpredictable.

Precipitation for this winter season is expected to be above the typical amounts over the Pacific Northwest, eastward to the far northern plains, in the Mississippi and Ohio Valleys, and in the Great Lakes region. Drier-than-usual conditions are expected over the South, from Arizona and the southern Rockies to the Southeast.

United States/La Niña Impacts

La Niña refers to a periodic significant cooling of the ocean temperatures across the central and eastern tropical Pacific Ocean. During a strong La Niña episode, ocean temperatures locally average 1° to 4°C (2° to 8°F) below normal between the date line and the west coast of South America, which is a distance of more than one-quarter of the circumference of the globe. This cooling of the ocean waters leads to increased tropical rainfall across Indonesia and the western equatorial Pacific, and to a complete disappearance of tropical rainfall from the central and eastern equatorial Pacific. Overall, the region experiencing La Niña-related tropical rains (Indonesia to South

America) spans a distance of more than one-half the circumference of the earth.

These changes in tropical rainfall significantly affect the strength and location of the atmospheric jet stream at upper levels of the atmosphere over the North Pacific Ocean and North America. This influence on the jet streams is generally most pronounced during our winter.

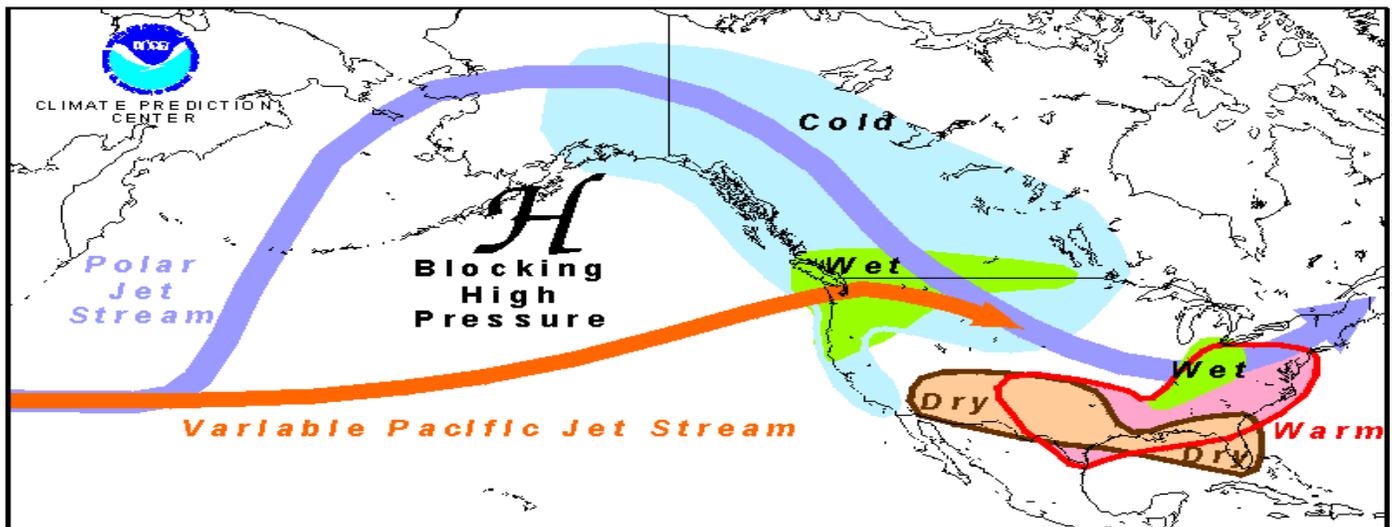
La Niña episodes feature three prominent changes in the jet stream across the eastern North Pacific and North America, as displayed in the figure below:

- 1) An increased wave-like structure to the jet stream, with an increased north-to-south flow across the continent and the eastern North Pacific.
- 2) A sometimes highly variable strength of the jet stream over the eastern North Pacific, with the mean jet position entering North America in the Northwestern United States/southwestern Canada.
- 3) Increased blocking activity and high pressure across the eastern North Pacific.

