



(Continued from front cover)

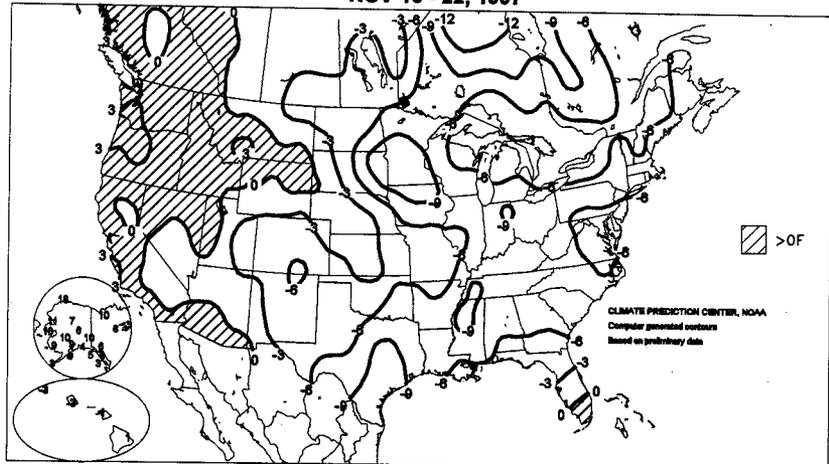
Early in the week, sub-freezing temperatures were recorded as far south as **southern Louisiana** and **Florida's Panhandle**. From November 16-18, about three dozen daily-record lows were tied or set, primarily across the **Southeast**. On Sunday, lows dipped below 0°F in parts of the **upper Midwest**, where fresh snow enhanced radiational cooling. **Brookings, SD** notched a daily-record low of -12°F. Farther south, **Dallas-Ft. Worth, TX** (24°F) also noted a daily record. A day later, the chill shifted into the **Southeast**, where daily records included 31°F in **Pensacola, FL**, 29°F in **Alexandria, LA**, 20°F in **Tupelo, MS**, and 8°F in **Gilbert, AR**. On Tuesday, lows of 7°F in **Elkins, WV** and 23°F in **Augusta, GA** were among a final flurry of records.

In **Rochester, MN**, daily temperatures averaged at or below normal on 36 of the 41 days from October 13 to November 22, including 21 in a row from November 2-22. A 19-day streak of sub-normal temperatures ended on November 21 in **Atlanta, GA**, where below-normal temperatures had prevailed on 35 of the previous 38 days (October 14 to November 20). The brief late-week warmup in the **Southeast** delivered a daily-record high to **Savannah, GA** (82°F on Saturday), but was capped by a round of severe weather. On Friday, at least a half-dozen tornadic thunderstorms swept across the **Gulf Coast region**. Farther north, enough cold air lingered over the **Northeastern and Great Lakes States** to produce another snowfall. On November 21-22, 7.9 inches blanketed **Duluth, MN**, boosting their monthly snowfall to 16.7 inches. **Coastal New England**, which was belted by heavy snowfall as the week began, received additional precipitation at week's end. **Portland, ME** netted 10.2 inches on November 16 and 4.0 inches on November 22, lifting their month-to-date snowfall to 19.7 inches.

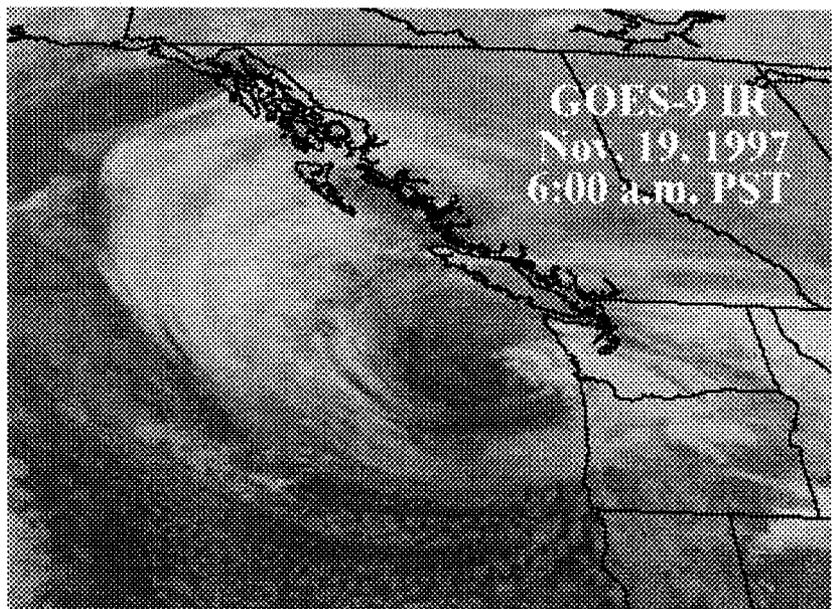
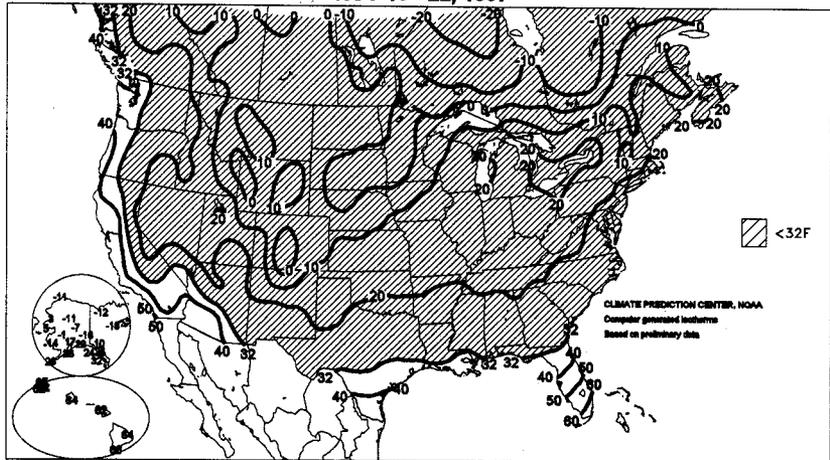
On Wednesday morning, a powerful low-pressure system, with a central pressure of 29.00 inches (982 millibars), moved northeastward toward the **Pacific Northwest**. The previous evening, wind gusts along the **northern California coast** had reached 64 mph in **Crescent City** and 81 mph on **Cooskie Mountain**, south of **Eureka**. A few hours later, gusts topped 70 mph in and near **Reno, NV**. On November 19, wind gusts along the **Oregon coast** were clocked to 89 mph in **Florence** and 80 mph in **Newport**. Due to the persistent on-shore flow, 8-day (November 16-23) rainfall in **western Oregon** reached 6.80 inches in **Tillamook** and 6.15 inches in **Florence**. In **northern California**, the town of **Mount Shasta** collected 6.26 inches during the same period.

For the third consecutive week, above-normal temperatures prevailed in **Alaska**. Departures on the mainland ranged from +6 to +13°F. In contrast, weekly temperatures averaged as much as 3°F below normal in **Hawaii**, as cool air spilled across the western islands in the wake of a cold front.

Departure of Average Temperature from Normal (°F)  
NOV 16 - 22, 1997



Extreme Minimum Temperature (°F)  
NOV 16 - 22, 1997



**Small, But Powerful:** A storm centered just west of the mouth of the Columbia River rakes the coastal Northwest with high winds and heavy rain. This storm, the latest in a series of vigorous eastern Pacific systems, boosted the Oct. 1 - Nov. 19 rainfall to 8.61 inches (148% of normal) in Portland, OR.

# National Weather Data for Selected Cities

Weather Data for the Week Ending November 22, 1997

Data Provided by Climate Prediction Center (301-763-8000 EXT. 7511)