This jet stream pattern is a major factor controlling the winter weather and storm tracks across North America (figure). Overall, there tends to be considerable monthly variation in temperature, precipitation, and storminess over much of the Central and Northern United States during the winter and spring in response to the more variable atmospheric circulation throughout the period. These variations usually result in:

- 1) Large portions of the Northwest and Midwest experiencing increased storminess, increased precipitation, and increased snowfall.
- 2) The Pacific Northwest experiencing more storminess and more overall days with measurable precipitation. The risk of flooding in this area increases as the strength of the La Niña decreases due to an increase in "Pineapple Express events" in the weaker events.
- 3) Much of the Northwest and northern Plains States experiencing an increased frequency of significant cold-air outbreaks and an overall colder-than-normal winter.
- 4) The southern tier of the United States experiencing less storminess and fewer heavy precipitation events, along with overall warmer- and drier-than-normal conditions.
- 5) The mid-Atlantic region experiencing reduced snowfall and

TYPICAL WINTER WEATHER ANOMALIES AND ATMOSPHERIC CIRCULATION DURING LA NINA



milder-than-normal conditions.

6) The Tennessee and Ohio Valleys experiencing an increased number of heavy precipitation events and have an increased risk of severe winter weather.

An important source of uncertainty in outlooks of the upcoming winter weather patterns during La Niña is the fact that other atmospheric wind systems not linked to La Niña can also significantly affect the jet stream, storm tracks, and weather patterns. One of the most prominent of these systems is called the North Atlantic Oscillation (NAO), which represents large-scale changes in the atmospheric circulation across eastern North America and the North Atlantic. Opposite phases of this oscillation, referred to as the positive and negative phases, yield significantly different temperature, rainfall, and snowfall patterns over much of the United States, even when La Niña conditions are present. Unfortunately, there is little skill in predicting the phase of the NAO prior to the start of the winter season.

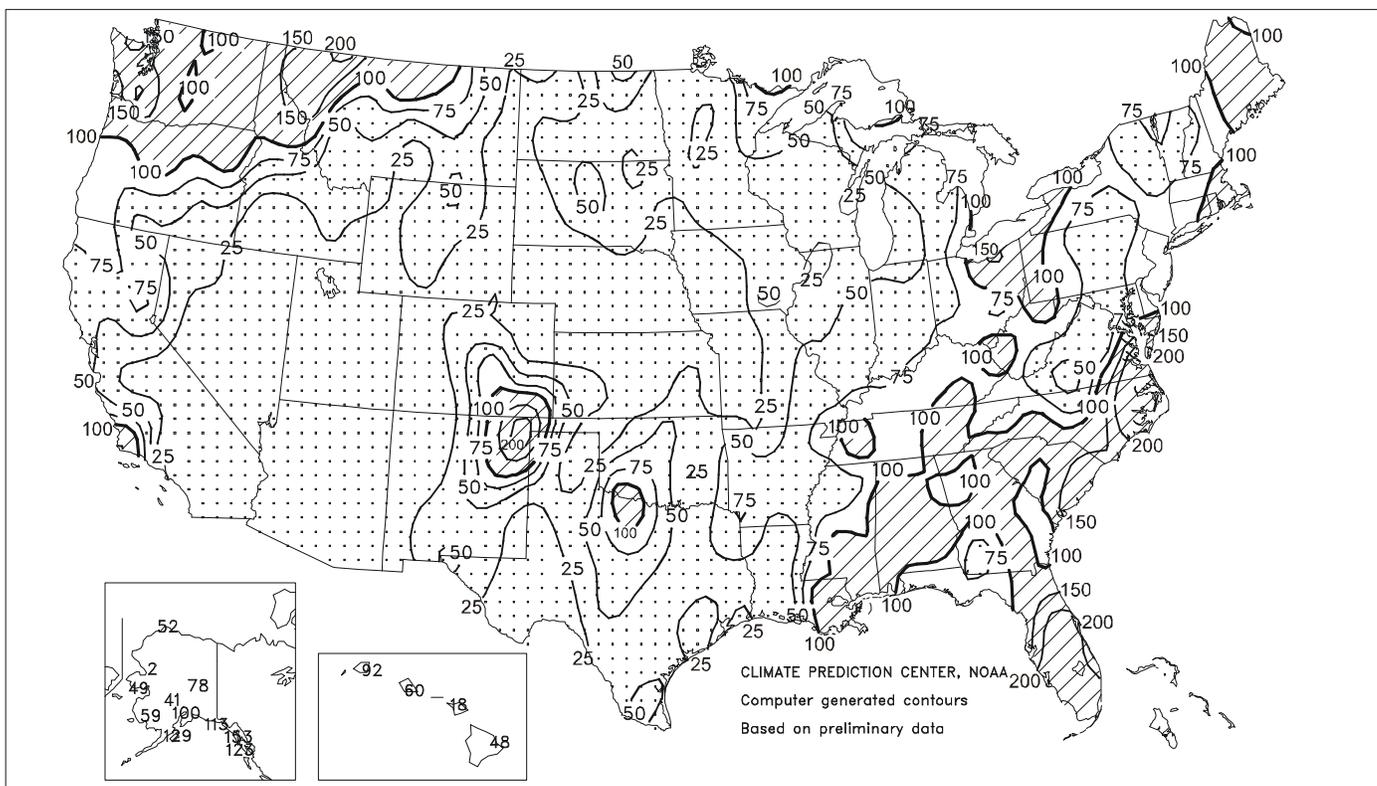
When La Niña co-exists with a positive phase of the NAO, as was observed last winter, the extent of abnormally cold conditions decreases in the Northern Plains and Pacific Northwest. Also in the Pacific Northwest, the region of abnormally heavy precipitation decreases considerably and snowfall totals decrease at lower elevations. Farther south, southern Idaho, Utah, Colorado, and Wyoming experiences considerably colder-than-normal temperatures, above-normal