STATES AND STATIONS	TEMPERATURE °F							PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN. SINCE Sep 1	PCT. NORMAL SINCE Sep 1	TOTAL IN. SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP, °F		PRECIP.		
																80 AND ABOVE	32 AND BELOW	01 INCH OR MORE	50 INCH OR MORE	
AL BIRMINGHAM	57	34	65	20	46	-8	1.00	-0.06	0.96	12.99	133	50.58	106	92	47	0	4	3	1	
AL HUNTSVILLE	53	33	63	20	43	-9	0.54	-0.65	0.43	15.86	148	54.35	109	92	47	0	4	2	0	
AL MOBILE	62	42	78	28	52	-7	2.67	1.66	2.26	13.96	119	73.24	128	96	57	0	3	4	1	
AL MONTGOMERY	61	37	73	23	49	-7	1.72	0.71	1.72	10.26	110	42.38	90	90	37	0	4	1	1	
AK ANCHORAGE	32	26	34	17	28	8	0.29	0.06	0.19	5.06	91	17.40	120	96	82	0	7	6	0	
AK BARROW	16	3	26	-11	10	13	0.03	-0.03	0.02	1.44	117	5.46	132	92	82	0	7	2	0	
AK FAIRBANKS	13	-1	16	-7	6	6	0.09	-0.10	0.07	1.56	66	5.37	55	86	77	0	7	2	0	
AK JUNEAU	38	30	43	24	34	3	0	-	-	-	-	-	-	100	91	0	6	-	-	
AK KODIAK	40	27	42	23	33	0	0.00	-1.35	0.00	16.67	90	56.56	96	89	69	0	6	0	0	
AK NOME	29	20	32	5	25	10	1.41	1.17	0.68	5.76	128	16.62	120	96	87	0	7	6	1	
AZ FLAGSTAFF	50	21	55	16	36	0	0.00	-0.47	0.00	5.61	112	14.63	74	79	27	0	7	0	0	
AZ PHOENIX	73	49	77	47	61	1	0.00	-0.16	0.00	0.84	43	4.10	63	57	20	0	0	0	0	
AZ PRESCOTT	58	29	63	25	43	0	0.00	-0.37	0.00	4.40	104	14.02	80	67	20	0	6	0	0	
AZ TUCSON	73	42	77	38	57	0	0.00	-0.15	0.00	2.30	72	7.68	71	62	17	0	0	0	0	
AZ YUMA	78	53	79	49	64	2	0.00	-0.06	0.00	4.54	622	5.11	184	82	37	0	0	0	0	
AR FORT SMITH	55	31	61	20	43	-6	0.00	-0.83	0.00	9.41	95	35.75	97	93	50	0	4	0	0	
AR LITTLE ROCK	56	35	65	23	46	-5	0.00	-1.26	0.00	11.86	104	54.91	127	89	46	0	3	0	0	
CA BAKERSFIELD	62	46	68	41	53	-1	0.40	0.23	0.39	1.13	119	4.12	84	94	60	0	0	2	0	
CA EUREKA	60	47	68	44	54	2	1.90	0.30	0.93	6.16	100	26.30	96	94	70	0	0	6	2	
CA FRESNO	62	47	66	39	54	2	0.06	-0.29	0.03	1.66	95	5.65	65	93	62	0	0	2	0	
CA LOS ANGELES	72	53	81	50	62	2	0.06	-0.38	0.04	1.78	93	7.41	75	88	49	0	0	3	0	
CA REDDING	56	44	58	40	50	0	1.92	0.63	0.71	8.78	129	26.68	102	96	72	0	0	6	2	
CA SACRAM/MCCLELL	62	48	64	41	55	-	0.37	-	0.26	1.65	-	11.16	-	94	64	0	0	2	0	
CA SAN DIEGO	71	55	79	53	63	2	0.00	-0.37	0.00	1.48	92	4.81	61	88	58	0	0	0	0	
CA SAN FRANCISCO	61	51	64	48	56	2	0.84	0.14	0.34	4.76	138	14.13	90	92	71	0	0	5	0	
CO ALAMOSA	39	7	50	0	23	-5	0.01	-0.07	0.01	2.25	118	7.11	102	88	35	0	7	1	0	
CO CO SPRINGS	44	19	52	6	32	-6	0.02	-0.09	0.02	2.92	116	22.96	147	80	31	0	7	1	0	
CO DENVER	45	23	52	7	34	-3	0.00	-0.19	0.00	3.17	110	19.88	137	71	37	0	7	0	0	
CO GRAND JUNCTION	44	23	52	19	34	-5	0.00	-0.17	0.00	4.52	192	12.94	164	82	46	0	7	0	0	
CO PUEBLO	50	17	61	2	33	-6	0.24	0.13	0.12	2.51	139	13.13	123	88	37	0	7	2	0	
CT BRIDGEPORT	46	29	54	25	37	-7	0.67	-0.24	0.45	6.33	71	33.36	90	79	54	0	6	3	0	
CT HARTFORD	43	24	52	17	34	-7	0.58	-0.38	0.53	6.77	66	34.93	89	88	58	0	6	2	1	
DC WASHINGTON	52	33	60	27	42	-6	0.84	-0.10	0.58	6.83	112	31.81	92	83	46	0	4	2	1	
DE WILMINGTON	52	30	58	22	41	-4	0.93	0.15	0.71	8.28	96	-	-	91	50	0	4	2	1	
FL DAYTONA BEACH	73	53	83	41	63	-2	0.00	-0.64	0.00	12.67	100	46.52	104	92	55	0	0	0	0	
FL JACKSONVILLE	68	44	83	32	56	-5	0.01	-0.50	0.01	10.25	89	46.30	96	92	49	0	1	1	0	
FL KEY WEST	79	71	82	68	75	0	0.12	-0.50	0.09	7.94	64	33.47	91	88	71	0	0	2	0	
FL MIAMI	80	68	84	64	74	1	0.08	-0.46	0.08	16.31	106	63.70	119	88	67	0	0	1	0	
FL ORLANDO	75	55	83	44	65	-2	0.00	-0.55	0.00	9.75	96	51.69	114	94	58	0	0	0	0	
FL TAMPA	74	55	82	42	64	-2	0.00	-0.43	0.00	19.98	216	51.67	125	87	58	0	0	0	0	
FL VALPARAISO/EGLIN	66	46	81	30	55	-2	0.14	-0.63	0.09	9.59	79	57.77	102	87	48	0	2	3	0	
FL WEST PALM BEACH	78	65	81	58	72	0	1.52	0.48	1.46	9.67	51	55.22	97	90	64	0	0	2	1	
GA ATHENS	56	34	69	25	45	-7	1.22	0.35	1.08	17.84	192	48.59	108	87	42	0	4	2	1	
GA ATLANTA	58	35	67	22	45	-7	1.57	0.84	1.55	12.88	139	48.23	102	86	41	0	3	2	1	
GA AUGUSTA	62	34	73	23	48	-6	1.29	0.72	1.11	15.52	203	44.59	110	99	46	0	4	3	1	
GA COLUMBUS	61	39	69	28	50	-6	1.18	0.31	1.17	9.83	125	44.40	99	85	44	0	3	2	1	
GA MACON	62	36	73	23	49	-6	1.05	0.39	1.02	11.93	175	35.51	90	93	44	0	4	2	1	
GA SAVANNAH	64	39	82	30	52	-6	1.10	0.58	1.10	14.73	178	50.60	111	95	46	0	2	1	1	
HI HILO	83	66	86	64	75	1	0.26	-3.24	0.24	25.94	90	119.47	106	91	62	0	0	2	0	
HI HONOLULU	82	66	85	63	74	-3	0.38	-0.36	0.28	4.03	78	19.47	112	88	57	0	0	3	0	
HI KAHULUI	83	66	86	62	74	-1	0.67	0.03	0.39	2.91	86	-	-	92	58	0	0	3	0	
HI LIHUE	79	65	86	62	72	-3	1.24	-0.06	0.98	7.96	74	-	-	89	63	0	0	4	1	
ID BOISE	49	34	52	29	41	3	0.40	0.04	0.23	1.84	71	10.35	100	80	46	0	3	4	0	
ID LEWISTON	50	36	55	29	43	3	0.22	-0.06	0.13	3.93	154	15.01	137	86	59	0	1	5	0	
ID POCATELLO	44	25	47	7	34	0	0.07	-0.21	0.05	3.12	120	12.31	115	85	54	0	4	2	0	
IL CHICAGO/O'HARE	38	23	44	17	30	-8	0.00	-0.69	0.00	5.30	63	29.61	91	86	67	0	7	0	0	
IL MOLINE	40	22	51	18	31	-7	0.00	-0.58	0.00	6.09	69	32.43	90	87	60	0	7	0	0	
IL PEORIA	44	26	54	15	34	-5	0.00	-0.63	0.00	7.01	82	29.35	89	88	52	0	6	0	0	
IL ROCKFORD	36	20	42	11	28	-9	0.06	-0.54	0.06	3.90	45	25.67	78	90	69	0	7	1	0	
IL SPRINGFIELD	45	28	57	18	37	-4	0.28	-0.31	0.28	6.80	88	25.32	80	83	59	0	5	1	0	
IN EVANSVILLE	47	28	59	15	38	-7	0.26	-0.83	0.28	5.31	62	43.34	113	90	51	0	4	1	0	
IN FORT WAYNE	38	22	49	13	30	-10	0.51	-0.15	0.48	7.49	105	37.78	122	93	70	0	5	2	0	
IN INDIANAPOLIS	42	26	54	13	34	-9	0.38	-0.39	0.34	4.18	54	30.90	87	95	64	0	5	2	0	
IN SOUTH BEND	38	23	44	12	30	-9	0.12	-0.66	0.12	6.72	74	30.57	87	92	66	0	6	1	0	
IA BURLINGTON	-	-	-	-	-	-	0.00	-0.84	0.00	5.21	59	29.56	88	-	-	-	-	0	0	
IA CEDAR RAPIDS	-	-	-	-	-	-	0.00	-0.56	0.00	6.05	78	24.66	78	-	-	-	-	0	0	
IA DES MOINES	40	22	50	15	31	-6	0.00	-0.40	0.00	7.41	99	29.83	95	88	62	0	7	0	0	
IA DUBUQUE	32	18	41	9	25	-9	0.02	-0.81	0.02	5.82	62	28.40	80	90	70	0	7	1	0	
IA SIOUX CITY	41	18	53	0	29	-6	0.00	-0.23	0.00	3.98	70	18.24	74	91	62	0	7	0	0	
IA WATERLOO	32	17	40	9	24	-10	0.00	-0.41	0.00	10.10	135	30.27	95	92	72	0	7	0	0	
KS CONCORDIA	51	26	60	12	38	-2	0.00	-0.24	0.00	6.51	111	23.38	84	81	41	0	7	0	0	
KS DODGE CITY	55	24	62	14	40	-2	0.11	-0.08	0.08	7.31	191	27.10	131	80	31	0	7	2	0	
KS GOODLAND	52	20	56	12	36	-1	0.00	-0.16	0.00	3.40	113	17.56	100	78	25	0	7	0	0	
KS TOPEKA	50	25	63	14	37	-4	0.04	-0.38	0.04	5.82	70	26.11	78	90	45	0	6	1	0	

Based on 1961-90 normals

Weather Data for the Week Ending November 22, 1997

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION								RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN, SINCE Sep 1	PCT. NORMAL SINCE Sep 1	TOTAL IN, SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP, °F		PRECIP.	
																		.01 INCH OR MORE	.50 INCH OR MORE	.01 INCH OR MORE	.50 INCH OR MORE
KY WICHITA	54	28	62	16	41	-2	0.00	-0.36	0.00	6.94	100	33.13	119	88	43	0	5	0	0	0	0
KY JACKSON	47	32	56	20	40	-7	0.89	-0.12	0.84	7.41	75	45.60	103	85	48	0	3	3	1	1	1
KY LEXINGTON	46	30	55	18	38	-7	0.78	-0.04	0.77	7.19	88	54.84	139	86	54	0	4	2	1	1	1
KY LOUISVILLE	48	31	58	20	39	-7	0.51	-0.38	0.51	4.93	58	52.32	132	88	52	0	4	1	1	1	1
KY PADUCAH	48	28	59	13	38	-9	0.05	-1.00	0.05	6.81	70	47.38	109	89	52	0	6	1	0	0	0
LA BATON ROUGE	61	44	72	30	53	-6	2.01	0.97	1.48	9.70	85	60.43	112	95	61	0	1	2	2	2	2
LA LAKE CHARLES	61	45	74	31	53	-7	2.11	1.09	1.23	14.39	114	59.84	123	95	61	0	1	2	2	2	2
LA NEW ORLEANS	63	49	82	40	56	-4	1.38	0.30	0.64	6.62	57	45.45	83	87	62	0	0	4	2	2	2
LA SHREVEPORT	57	38	66	26	48	-8	0.27	-0.78	0.19	12.64	125	62.39	153	96	52	0	2	3	0	0	0
ME CARIBOU	31	18	38	11	24	-5	0.01	-0.84	0.01	5.30	58	31.58	97	82	57	0	7	1	0	0	0
ME PORTLAND	40	19	48	13	30	-8	1.14	-0.10	0.58	7.31	68	32.89	86	89	57	0	7	4	1	1	1
MD BALTIMORE	52	29	69	21	40	-5	0.92	0.13	-	10.79	123	36.21	99	90	45	0	6	3	1	1	1
MA BOSTON	45	31	56	28	38	-6	0.78	-0.23	0.75	8.28	88	29.39	81	77	52	0	6	3	1	1	1
MA WORCESTER	40	26	48	21	32	-6	0.51	-0.54	0.51	6.76	58	31.61	74	84	53	0	7	1	1	1	1
MI ALPENA	35	24	40	20	30	-5	0.10	-0.42	0.08	5.41	79	27.77	106	91	64	0	7	2	0	0	0
MI GRAND RAPIDS	39	25	43	17	32	-5	0.03	-0.77	0.03	7.83	83	28.10	87	91	66	0	7	1	0	0	0
MI HOUGHTON LAKE	35	24	39	18	29	-4	0.11	-0.41	0.11	6.30	87	25.35	99	86	67	0	7	1	0	0	0
MI LANSING	38	24	43	11	31	-6	0.02	-0.81	0.02	5.70	75	25.64	93	87	66	0	7	1	0	0	0
MI MARQUETTE	-	-	-	-	-	-	0.19	-0.48	-	7.04	71	30.31	95	-	-	-	-	-	-	-	-
MI MUSKEGON	39	27	43	22	33	-5	0.14	-0.60	0.14	6.22	69	24.60	86	88	64	0	7	1	0	0	0
MI DULUTH	25	10	31	8	18	-9	0.26	-0.14	0.16	4.44	58	22.95	81	92	63	0	7	2	0	0	0
MI INT'L FALLS	24	7	34	-4	15	-7	0.22	-0.03	0.11	7.19	120	18.62	80	88	63	0	7	4	0	0	0
MI MINNEAPOLIS	29	14	33	3	21	-10	0.06	-0.28	0.04	5.40	89	33.61	125	89	65	0	7	2	0	0	0
MI ROCHESTER	28	14	34	5	21	-9	0.00	-0.36	0.00	4.63	66	29.06	103	91	77	0	7	0	0	0	0
MI ST. CLOUD	26	11	29	-3	18	-10	0.16	-0.12	0.11	3.62	57	23.96	91	96	65	0	7	2	0	0	0
MS JACKSON	58	35	67	25	46	-8	0.94	-0.23	0.81	9.18	90	51.59	108	95	55	0	3	3	1	1	1
MS MERIDIAN	60	33	68	24	46	-8	0.23	-0.87	0.17	7.65	79	49.60	101	94	48	0	4	3	0	0	0
MS TUPELO	53	33	63	20	43	-8	0.02	-1.16	0.02	8.54	82	59.86	124	93	50	0	5	1	0	0	0
MO COLUMBIA	47	28	57	16	38	-6	0.04	-0.64	0.04	6.87	74	33.48	93	84	48	0	4	1	0	0	0
MO KANSAS CITY	49	28	61	14	38	-3	0.02	-0.40	0.02	6.89	70	29.12	82	88	51	0	5	1	0	0	0
MO SAINT LOUIS	48	30	62	18	39	-5	0.11	-0.67	0.11	6.83	83	29.14	87	81	53	0	4	1	0	0	0
MO SPRINGFIELD	51	29	62	18	40	-5	0.00	-0.88	0.00	8.39	77	34.81	90	90	50	0	4	0	0	0	0
MT BILLINGS	46	27	50	21	37	3	0.00	-0.19	0.00	2.10	67	14.42	102	70	37	0	6	0	0	0	0
MT BUTTE	42	17	43	2	29	3	0.07	-0.04	0.03	2.30	97	19.33	167	85	42	0	7	3	0	0	0
MT GLASGOW	31	13	39	6	22	-5	0.21	0.15	0.17	1.59	88	11.74	112	93	66	0	7	2	0	0	0
MT GREAT FALLS	42	28	46	24	35	3	0.00	-0.16	0.00	1.65	67	14.06	99	74	51	0	6	0	0	0	0
MT KALISPELL	37	24	45	10	31	1	0.31	-0.01	0.11	2.91	96	16.96	118	94	74	0	7	4	0	0	0
MT MILES CITY	44	21	51	9	32	2	0.04	-0.07	0.04	1.50	58	10.48	79	84	51	0	7	1	0	0	0
MT MISSOULA	40	25	44	12	33	2	0.14	-0.05	0.12	2.27	93	14.49	120	89	60	0	6	3	0	0	0
NE GRAND ISLAND	50	19	58	8	35	-1	0.27	0.03	0.27	9.39	189	28.30	118	90	36	0	7	1	0	0	0
NE LINCOLN	49	18	59	9	33	-4	0.00	-0.28	0.00	5.37	82	21.88	81	88	44	0	7	0	0	0	0
NE NORFOLK	45	17	58	4	31	-3	0.00	-0.22	0.00	5.38	111	19.86	82	84	46	0	7	0	0	0	0
NE NORTH PLATTE	51	12	57	1	32	-2	0.00	-0.14	0.00	4.57	149	17.41	83	87	29	0	7	0	0	0	0
NE OMAHA	45	21	53	12	33	-5	0.00	-0.35	0.00	10.17	142	28.09	99	89	56	0	7	0	0	0	0
NE SCOTTSBLUFF	48	16	50	3	32	-3	0.00	-0.14	0.00	2.89	123	20.03	138	83	33	0	7	0	0	0	0
NE VALENTINE	45	15	53	-11	30	-3	0.00	-0.14	0.00	4.92	169	21.80	123	88	49	0	7	0	0	0	0
NV ELY	46	20	51	10	33	0	0.02	-0.13	0.02	2.30	95	8.66	93	82	35	0	6	1	0	0	0
NV LAS VEGAS	63	43	67	39	53	0	0.00	-0.11	0.00	2.25	281	3.69	103	58	27	0	0	0	0	0	0
NV RENO	52	28	60	21	40	1	0.00	-0.22	0.00	1.19	89	6.78	108	83	39	0	6	0	0	0	0
NV WINNEMUCCA	49	26	53	20	37	1	0.02	-0.20	0.02	1.06	63	7.42	104	85	50	0	6	1	0	0	0
NH CONCORD	41	21	51	15	31	-5	0.78	-0.09	0.66	8.09	93	31.33	97	87	53	0	7	2	1	1	1
NJ NEWARK	48	31	58	27	39	-7	0.80	-0.14	0.50	8.60	90	38.00	96	81	49	0	5	2	1	1	1
NM ALBUQUERQUE	51	28	60	18	40	-3	0.00	-0.08	0.00	3.48	157	11.38	138	70	32	0	5	0	0	0	0
NY ALBANY	38	24	45	13	31	-7	0.59	-0.18	0.57	10.78	132	31.34	97	89	67	0	7	2	1	1	1
NY BINGHAMTON	35	26	45	18	30	-7	0.38	-0.39	0.35	8.28	96	28.09	85	86	67	0	6	3	0	0	0
NY BUFFALO	38	30	46	25	34	-6	0.33	-0.58	0.25	10.70	114	37.22	110	85	65	0	6	4	0	0	0
NY ROCHESTER	39	28	47	22	34	-5	0.49	-0.20	0.29	9.83	130	30.94	109	84	60	0	6	3	0	0	0
NY SYRACUSE	39	28	48	21	34	-6	0.34	-0.54	0.24	7.80	80	27.73	80	84	63	0	5	2	0	0	0
NC ASHEVILLE	50	29	60	18	39	-7	0.25	-0.58	0.25	10.17	101	48.18	107	87	43	0	5	1	0	0	0
NC CHARLOTTE	55	33	67	24	44	-7	1.33	0.59	1.24	10.70	118	44.34	115	86	39	0	5	3	1	1	1
NC GREENSBORO	52	29	60	22	41	-8	1.02	0.33	1.02	8.44	91	36.80	96	81	41	0	5	1	1	1	1
NC HATTERAS	56	42	67	32	49	-7	0.45	-0.71	0.28	15.27	109	47.12	94	84	56	0	1	3	0	0	0
NC RALEIGH	58	31	66	23	43	-7	1.43	0.73	1.26	10.63	130	38.33	103	92	44	0	5	2	1	1	1
NC WILMINGTON	62	37	77	25	49	-7	0.00	-0.76	0.00	13.15	132	41.33	83	90	40	0	3	0	0	0	0
ND BISMARCK	31	12	42	6	21	-5	0.16	0.05	0.09	4.32	156	14.80	100	88	73	0	7	3	0	0	0
ND DICKINSON	34	17	45	8	25	-3	0.02	-0.07	0.02	1.27	43	16.06	103	91	70	0	7	1	0	0	0
ND FARGO	24	11	29	2	17	-9	0.12	-0.03	0.12	7.46	175	27.72	148	90	71	0	7	1	0	0	0
ND GRAND FORKS	24	11	30	5	18	-7	-	-	-	-	-	-	-	91	71	0	7	-	-	-	-
ND JAMESTOWN	28	13	38	4	20	-6	0.26	0.15	0.21	3.07	99	20.31	125	96	75	0	7	3	0	0	0
ND WILLISTON	29	11	40	4	20	-5	0.41	0.30	0.33	1.17	48	11.78	91	90	66	0	7	2	0	0	0
OH AKRON-CANTON	41	26	50	16	33	-7	0.31	-0.41	0.25	5.46	70	29.84	90	85</							