precipitation, and increased snowfall. Farther east, the region of abnormally warm weather shifts north and east to cover much of the Eastern United States. Also, the East Central and Northeastern States, as well as the Pacific Northwest, experience substantially reduced snowfall, while the region extending northeastward from Missouri to northern Ohio experiences above-normal snowfall.

In contrast, when La Niña co-exists with a negative phase of the NAO, as was observed during the 1995/96 winter, the extent of abnormally cold conditions increases considerably in the Northern Plains and Pacific Northwest, and milder-than-normal conditions are observed across Utah and Colorado. Snowfall totals and the number of heavy precipitation events increase considerably across Washington, Oregon, and northern California in association with above-normal precipitation throughout the region. Below-normal snowfall is observed across portions of southern Utah and southern California. Farther east, near-normal temperatures prevail across the Eastern United States, and the region of abnormally warm weather becomes confined to Texas and Utah. The number of heavy precipitation events decreases sharply across most of the eastern half of the Nation, most notably in the Ohio Valley, portions of the Southeast, and the Northeast. Nonetheless, there is increased storminess across the lower Midwest and Northeast, which results in increased snowfall extending from Kansas eastward to Virginia and then northward into New England.

Dry Conditions Prevail Across Central U.S.

Percent Of Normal Precipitation
October 1 - November 13, 1999



Since October 1, little precipitation (less than 25 percent of normal in many locations) had fallen across the Central and Southwestern United States. Exceptionally dry weather has prevailed across the Plains since October 10, with many stations from southeastern Montana and the Dakotas southward to northernmost Texas reporting no measurable precipitation. In fact, aside from the Northwest and parts of the East, the only significant precipitation during the past 35 days fell on October 29 - November 2 across the southeastern Plains and portions of the Ohio Valley. In addition, subnormal precipitation returned to portions of the mid-Atlantic and New England after a very wet September alleviated the region's long-term drought.

The *Weekly Weather and Crop Bulletin* (ISSN 0043-1974) is published weekly and jointly prepared by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) and the U.S. Department of Agriculture (USDA). Publication began in 1872 as the *Weekly Weather Chronicle*. It is issued under general authority of the Act of January 12, 1895 (44-USC 213), 53rd Congress, 3rd Session. NOAA is responsible for managing, printing, and distributing the bulletin. The contents may be reprinted freely, with proper credit.