Weather Data for the Week Ending November 22, 1997

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS					
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN, SINCE Sep 1	PCT. NORMAL SINCE Sep 1	TOTAL IN, SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP, °F		PRECIP.	
																		01 INCH OR MORE	.50 INCH OR MORE		
OK TOLEDO	38	23	47	18	30	-8	0.38	-0.32	0.28	7.27	104	35.94	123	90	88	0	6	2	0		
OK YOUNGSTOWN	40	28	50	19	34	-6	0.44	-0.30	0.25	7.31	88	29.78	89	83	80	0	5	4	0		
OK OKLAHOMA CITY	56	32	64	19	44	-4	0.00	-0.43	0.00	4.86	57	24.99	79	91	47	0	4	0	0		
OK TULSA	52	32	62	22	42	-6	0.00	-0.71	0.00	5.93	56	36.48	97	89	61	0	3	0	0		
OR ASTORIA	54	45	57	38	50	3	3.96	1.50	1.98	23.44	149	74.32	140	95	74	0	0	7	4		
OR BURNS	43	23	45	16	33	1	0.31	-0.01	-	1.68	76	8.38	99	86	52	0	7	3	0		
OR EUGENE	52	42	57	35	47	2	2.23	0.16	0.57	10.52	96	36.08	92	89	72	0	0	7	2		
OR MEDFORD	54	38	58	35	46	3	0.56	-0.25	0.26	4.36	94	15.80	108	95	63	0	0	5	0		
OR PENDLETON	52	35	57	30	43	3	0.38	-0.03	0.12	3.89	151	10.67	107	91	58	0	3	5	0		
OR PORTLAND	52	43	54	40	48	2	2.44	1.13	0.97	11.52	141	40.00	140	92	74	0	0	7	2		
OR SALEM	52	42	56	36	47	3	2.60	1.05	0.87	13.72	153	41.24	135	95	78	0	0	7	2		
PA ALLENTOWN	45	24	55	16	34	-8	0.38	-0.56	0.22	7.99	83	35.83	92	90	54	0	6	3	0		
PA ERIE	40	31	50	22	35	-7	0.41	-0.53	0.16	8.11	73	36.25	98	88	66	0	3	4	0		
PA MIDDLETOWN	48	27	57	20	38	-5	0.38	-0.47	0.20	7.51	83	29.83	82	88	50	0	6	2	0		
PA PHILADELPHIA	49	31	58	25	40	-5	0.92	0.12	0.61	6.84	81	29.36	79	85	46	0	4	2	1		
PA PITTSBURGH	42	30	53	18	36	-5	0.38	-0.33	0.18	8.05	109	31.47	95	80	52	0	4	2	0		
PA SCRANTON	39	25	49	17	32	-8	0.07	-0.65	0.04	5.50	66	24.44	74	95	66	0	6	3	0		
PA WILLIAMSPORT	40	25	46	18	32	-8	0.54	-0.34	0.39	8.80	93	28.07	78	93	84	0	6	2	0		
RI PROVIDENCE	46	28	58	21	36	-7	0.67	-0.38	0.54	8.58	83	37.02	93	89	55	0	6	2	1		
SC BEAUFORT	63	41	80	32	52	-6	0.34	-0.22	0.22	8.68	94	39.23	83	94	48	0	1	3	0		
SC CHARLESTON	64	40	80	31	52	-8	0.28	-0.30	0.28	16.44	175	56.86	119	93	44	0	2	1	0		
SC COLUMBIA	60	33	71	24	47	-7	0.67	-0.01	0.66	12.90	147	42.36	93	91	39	0	5	2	1		
SC GREENVILLE	54	31	68	23	43	-8	1.24	0.39	1.21	11.80	109	45.80	99	90	40	0	5	3	1		
SD ABERDEEN	26	8	32	-7	17	-11	0.08	-0.07	0.04	4.57	133	19.13	106	93	80	0	7	2	0		
SD HURON	32	11	43	1	22	-9	0.07	-0.08	0.06	6.53	173	24.38	125	91	70	0	7	2	0		
SD RAPID CITY	46	19	50	0	33	-1	0.03	-0.08	0.03	1.40	50	20.60	128	78	43	0	7	1	0		
SD SIOUX FALLS	32	12	45	-2	22	-9	0.01	-0.23	0.01	3.68	65	20.01	87	95	77	0	7	1	0		
TN BRISTOL	48	27	57	16	38	-8	0.39	-0.31	0.37	5.97	75	38.93	107	90	60	0	6	2	0		
TN CHATTANOOGA	53	32	62	22	43	-7	0.43	-0.69	0.42	12.54	118	52.76	112	93	44	0	5	2	0		
TN KNOXVILLE	49	31	59	20	40	-8	0.70	-0.21	0.69	8.56	100	49.17	119	91	46	0	5	2	1		
TN MEMPHIS	54	35	63	22	44	-7	0.00	-1.26	0.00	12.36	122	66.54	148	86	50	0	2	0	0		
TN NASHVILLE	52	32	63	21	42	-7	0.78	-0.25	0.78	10.81	120	48.03	116	86	42	0	6	1	1		
TX ABILENE	63	35	76	20	49	-5	0.00	-0.32	0.00	3.26	47	23.60	102	86	34	0	3	0	0		
TX AMARILLO	55	29	66	15	42	-3	0.09	-0.05	0.08	3.26	83	22.83	120	81	36	0	5	2	0		
TX AUSTIN	58	42	68	34	50	-10	0.02	-0.50	0.02	9.53	111	42.54	144	90	80	0	0	1	0		
TX BEAUMONT	61	45	73	35	53	-7	0.70	-0.46	0.80	9.89	70	45.47	89	95	65	0	0	3	1		
TX BROWNSVILLE	66	52	80	42	59	-9	0.05	-0.28	0.02	18.64	188	35.73	143	97	72	0	0	4	0		
TX CORPUS CHRISTI	59	48	68	42	54	-11	0.10	-0.24	0.05	15.65	160	35.93	126	95	78	0	0	3	0		
TX DEL RIO	61	43	72	36	52	-7	0.00	-0.18	0.00	4.06	70	22.00	126	91	52	0	0	0	0		
TX EL PASO	61	37	70	30	49	-2	0.01	-0.10	0.01	2.54	90	8.24	100	74	36	0	3	1	0		
TX FORT WORTH	57	37	65	24	47	-8	0.00	-0.50	0.00	8.61	99	37.96	121	87	43	0	2	0	0		
TX GALVESTON	60	50	71	44	55	-8	0.43	-0.38	0.41	20.78	186	56.00	148	91	73	0	0	2	0		
TX HOUSTON	58	42	70	31	50	-10	0.28	-0.58	0.27	14.77	123	63.72	129	99	63	0	1	2	0		
TX LUBBOCK	58	30	67	19	44	-4	0.00	-0.16	0.00	3.67	72	20.90	116	84	35	0	4	0	0		
TX MIDLAND	61	31	70	23	46	-5	0.00	-0.14	0.00	2.90	59	15.77	110	87	34	0	4	0	0		
TX SAN ANGELO	63	33	74	23	48	-6	0.00	-0.22	0.00	2.78	42	21.63	111	94	36	0	3	0	0		
TX SAN ANTONIO	60	42	72	33	51	-8	0.02	-0.57	0.02	7.69	89	30.36	105	92	58	0	0	1	0		
TX VICTORIA	60	44	70	37	52	-10	0.17	-0.38	0.16	20.22	185	65.33	188	96	64	0	0	2	0		
TX WACO	57	35	66	28	46	-10	0.01	-0.53	0.01	4.41	50	32.83	111	93	52	0	2	1	0		
TX WICHITA FALLS	59	33	67	24	46	-5	0.00	-0.33	0.00	3.59	46	19.43	71	90	40	0	4	0	0		
UT SALT LAKE CITY	48	31	58	25	40	0	0.35	0.05	0.17	3.91	106	15.96	110	88	49	0	5	3	0		
VT BURLINGTON	37	23	44	15	30	-6	0.16	-0.58	0.13	7.50	88	28.06	90	88	59	0	6	2	0		
VA LYNCHBURG	51	28	63	18	40	-7	0.82	-0.10	0.34	9.28	100	32.60	88	87	39	0	5	2	0		
VA NORFOLK	57	38	70	28	46	-5	0.21	-0.45	0.20	9.92	109	33.46	82	89	52	0	4	2	0		
VA RICHMOND	54	31	65	22	42	-6	1.07	0.34	0.78	8.90	97	31.27	80	86	41	0	5	2	1		
VA ROANOKE	50	31	62	22	40	-6	0.71	-0.01	0.70	7.08	73	32.83	88	78	42	0	4	2	1		
VA WASH/DULLES	53	31	62	22	42	-2	0.54	-0.23	0.53	11.14	124	33.69	93	86	48	0	5	2	1		
WA HANFORD	51	33	61	28	42	-	0.26	0.05	-	2.07	152	5.90	118	91	58	0	2	-	-		
WA OLYMPIA	50	37	54	28	44	2	3.11	1.14	1.06	16.63	135	57.11	142	99	84	0	1	7	2		
WA QUILLAYUTE	54	39	58	32	46	3	2.51	-1.03	0.72	31.37	121	110.07	129	97	78	0	1	7	2		
WA SEATTLE-TACOMA	53	42	57	34	47	3	1.98	0.55	0.61	12.65	137	41.44	140	92	61	0	0	7	2		
WA SPOKANE	42	31	50	25	37	3	0.82	0.28	0.46	3.98	125	15.83	118	94	71	0	4	4	0		
WA YAKIMA	46	29	56	23	37	0	0.35	0.07	-	2.94	186	6.54	105	95	65	0	6	-	-		
WV BECKLEY	42	27	51	13	35	-8	0.45	-0.25	0.23	4.32	51	34.55	93	86	54	0	4	3	0		
WV CHARLESTON	47	30	58	18	38	-7	0.47	-0.38	0.41	5.00	57	38.45	101	91	53	0	4	3	0		
WV ELKINS	42	23	51	7	33	-8	0.63	-0.16	0.32	8.83	95	38.85	96	92	56	0	6	3	0		
WV HUNTINGTON	47	31	57	18	39	-6	0.38	-0.40	0.35	4.67	57	35.15	95	90	49	0	4	3	0		
WI EAU CLAIRE	32	16	40	9	24	-7	0.10	-0.23	0.10	5.86	78	29.30	97	90	61	0	7	1	0		
WI GREEN BAY	35	18	40	15	27	-6	0.00	-0.50	0.00	3.97	54	26.72	100	87	58	0	7	0	0		
WI MADISON	36	20	39	17	28	-6	0.14	-0.38	0.11	3.47	49	27.02	96	85	65	0	7	3	0		
WI MILWAUKEE	37	23	42	18	30	-6	0.35	-0.24	0.28	4.89	64	31.30	104	86	65	0	7	3	0		
WI CASPER	44	22	50	16	33	1	0.12	-0.05	0.12	2.26	91	11.40	98	70	32	0	7	1	0		
WI CHEYENNE	40	22	45	9	31	-3	0.00	-0.11	0.00	3.43	142	19.38	140	71	39	0	7	0	0		
WI LANDER	43	17	46	6	30	0	0.00	-0.17	0.00	2.70	95	12.90	103	67	34	0	7	0	0		
WI SHERIDAN	46	19	50	7	32	1	0.00	-0.19	0.00	2.59	81	14.74	108	81	42	0	7	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 17 - 23, 1997

### HIGHLIGHTS

**Dry weather from the Mississippi River westward to the Great Basin provided favorable harvest conditions, but field activity was hindered by precipitation in the east and along the Pacific Coast. Even though rain fell for the sixth consecutive week in the Southeast and hampered harvest efforts, some farmers harvested cotton**

**and soybeans. Corn growers in the Great Lakes region made good harvest progress between snows. However, in some areas of the eastern Corn Belt, moisture levels were too high and farmers were kept out of fields. Rain along the Pacific Coast limited fieldwork activities but benefited newly planted winter crops.**

**Corn:** Harvest of the Nation's corn crop was winding down, with 95 percent (%) of the crop out of the field. This compares with 93% harvested at this time in 1996 and the 5-year average of 90%. Farmers in the Great Lakes States made good harvest progress between snowstorms. In Michigan, growers harvested 18% of their State's crop during the week, catching up to only 3 percentage points behind the average. In Wisconsin, farmers reported that fields were still standing because there was no place to store the grain once it was harvested. However, in other areas of the eastern Corn Belt, wet snow kept moisture levels high and limited harvest activities. In the western Corn Belt, harvest was virtually complete as favorable weather allowed producers to complete their harvest and proceed with fall tillage.

**Soybeans:** Soybean harvest advanced to 96% complete, 2 points ahead of last year but equal to the average. Drier weather allowed growers in North and South Carolina to make rapid harvest progress. In Alabama, Kentucky, and Tennessee, soybean producers made some progress despite cold, wet weather most of the week. Dampness and below-normal temperatures delayed harvest in Georgia again this week, as even the southern areas of the State recorded freezing temperatures. Harvest in the other major soybean-producing States was winding down under mostly favorable conditions.

**Cotton:** Eighty-five percent of the national cotton acreage was harvested, compared with 83% for both 1996 and the average. Growers in North and South Carolina made some harvest progress with drier weather. A few Alabama producers harvested some soybean fields, but cold, wet weather hampered harvest in other areas. Showers continued to delay harvest in Georgia, where progress was 14 points behind the normal pace. Cool, dry weather late in the week accelerated harvest in New Mexico, Oklahoma, and Texas.

In Texas, quality on late fields suffered from recent moisture. Harvest activity increased in the Trans Pecos region, with increased leaf drop from recent freezing temperatures.

**Sorghum:** Sorghum harvest reached 92% complete, behind 94% harvested for both last year and the average. Wet conditions from earlier precipitation and a lack of storage continued to hinder sorghum harvest in western Kansas. Dry, seasonal weather allowed Colorado producers to harvest more of the storm-damaged crop than previously expected. However, harvest progress remained well behind the normal pace. In New Mexico, harvest was almost finished as farmers harvested 14% of their State's crop during the week, 21 points ahead of the normal pace. In Texas, harvest resumed late in the week as freezing temperatures aided drying of later fields. Many producers waited until cotton was harvested before completing sorghum harvest.

**Winter wheat:** The 1998 winter wheat crop was 92% emerged, behind 94% emergence last year but ahead of 91% for the average. Emergence was most active in North Carolina following active plantings the previous week. Nationwide, condition of the winter wheat crop rated mostly good. Conditions in Kansas declined due to a lack of moisture in some areas. In Oklahoma, cool, dry weather restricted wheat growth. Recent snow and rain in the Texas plains benefited dryland wheat fields. However, additional moisture was needed for further development. Late-planted fields showed slow emergence due to cool, wet weather. In Montana, very little wind damage was reported, but farmers were concerned about the lack of snow cover going into winter. The Washington winter wheat crop was mostly in the four- to five-leaf stage and in good condition. Rainfall in California benefited newly emerged fields.

# Crop Progress and Condition

Week Ending November 23, 1997

Winter Wheat Percent Emerged				
	Nov 23 1997	Prev Week	Prev Year	5-Yr Avg
AR	74	65	67	76
CA	20	15	34	23
CO	100	99	100	100
GA	16	13	25	26
ID	92	90	93	93
IL	99	98	97	94
IN	97	93	95	97
KS	96	94	98	97
MI	99	99	99	96
MO	92	84	83	83
MT	93	91	93	93
NE	100	100	100	100
NC	65	42	58	57
OH	96	94	92	97
OK	92	88	97	90
OR	85	80	92	93
SD	100	100	100	99
TX	89	85	100	85
WA	99	99	99	95
ALL	92	89	94	91

These 19 States produced 92% of the 1996 winter wheat crop.

Soybeans Percent Harvested				
	Nov 23 1997	Prev Week	Prev Year	5-Yr Avg
AL	85	72	83	80
AR	89	81	74	88
GA	53	44	75	67
IL	100	99	99	99
IN	100	99	98	99
IA	100	99	100	100
KS	99	95	92	96
KY	87	77	90	90
LA	99	99	100	97
MI	97	93	98	95
MN	99	99	99	99
MS	94	90	97	93
MO	95	90	89	94
NE	99	97	100	100
NC	57	33	56	51
OH	100	100	93	98
SC	40	20	62	48
SD	100	100	100	100
TN	79	64	67	82
ALL	96	93	94	96

These 19 States produced 94% of the 1996 soybean crop.

Corn Percent Harvested				
	Nov 23 1997	Prev Week	Prev Year	5-Yr Avg
CO	98	92	98	92
GA	100	100	100	100
IL	98	96	95	93
IN	92	87	88	88
IA	99	96	94	93
KS	98	95	99	97
KY	97	93	97	97
MI	70	52	83	73
MN	98	97	97	93
MO	97	93	92	91
NE	96	91	95	90
NC	100	100	100	100
OH	82	72	74	81
PA	74	66	78	75
SD	99	98	93	86
TX	100	100	100	100
WI	85	70	84	83
ALL	95	91	93	90

These 17 States produced 90% of the 1996 corn crop.

Cotton Percent Harvested				
	Nov 23 1997	Prev Week	Prev Year	5-Yr Avg
AL	86	75	90	89
AZ	88	82	77	89
AR	95	88	99	96
CA	97	95	89	94
GA	66	59	85	80
LA	100	99	100	99
MS	97	95	99	97
MO	94	86	87	94
NM	80	70	80	72
NC	76	63	84	80
OK	72	*61	40	60
SC	78	64	92	83
TN	91	83	95	93
TX	79	71	68	69
ALL	85	76	83	83

These 14 States produced 99% of the 1996 cotton crop.

Sorghum Percent Harvested				
	Nov 23 1997	Prev Week	Prev Year	5-Yr Avg
AR	100	99	100	100
CO	35	27	92	84
IL	97	94	89	94
KS	91	89	95	91
LA	100	100	100	100
MS	100	100	100	100
MO	96	92	91	93
NE	97	96	93	96
NM	98	84	61	77
OK	80	73	86	85
SD	98	96	98	97
TX	95	92	97	98
ALL	92	89	94	94

These 12 States produced 99% of the 1996 sorghum crop.

Winter Wheat Crop Condition by Percent					
	VP	P	F	G	EX
AR	0	4	34	55	7
CA	0	0	30	50	20
CO	1	3	20	62	14
GA	0	11	20	65	4
ID	0	0	5	87	8
IL	0	3	23	64	10
IN	0	5	27	56	12
KS	0	2	18	64	16
MI	1	4	36	53	6
MO	0	2	32	56	10
MT	3	10	36	50	1
NE	0	4	25	63	8
NC	0	0	26	66	8
OH	1	4	34	49	12
OK	0	1	15	79	5
OR	0	0	15	83	2
SD	0	6	13	55	26
TX	2	10	40	42	6
WA	0	0	13	72	15
ALL	0	4	23	62	11
Prev Wk	1	3	21	64	11
Prev Yr	0	3	24	62	11

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

\* Revised

National crop conditions for selected States are weighted based on 1996 planted acres.

## 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 4.8. Topsoil moisture 1% short, 83% adequate, 16% surplus. Livestock 2% poor, 24% fair, 69% good, 5% excellent. Cold, wet week hindered cotton, soybean harvests in some areas.

**ARIZONA:** Alfalfa 15% fair, 35% good, 50% excellent. Alfalfa harvest activity 2% light, 14% moderate, 41% active, 43% not being harvested. Alfalfa sheeping off 84% none, 5% light, 6% moderate, 5% active. Small grain seeding 14% seeded, 5% emerged. Central area growers shipped bok choy, cabbage, carrots, broccoli, green onions, iceberg lettuce, mixed greens, radishes, spinach, swiss chard, turnips, cantaloupe, honeydews. Western growers harvested broccoli, boston lettuce, iceberg lettuce, leaf lettuce, romaine lettuce, spinach, cantaloupe, honeydew. Iceberg lettuce, green chili harvests were completed in eastern area, while red chili harvest continued. Pecan harvest was also underway. Lemon harvest continued steady in western area. Navel orange harvest in the central area gained momentum; was expected to be in full swing next week. Growers in the central, western areas also picked tangerines, grapefruit.

**ARKANSAS:** Days suitable for fieldwork 5. Soil moisture 7% short, 61% adequate, 32% surplus. Main farming activities: Harvesting cotton, soybeans, planting wheat. Other farm activities included marketing spring calves, feeding cattle, planting, fertilizing winter forages, pastures. Alfalfa hay 21% poor, 59% fair, 20% good. Other hay 6% very poor, 25% poor, 41% fair, 24% good, 4% excellent.

**CALIFORNIA:** Progress of field activities was slowed by rainfall in most areas. Seedbed preparation for planting small grains, forage crops, new alfalfa continued where conditions permitted. Planting of wheat, barley, oats, winter forages, new alfalfa was ongoing in the San Joaquin, Sacramento Valleys. Some emerging wheat fields were fertilized. Wheat planting in the Imperial Valley was just getting underway. Rains halted the soil incorporation of rice stubble in the Sacramento Valley. Cotton harvest was virtually complete in the San Joaquin Valley. Shredding, discing of harvested cotton fields for pink bollworm control resumed in areas with sandier soils. Few fields of corn for silage were still being harvested. Sugar beets, seed alfalfa were planted in the central San Joaquin Valley. Some older seed alfalfa fields were mowed and baled. Alfalfa, sudan grass were cut for hay or green chopped. Pruning continued in deciduous orchards. Kiwifruit, persimmon, pomegranate, avocado harvesting continued. Navel orange picking remained active. Other citrus picked included grapefruit, lemons, mandarins. Broccoli, cauliflower were harvested in the central coast area. Fall lettuce harvesting was nearing completion in most areas. Fresno County garlic was being planted. Also planted were red onion, broccoli, cabbage transplants. Vegetables harvested in Fresno County were regular, organic carrots, broccoli, cabbage, fresh and processed garlic, strawberries. Cauliflower, broccoli, spinach crops progressed well. Artichokes, brussels sprouts were harvested in the Salinas-Watsonville area, along the Santa Cruz-San Mateo coast. Sweet potato, fresh market tomato harvests neared completion in Merced County. Cantaloup, honeydew melons continued to be harvested in the Imperial Valley. Other crops harvested were lima beans, green beans, onions, radishes, vineseed, eggplant, squash, okra. Rangeland, native pasture were starting to green, were improved by the recent rain, mild temperatures. Supplemental feeding was still necessary in most areas. Livestock were in generally good condition, with fall calving continuing. Sheep were moved to alfalfa hay fields for grazing and fall lambing. Beekeepers in the Fresno area were looking for good locations to overwinter hives.

**COLORADO:** Characterized by dry, seasonal weather. This allowed farmers to continue harvesting sorghum, corn. Prospects for sorghum have increased due to dry conditions that allowed producers to harvest more of the storm-damaged crop than previously expected. Other major farm activities included the caring, feeding of livestock, attending producer meetings.

**DELAWARE:** Days suitable for fieldwork 4.2. Topsoil moisture 87% adequate, 13% surplus. Subsoil moisture 7% short, 80% adequate, 13% surplus. Field corn 90% harvested for grain, 97% 1996, 98% avg. Soybeans 53% harvested, 74% 1996, 80% avg. Barley 12% fair, 85% good, 3% excellent. Wheat 20% fair, 78% good, 2% excellent. Hay 20% very short, 27% short, 52% adequate, 1% surplus. Alfalfa 85% harvested 5th cutting, 97% 1996, 76% avg. Pasture feed 8% poor, 30% fair, 62% good. Activities: Intensive harvesting of soybeans due to good weather, corn harvesting finished in majority of fields, sorghum harvesting near wrap-up, deer problem with wheat plantings.

**FLORIDA:** Topsoil moisture mostly adequate Panhandle, northern Peninsula, with scattered areas short moisture. Central Peninsula moisture adequate to surplus. Southern Peninsula moisture short to adequate. Sugarcane growth normal, harvest active. Wet condition delaying cotton picking. Farmers were planting winter wheat for grain. Drier weather helped keep harvesting on schedule, with most supplies satisfying Thanksgiving Day demand. Strawberry picking getting underway, west-central region. Vegetables marketed include snap beans, cabbage, sweet corn, cucumbers, eggplant, endive, escarole, lettuce, okra, parsley, peppers, radishes, squash, Chinese cabbage, tomatoes, watermelons. Some citrus producers still irrigating to maintain good tree, fruit condition. Very little new growth. Good color break on early fruit. Mid-season fruit starting to break color. Orange harvest very active. Processors very busy with oranges. Fresh houses packing for Thanksgiving trade. Caretakers cutting cover crops, fall fertilizations complete, some hedging, topping in southern area. General quality of pastures deteriorated. Freezing temperature put end to permanent pasture growth, Panhandle, northern Peninsula. West-central area pastures in quite good shape, but some a little wet. Cool season pasture still being planted. Winter pastures that are up doing well. Southwest, condition of pasture was declining seasonally. Pasture feed poor 5%, fair 45%, good 50%. Cattle fair 35%, good 65%.

**GEORGIA:** Days suitable for fieldwork 4.4. Soil moisture 1% short, 63% adequate, 36% surplus. Cotton 5% very poor, 17% poor, 48% fair, 28% good, 2% excellent. Rye 88% planted, 89% 1996, 91% avg. Sorghum 6% very poor, 18% poor, 57% fair, 19% good; 86% harvested for grain, 88% 1996, 92% avg. Soybeans 53% harvested, 75% 1996, 67% avg. Wheat 28% planted, 40% 1996, 43% avg. Other small grains 76% planted, 78% 1996, 79% avg. Onions 16% poor, 36% fair, 48% good; 29% transplanted, 41% 1996, 38% avg. Pecans 2% very poor, 23% poor, 41% fair, 33% good, 1% excellent; 58% harvested, 66% 1996, 62% avg. Pasture feed 3% very poor, 21% poor, 37% fair, 38% good, 1% excellent. Activities: Another week of showers throughout the State delayed harvesting, planting. Dampness was accompanied by cold weather, as even the southern area had freezing temperatures. Overall, crop conditions held steady or declined slightly. Other activities: Feeding hay to livestock, over seeding, planting winter forages, harvesting late vegetables.