Annual subscriptions: domestic first class \$45, foreign \$55 (in U.S. funds by international money order or check drawn on U.S. bank) payable to **U.S. Department of Commerce, NOAA POSTMASTER**: Send address changes to: **Climate Prediction Center, W/NP52, Attn: Weekly Weather and Crop Bulletin, Room 605, WWBG, 5200 Auth Road, Camp Springs, MD 20746-4304**. Order subscriptions from the office and address listed above. First-class postage paid at Washington, DC, and other mailing offices. Correspondence to the meteorologists should be directed to: **Weekly Weather and Crop Bulletin, NOAA/USDA, Joint Agricultural Weather Facility, USDA South Building, Room 5844, Washington, DC 20250**. Internet URL: <http://www.usda.gov/oce/waob/jawf>; E-mail address: wwcb@jawfsrv.wwb.noaa.gov

U.S. DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration
National Weather Service/Climate Prediction Center
Managing Editor **David Miskus** (202) 720-7919
Meteorologists **Eric Luebehusen, Brad Pugh,**
. and **Chester Schmitt**
Subscriptions . . . **John Kopman** (301) 763-8000 ext 7534
. **fax:** (301) 763-8125

U.S. DEPARTMENT OF AGRICULTURE

Economic Research Service
E.R.S. Editor **Sharon Lee**
National Agricultural Statistics Service
Agricultural Statistician **Mark Miller** (202) 720-7621
State Summaries Editor **Delores Thomas** (202) 720-8033
World Agricultural Outlook Board
International Editor **Tom Puterbaugh**
U.S. Editor **Brad Rippey** (202) 720-2397
Agricultural Weather Analysts **Mark Brusberg**
. **Bob Stefanski, Brian Morris,** and **Harlan Shannon**
Stoneville **Michael Toth** and **Elizabeth Lord**

La Niña Update: November 10, 1999

The following is derived from the ENSO Advisory 99/10 issued by the Climate Prediction Center/National Centers for Environmental Prediction (NCEP) on November 10, 1999.

Cold episode conditions (La Niña) continued to dominate the tropical Pacific during October as sea surface temperature (SST) anomalies were generally between -0.5 and -1.5°C along the equator from 170°E eastward to the South American coast. Cold episode conditions have persisted since June 1998, with a deeper-than-normal oceanic thermocline, colder-than-normal SSTs, enhanced low-level easterlies and weaker-than-normal convection throughout the central and western equatorial Pacific. Accompanying these conditions, tropical convection and rainfall - - as inferred from the outgoing longwave radiation (OLR) -- have been persistently below normal over the central equatorial Pacific and enhanced over portions of Indonesia, Malaysia, Southeast Asia, Central America, and sub-Saharan Africa. These features of tropical convection were still evident in October.

In the past, the depth of the 20°C isotherm has been a good indicator of transitions to either warm or cold extremes of the ENSO cycle. Prior to warm (cold) episodes, the thermocline becomes deeper (shallower) than normal across the central and eastern equatorial Pacific. At the present, subsurface oceanic conditions continue to reflect the ongoing cold episode with no signs of an evolution toward a pre-warm episode state. Thus, it is likely that cold episode conditions will continue for the next several months. This assessment is supported by the most recent NCEP coupled model forecasts and other available coupled models and statistical predictions indicating cold episode conditions persisting through April 2000.

Weekly updates for SST, 850-hPa wind, and OLR are available on the Climate Prediction Center homepage at:

<http://www.cpc.ncep.noaa.gov> (Weekly Update)

Climate Prediction Center, W/NP52
Attn: *Weekly Weather & Crop Bulletin*
NOAA/NWS/NCEP/CPC
5200 Auth Road
WWB, Room 605
Camp Springs, MD 20746-4304

**WEEKLY NEWS BULLETIN
FIRST CLASS**

FIRST CLASS MAIL
POSTAGE & FEES PAID
NOAA
PERMIT NO. G-19

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300