**HAWAII:** Favorable weather conditions mostly good for agriculture. Early thundershowers gave way to mostly sunny skies and cool temperatures. Head, Chinese cabbage harvesting expected to increase. Tomato harvesting remains active. Banana harvesting active, increase in Williams varieties expected. Papaya production active, some areas will see decrease. Diseased banana and papaya plants being rogued. Export of semi-mature ginger root continues.

**IDAHO:** Days suitable for fieldwork 4.5. Corn harvested for grain 87%, 80% 1996, 82% avg. Hay, roughage supply 2% surplus, 72% adequate, 22% short, 4% very short. Activities: Harvesting corn for grain, plowing, repairing machinery, attending educational meetings, feeding livestock, weaning calves, marketing livestock.

**ILLINOIS:** Days suitable for fieldwork 4.5. Topsoil moisture 1% very short, 20% short, 75% adequate, 4% surplus. Cooler-than-normal temperatures, less than normal precipitation again last week allowed farmers to nearly complete harvesting the corn crop. Snow which fell on the 15th, however, delayed the harvesting of the remaining corn, which was carrying moisture in the upper 20's due to the wet snows. Wheat crop is reportedly in good shape and has good growth going into the winter. Farm activities last week included fall tillage, application of lime, fertilizer, anhydrous ammonia. Many farmers are reported to be hauling water due to dry wells, concerned over the low subsoil moisture levels.

**INDIANA:** Days suitable for fieldwork 3.6. Topsoil moisture 1% very short, 14% short, 71% adequate, 14% surplus. Subsoil moisture 8% very short, 31% short, 55% adequate, 6% surplus. Corn harvest was slowed in northern area of the State, where several inches of snow were received. Cool temperatures prevented the snow from melting, leading to further delays for farmers. Cooler-than-normal temperatures combined with dry soil conditions have slowed wheat growth in many areas. Activities: Harvesting corn, soybeans, tilling harvested soybean, corn acreage, applying fertilizer, lime, caring for livestock.

**IOWA:** Days suitable for fieldwork 4.0. Harvest virtually complete. Fertilizer being applied despite frozen ground in many areas. Corn acreage harvested 99%, 94% 1996, 93% avg. Soybean acreage harvested 100%. Available hay, roughage for livestock feed 14% short, 81% adequate, 5% surplus. Quality of hay, roughage supplies 9% poor, 48% fair, 43% good. Use of stubble fields 22% none, 30% limited, 39% moderate, 9% extensive. Grain movement 14% none, 45% light, 38% moderate, 3% heavy. Fall tillage completed 54%, 40% 1996; fall fertilizer applied 50%, 36% 1996. Winter wheat planted 99%, 100% 1996, 100% avg. Livestock good condition. Calf sales increasing. Up and down temperatures causing some respiratory problems.

**KANSAS:** Days suitable for fieldwork 6.0. Topsoil moisture 6% short, 92% adequate, 2% surplus. Subsoil moisture 11% short, 88% adequate, 1% surplus. Wheat seeded 99%, 99% 1996, 99% avg. Wheat pastured 12%, 9% 1996, 9% avg. Wheat conditions have declined in some areas due to a lack of moisture. Fall harvest is nearly complete. Wet conditions, lack of storage continue to hinder sorghum harvest in the western third of the State. Sunflowers harvested 96%. Stock water supplies 5% short, 93% adequate, 2% surplus. Livestock producers were calving, weaning calves, moving cattle off pastures to crop residue, wheat fields.

**KENTUCKY:** Early-week suitable for fieldwork, late-week rain delayed harvests, benefited tobacco stripping. Topsoil, subsoil moisture mostly adequate to short. Additional precipitation needed to resupply stock water in some areas. Warmer weather, limited rain across the State allowed farmers to make rapid harvest progress. Relative humidity generally favorable for tobacco stripping, some producers report the crop still needs to dry down before stripping can begin. Transporting stripped tobacco to auction market active. Stripping continued to lag behind normal. Corn, soybean combining finishing up most areas. Soil moisture generally adequate statewide for fall-seeded small grains. Wheat seeding virtually complete,

emerged generally good to fair condition. Cattle good condition. Supplemental feeding necessary due to poor pasture conditions.

**LOUISIANA:** Days suitable for fieldwork 3.0. Soil moisture 3% short, 49% adequate, 48% surplus. Pecans 10% very poor, 16% poor, 40% fair, 31% good, 3% excellent; 69% harvested, 64% 1996, 57% avg. Harvest was active throughout the week. Yields were reported fair to good, nut size was slightly smaller than normal. Sugarcane 5% poor, 22% fair, 53% good, 20% excellent; 58% harvested, 54% 1996, 57% avg. Muddy fields slowed harvesting operations. Burning was limited, sugar recovery was down due to higher trash and mud content. Sweet potatoes 96% harvested, 96% 1996, 94% avg. Wheat 4% poor, 31% fair, 65% good; 87% planted, 72% 1996, 77% avg.; 79% emerged, 55% 1996, 64% avg. Wheat planting was halted 21st due to heavy rains. Livestock 11% poor, 39% fair, 45% good, 5% excellent. Vegetables 6% very poor, 13% poor, 40% fair, 38% good, 3% excellent. Producers were selling greens. Few acres of strawberries were replanted due to poor stands. Pasture feed 3% very poor, 17% poor, 48% fair, 31% good, 1% excellent. Pasture growth was slow due to cool weather, limited sunshine.

**MARYLAND:** Days suitable for fieldwork 4.6. Topsoil moisture 1% short, 59% adequate, 40% surplus. Subsoil moisture 16% short, 72% adequate, 12% surplus. Field corn 91% harvested for grain, 96% 1996, 93% avg. Soybeans 78% harvested, 83% 1996, 80% avg. Barley 1% poor, 12% fair, 69% good, 18% excellent. Rye 3% poor, 18% fair, 67% good, 12% excellent. Wheat 4% poor, 16% fair, 59% good, 21% excellent; 91% seeded, 94% 1996, 93% avg. Hay supplies 20% very short, 36% short, 43% adequate, 1% surplus. Alfalfa hay 78% 5th cutting, 85% 1996, 78% avg. Activities: Corn harvest nearing completion, soybean harvesting picked up due to good weather, deer feeding in planted wheat fields.

**MICHIGAN:** Days suitable for fieldwork 5.5. Topsoil moisture 3% short, 83% adequate, 14% surplus. Subsoil moisture 1% very short, 5% short, 87% adequate, 7%. Alternation of snow, warm weather kept moisture levels high, continued to keep some farmers out of the fields until they dry up or freeze.

**MINNESOTA:** Snow cover reached 2 inches or more across most of the State outside the southeast, northeast districts. Field activities have finished for the year. Livestock producers are busy with normal winter tasks. Below-normal temperatures are leading to an early freeze-up of waterways; barge traffic is expected to be halted earlier than usual this fall, which will add to difficulties moving grain. Hay supplies are short in areas that had early and late periods of below-normal precipitation.

**MISSISSIPPI:** Days suitable for fieldwork 3.7. Soil moisture 1% short, 49% adequate 50% surplus. Soybeans 94% harvested, 97% 1996, 93% avg. Sweet potatoes 95% harvested, 100% 1996; 100% avg. Pecans 51% harvested, 55% 1996, 57% avg.; 6% poor, 39% fair, 53% good, 2% excellent. Wheat 89% planted, 97% 1996, 92% avg.; 79% emerged, 92% 1996, 83% avg.; 3% poor, 30% fair, 65% good, 2% excellent. Cattle 1% very poor, 6% poor, 26% fair, 58% good, 9% excellent. Activities: Harvesting soybeans, planting wheat, feeding cattle. Rain continues to delay harvesting of crops across the State.

**MISSOURI:** Days suitable for fieldwork 5.4. Topsoil moisture 2% very short, 11% short, 83% adequate, 4% surplus. Bean harvesting most advanced north-central, northeast, with 99%, central, east-central, southwest, south-central, with 98%, least advanced northwest, southeast at 90%, 92%, respectively. Corn harvesting complete in southern third of State, 99% central third, 93% northern third. Sorghum harvesting in central district is least advanced at 81%, while the southern third of State is at 100%. Pasture feed 2% very poor, 10% poor, 37% fair, 49% good, 2% excellent.

**MONTANA:** Days suitable for fieldwork 5. Topsoil moisture 5% very short, 46% short, 48% adequate, 1% surplus. Subsoil moisture

9% very short, 47% short, 43% adequate, 1% surplus. Very little damage from wind was reported. Winter wheat wind damage 0% heavy, 2% moderate, 58% light, 40% none. Some concern about the lack of snow cover for winter wheat. Winter wheat protectiveness of snow cover 49% very poor, 37% poor, 9% fair, 5% good. Cattle, calves reported in good to excellent condition. Supplemental feeding has begun. Cattle, calves receiving supplemental feed 31% sheep, lambs 44%. Livestock grazing 0% closed, 14% difficult, 86% open.

**NEBRASKA:** Days suitable for fieldwork 6.8. Subsoil moisture 1% very short, 15% short, 81% adequate, 3% surplus. Topsoil moisture 8% short, 89% adequate, 3% surplus. Favorable fall harvest weather enabled many producers to complete their harvest, proceed with fall tillage operations. Corn 96% harvested, 95% 1996, 90% avg. Soybeans 99% combined, 100% 1996, 100% avg. Sorghum 97% harvested, 93% 1996, 96% avg. Winter wheat 4% poor, 25% fair, 63% good, 8% excellent. Producers weaning, moving cows to stalks fields; concerns of over-eating on corn due to the above-normal amounts of grain on the ground in some fields.

**NEVADA:** Dormant grass, hay fields providing good forage north. Hay supplies good. Fall seeded grains continue to show good early growth. Calf crop being weaned, stock moved to winter ranges. Sheep, lambs grazing dormant hay fields. Main farm, ranch activities: moving cattle, marketing cattle, tending livestock.

**NEW ENGLAND:** Topsoil moisture conditions favorably moist in most areas. Christmas tree growers loading trees on trucks for delivery to retailers. Major farm activities: mending fences; spreading manure; caring for livestock.

**NEW JERSEY:** Days suitable for fieldwork 3. Topsoil moisture adequate to surplus. Harvesting of fall vegetables is complete except for certain southern areas where a light harvest of cabbage, parsley, turnips was reported. Harvesting of soybeans continues, with the harvesting of corn nearly complete. Pasture feed fair to good.

**NEW MEXICO:** Days suitable for fieldwork 6.3. Topsoil moisture 1% very short, 21% short, 77% adequate, 1% surplus. Harvest of sorghum, cotton, red chile continued as pecan harvest was just getting underway. Sorghum harvest was almost completed with 98% harvested, 81% 1996, 77% avg.; 8% poor, 51% fair, 41% good. Cotton harvest continued with 80% of the crop picked, 80% 1996, 72% avg.; 2% poor, 20% fair, 65% good, 13% excellent. Red chile 75% harvested, 66% 1996; 3% poor, 20% fair, 55% good, 22% excellent. Wheat crop 7% poor, 50% fair, 43% good. Pecan harvest continued in the north, while southern producers were waiting for a hard freeze before beginning harvest. Pecan 1% poor, 19% fair, 65% good, 15% excellent. Cattle, sheep mostly fair to good condition. Range, pasture feed 1% very poor, 5% poor, 27% fair, 61% good, 6% excellent.

**NEW YORK:** Coldness, winter storm at the end of the week brought a halt to outside activities. Corn still standing will be harvested as farmers are once again able to get machinery into fields. Onions, potato, apple producers graded, packed crops. Wine making was in full swing. Cider production continued, at a slower pace.

**NORTH CAROLINA:** Days suitable for fieldwork 4.6. Soil moisture 3% short, 70% adequate, 27% surplus. Weather across the State was significantly below average. However, farmers made good progress with cotton, soybean harvests, small grain plantings. Activities included: Harvesting cotton, peanuts, sorghum, soybeans, sweet potatoes, Christmas trees; planting small grains, cover crops; maintaining pastures; tending livestock; repairing equipment.

**NORTH DAKOTA:** Producers continue to haul hay, with some areas expecting shortages this winter. Calves are at normal weights, good condition. Winter meetings have begun, and things are wrapping up for the year. Producers are reviewing their 1997 situation, contemplating next year.

**OHIO:** Days suitable for fieldwork 4.4. Topsoil moisture 10% short, 79% adequate, 11% surplus. Corn harvested for grain 1 day ahead of the avg. Winter wheat emerged 1 day behind avg. Tobacco 30% stripped. Activities: Corn drying; finishing soybean harvest; hauling, binning, selling corn, soybeans; chopping corn stalks; hauling, spreading manure; spreading lime, fertilizer; fall tillage for spring crops; equipment repair, maintenance, winter storage preparations; firewood cutting; ornamental tree digging.

**OKLAHOMA:** Days suitable for fieldwork 5.4. Topsoil moisture 8% short, 90% adequate, 2% surplus. Subsoil moisture 8% short, 91% adequate, 1% surplus. Cool, dry weather restricted wheat growth, accelerated harvest of row crops. Wheat 18% grazed, 20% 1996, 17% avg. Oats 94% planted, 86% 1996, 83% avg.; 77% up to stand, 65% 1996, 69% avg.; 12% grazed, 12% 1996, 6% avg. Soybeans 79% harvested, 89% 1996, 85% avg. Peanuts 97% combined, 85% 1996. Livestock 3% poor, 20% fair, 75% good, 2% excellent. Feeder cattle prices steady to \$1 per cwt. higher.

**OREGON:** Activities: Winter wheat planting, sugar beet harvest nearing completion. Fall nursery digging, container movement continued. Greenhouses busy with winter plants, preparing for early spring flowers. Christmas tree balling underway, sales on going. Domestic Christmas tree sale preparation full swing. Rain has slowed winter farm activities on westside. South coast cranberry growers cleaning ditches, resanding. Livestock condition good to excellent across State. Fall calving underway. Westside dairy cows still pasture grazing because mild weather. Winter farm, ranch activities underway.

**PENNSYLVANIA:** Days suitable for fieldwork 3.8. Fair week for fieldwork. Soil moisture 2% very short, 9% short, 64% adequate, 25% surplus. Soybean harvest 84% complete, 84% 1996, 83% avg. Fall plowing 88% complete, 90% 1996, 93% avg. Wheat emerged 90% complete, 92% 1996, 92% avg. Alfalfa 4th cutting 92% complete, 93% 1996, 92% avg. Activities: Harvesting corn, soybeans; some hay making; plowing fields; cleaning, repairing and storing machinery; hauling manure; caring for livestock.

**SOUTH CAROLINA:** Days suitable for fieldwork 5.1. Soil moisture 1% short, 80% adequate, 19% surplus. Barley 99% planted, 97% 1996, 81% avg.; 96% emerged, 94% 1996, 73% avg.; 60% good, 40% excellent. Oats 91% planted, 94% 1996, 84% avg.; 84% emerged, 87% 1996, 74% avg.; 1% poor, 21% fair, 65% good, 13% excellent. Pecans 64% harvested, 60% 1996; 53% fair, 46% good, 1% excellent. Rye 93% planted, 84% 1996, 80% avg.; 79% emerged, 71% 1996, 69% avg.; 34% fair, 61% good, 5% excellent. Sorghum 98% harvested, 100% 1996, 87% avg.; 1% very poor, 15% poor, 46% fair, 38% good. Sweet potatoes 100% harvested, 93% 1996, 81% avg.; 1% very poor, 2% poor, 28% fair, 68% good, 1% excellent. Winter grazings 95% planted, 93% 1996, 91% avg.; 83% emerged, 87% 1996, 84% avg.; 1% very poor, 3% poor, 30% fair, 60% good, 6% excellent. Winter wheat 47% planted, 62% 1996, 49% avg.; 36% emerged, 45% 1996, 33% avg.; 18% fair, 80% good, 2% excellent.

**SOUTH DAKOTA:** Farmers with crops left in fields, able to continue with harvest. Besides winding up row crop harvest, other activities are moving hay supplies, livestock for the upcoming winter months.

**TENNESSEE:** Days suitable for fieldwork 4.0. Topsoil moisture 3% short, 69% adequate, 28% surplus. Subsoil moisture 4% short, 75% adequate, 21% surplus. Tobacco 65% burley stripped, 76% 1996, 77% avg. Winter wheat 1% poor, 12% fair, 61% good, 26% excellent; 90% seeded, 82% 1996, 88% avg. Farmers were back in fields as early as 24th harvesting cotton, soybeans, seeding wheat. Field activities continued at a feverish pace until 20th. By 21st, rains moved back into mid-eastern area, delaying progress once again. Many producers in western area missed the rain, were able to continue harvesting through the weekend. As a result, only 9% of the cotton acreage remains to be harvested. Soybean harvest progressed well as producers brought in an additional 15% last week.

This places progress only a couple of days behind the 5-year average. Moisture from recent rains was ideal for wheat seeding, development. Seeding has slightly passed the 5-year average pace, with more than 85% of the crop rated in good-to-excellent condition. Burley tobacco stripping is ongoing, yet progress remains about a week behind. Producers were hoping to get back into fields to wrap-up harvest, seeding, since rain is not forecasted until the end of the week.

**TEXAS:** Cool, damp, cloudy conditions prevailed across State, cleared, turned warmer late week. Producers in Plains getting back into fields late week. Recent moisture helped small grains, winter pastures over past few weeks. Livestock conditions declined some with recent cold, wet conditions. Supplemental feeding activity increased during week. Small grains: Recent snow, rain in High Plains benefited dryland fields. However, additional moisture needed for further development. Irrigated fields showing good progress. Late-planted fields north-central area showed slow emergence due to cool, cloudy conditions. Some late planting occurred central, Hill Country areas. Cotton harvest resumed in Plains, making good progress by end week. Quality on later fields suffered from recent moisture. Few fields remained for harvest north-central area where harvest making progress by late week. Harvest also increasing in Trans Pecos, with increased leaf drop from recent freezing temperatures. Grain Sorghum: Harvest resumed by late week in High Plains. Many producers will wait until cotton is out to complete grain harvest. Recent freezing temperatures aided drying late fields. Peanuts: Harvest nearing completion north-central fields by late week. South-central, harvest beginning wind down some fields. Many fields remained too wet for much progress. Damage to dug fields from rain, frost reported to be minimal. Yields, quality continued good. Soybean harvest nearing completion by end week in High Plains. Along Upper Coast, late fields remained unharvested due to wet conditions, quality continued to decline. Sugar beets, most harvest activity completed by late week in High Plains. 90% harvested, 80% 1996, 75% avg. Other Crops: Sunflowers 85% harvested, 94% 1996, 88% avg. Oats 89% planted, 96% 1996, 84% avg.

**Commercial Vegetables:** Rio Grande Valley, harvest some vegetables resumed with slightly drier conditions later week. San Antonio-Winter Garden, progress good on all crops during week. East, recent freezing temperatures ended most remaining production. Pecans: Wet conditions slowed harvest part week, making progress again by late week. Yields, quality remained good in most areas; 29% harvested, 52% 1996, 46% avg.

**Range and Livestock:** Cold, wet conditions for most week caused increase in feeding activity throughout State. Body conditions some areas showed slight decline. Freezing temperatures early week ended growth on warm season grasses. Winter pastures benefited from recent moisture.

**UTAH:** Major farm, ranch activities included finishing plowing fields, shipping onions, moving cattle to winter ranges, completing the grain corn harvest, weaning calves, marketing cattle.

**VIRGINIA:** Days suitable for fieldwork 4.2. Topsoil moisture 5% short, 75% adequate, 20% surplus. Subsoil moisture 2% very short, 18% short, 75% adequate, 5% surplus. Corn 94% harvested, 97% 1996, 97% avg. Soybeans 60% harvested, 58% 1996, 67% avg. Cotton 73% harvested, 69% 1996, 79% avg. Barley 98% seeded, 100% 1996, 98% avg. Winter wheat 70% seeded, 74% 1996, 81% avg. Pasture feed 1% very poor, 18% poor, 39% fair, 38% good, 4% excellent. Small grains, grazing crops 4% poor, 30% fair, 53% good, 13% excellent. Livestock 4% poor, 29% fair, 62% good, 5% excellent. Rainfall was received again last weekend in most central, northern localities. For most localities, last week's rain was patterned after five previous weekend rains. Some central, northern localities

reported some harvesting, planting delays due to wet field conditions. Some extreme western counties reported snow cover early in the week that limited grazing, increased feeding of livestock. Producers in drier localities were able to move rapidly with fall harvesting, small grain seeding. Grain corn harvest remained behind last year, 5-year average. Other activities included peanut marketing, tobacco curing, stripping, marketing.

**WASHINGTON:** Days suitable for fieldwork 3.8. Topsoil moisture 62% adequate and 38% surplus; subsoil moisture 10% short, 87% adequate, 3% surplus. Cool, rainy conditions ended fieldwork throughout most of the State. Several counties reported that fieldwork was likely ended for the winter. Winter wheat 99% emerged, 99% 1996, 95% avg. Kittitas County reported that winter wheat was mostly in the four- to five-leaf stage, appears good. Whitman County reported winter grain crops were in mostly good condition. Corn for grain 80% harvested, 55% 1996, 79% avg. Grain corn harvest continued as weather allowed. Hay, other roughage supplies 2% short 80% adequate, 18% surplus. Range, pasture feed 11% very poor, 9% poor, 33% fair, 47% good. Western area reported wet pasture conditions, with little growth for the week. East of the Cascades, livestock were beginning to run short on adequate pasture. Feeding was set to begin at any time. Carrot harvest ended with lower than expected yields. Christmas tree growers scrambled to keep pace with demand for cut trees. U-cut places were getting set to open.

**WEST VIRGINIA:** Days suitable for fieldwork 4.0. Topsoil moisture 4% very short, 3% short, 86% adequate, 7% surplus. Corn 81% harvested grain, 72% 1996, 88% avg. Soybeans 89% harvested grain, 69% 1996, 84% avg. Winter wheat 53% fair, 47% good; 83% planted, 97% 1996, 97% avg. Cattle 1% poor, 16% fair, 79% good, 4% excellent. Sheep 2% poor, 16% fair, 78% good, 4% excellent. Activities: Harvesting corn, pasture clipping, winter wheat planting, marketing livestock, general maintenance.

**WISCONSIN:** Days suitable for fieldwork 5.7. Soil moisture 13% short, 85% adequate, 2% surplus. Reporters in the southwest district observed that there were still corn fields standing because there was no place to store the grain, or the field was left to "field dry." In 1995, all the corn acreage was harvested; 1992 only 48% was combined. Many reporters commented that the crop yields were good, filled many elevators, statewide. Long lines at elevators were caused by the quantity of corn, the need for grain drying. Reporters in Marinette, Wood Counties commented that corn harvest this year was only hampered by a shortage of harvest equipment. Hay, roughage supplies 18% short, 73% adequate, 9% surplus. Southwest, south-central districts showed the highest need for more hay. Chippewa County observed that hay quality was down, so there was some purchasing of high quality hay to supplement the poorer quality. A reporter in Dunn County estimated that hay supplies will be short on half of the area's farms. Quality forage supplies were reported as being tight in Dane, Dodge Counties due to adverse haying weather this year. Waushara County noted that straw supplies appear short. Fall tillage 65% complete, 58% 1996, 64% avg. Frost levels have made soils too firm to till. Columbia County reporter cited tilled fields that turned up frozen chunks. Other farm activities included: Attending winter auctions, supplementing cattle fed on pastures, winterizing machinery, hauling manure from storage units, chopping stalks for feed or bedding, drying grain, ordering seed for next year's crop.

**WYOMING:** Corn for grain 93% harvested, 100% 1996, 93% avg. Mild weather allowed producers to catch up to the average pace in the corn for grain harvest. Producers were busy feeding livestock, maintaining farm equipment, fixing fence, preparing for winter.

# International Weather and Crop Summary

November 16 - 22, 1997

## HIGHLIGHTS

**FSU-WESTERN:** Widespread light to moderate precipitation was accompanied by near- to slightly above-normal temperatures, favoring dormant winter grains.

**EASTERN ASIA:** Dry weather prevailed across the North China Plain after last week's beneficial rain.

**NORTHWESTERN AFRICA:** Widespread showers favored winter grain emergence and early establishment.

**AUSTRALIA:** Rain continued in primary sorghum and cotton areas, aiding crop establishment.

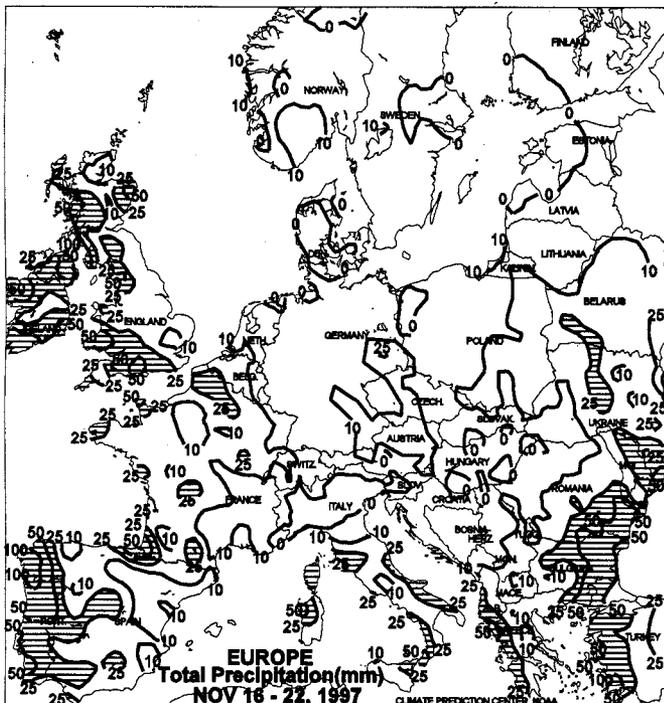
**SOUTH ASIA:** Shower activity increased across the region, leading to a resurgence of untimely rain in central India.

**SOUTH AFRICA:** Dry weather covered the corn belt, but below-normal temperatures restricted crop moisture demands and evaporative losses.

**SOUTHEAST ASIA:** Despite recent showers, more rain is needed across southern Sumatra, Java, and most of the Philippines.

**SOUTH AMERICA:** In Brazil, drier weather favored soybean planting in the south, while showers boosted topsoil moisture in the north.

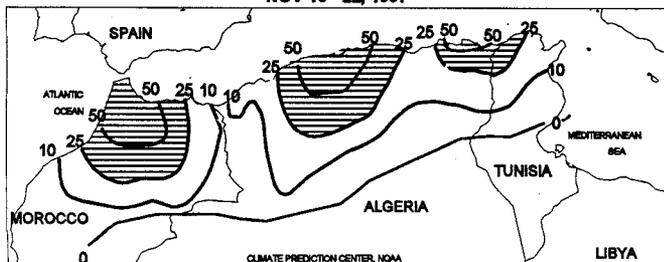
**EUROPE:** Showers and mild weather favored winter grain establishment in the west, while unseasonably cold weather in the southeast limited crop establishment.



### EUROPE

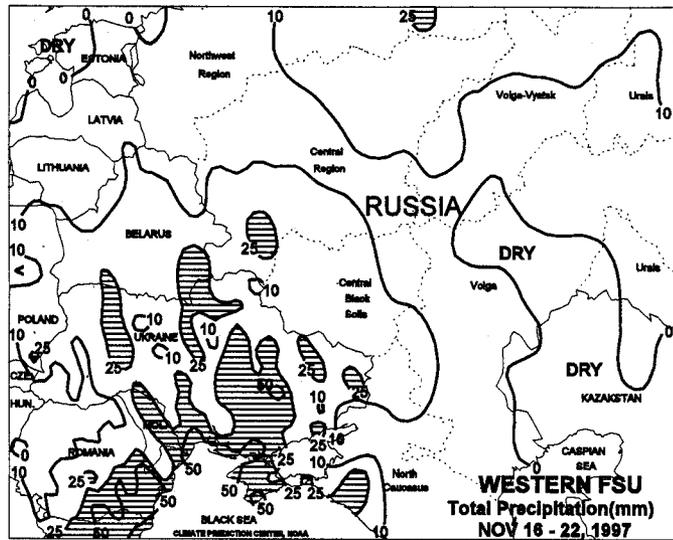
Light showers were accompanied by unseasonably mild weather in England, France, and northern Spain, benefiting winter crop establishment. Farther south, continued wet weather (40-100 mm) in Portugal kept soils waterlogged and caused additional flooding. Unseasonably cool weather prevailed over Germany, especially in the east, slowing winter grain development. In eastern Europe, cold weather prevailed in winter wheat areas that stretched from Poland southward into Greece. The cold weather kept winter grains dormant in northern areas and limited further winter grain establishment in the southeast. Light to moderate snow (2-20 mm liquid equivalent) accompanied the cold weather in Poland. In southern Romania, Yugoslavia, and Bulgaria, light to moderate rain (10-50 mm, with local amounts in excess of 50 mm) changed to heavy snow by week's end. In Italy, widespread showers (10-50 mm) in central and southern areas provided abundant topsoil moisture for winter grain emergence and establishment. Mostly dry weather prevailed over winter wheat areas in Italy's Po Valley.

**NORTHWEST AFRICA Total Precipitation (mm) NOV 16 - 22, 1997**



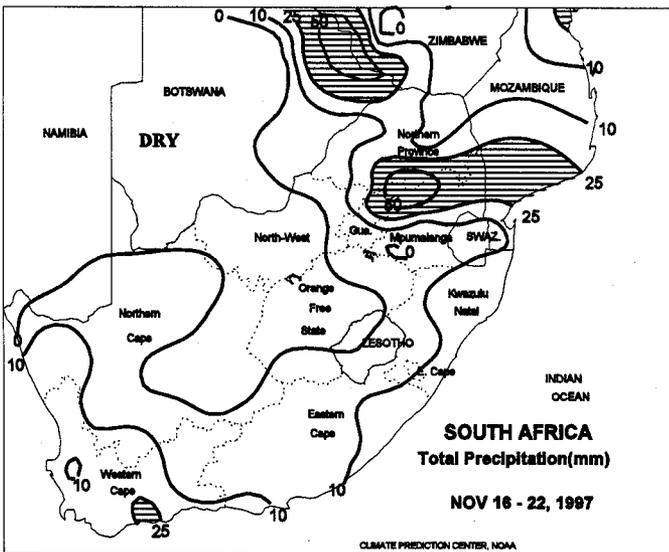
### NORTHWESTERN AFRICA

Light to moderate showers (10-50 mm, with local amounts in excess of 50 mm) continued over Algeria and Tunisia, maintaining sufficient topsoil moisture for winter grain emergence and establishment. Rainfall increased in Morocco, with greatest amounts of rain (25-40 mm) falling in northern winter wheat areas. The precipitation in northern Morocco will likely spur widespread winter wheat planting. Lesser amounts of rain (around 10 mm) in southern Morocco helped condition topsoils for planting.



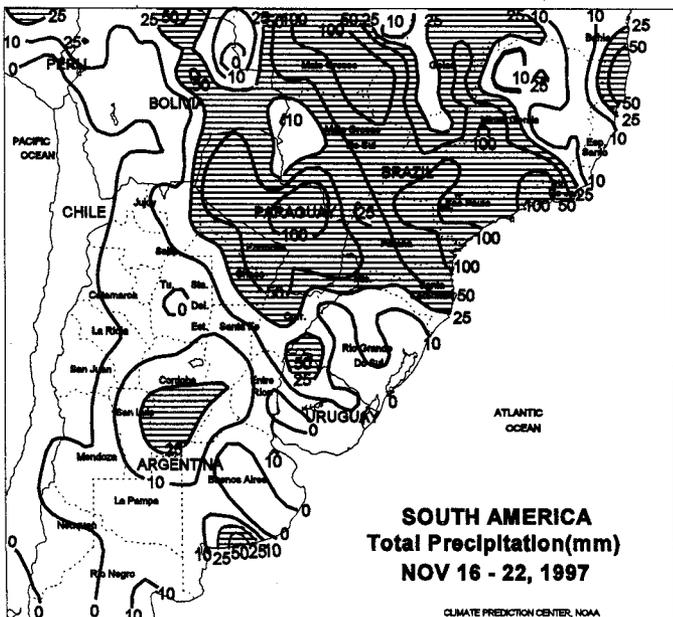
**FSU-WESTERN**

In Russia, light precipitation (around 10 mm) fell in most winter grain areas. The moisture fell as a mixture of rain and snow in the north, with mostly rain in southern winter wheat areas. In Ukraine, substantial amounts of precipitation (10-63 mm) covered most winter wheat areas. The precipitation fell as a cold rain in the east and south, with snow falling in the west. Temperatures averaged near to slightly above normal in the eastern two-thirds of Ukraine and southern Russia. Weekly temperatures averaged 1 to 2 degrees C below normal in northern Russia and western Ukraine. At week's end, a shallow snow cover existed over winter grain areas in a band that stretched from western Ukraine northeastward through southern Belarus into the Central Region. Winter grains over the remainder of Ukraine, Russia, and the Baltics were snow-free, leaving them vulnerable to potential extreme cold. In cotton-growing areas of Central Asia, dry weather favored final cotton harvesting efforts.



**SOUTH AFRICA**

Drier-than-normal weather dominated the corn belt, with just a few locations in the northeast reporting rainfall in excess of 10 mm. However, temperatures averaging 1 to 5 degrees C below normal reduced crop growth rates, and in western corn areas, tempered the impact of the current dry spell. In fact, lows dipped below 5 degrees C across the western two-thirds of the major maize-producing area, possibly bringing an unusually late frost to some traditionally colder spots. Corn faced only a minor risk though, as many of the coldest locations remained unplanted due to dryness. Rain (25 mm or less) and more moderate temperatures benefited sugarcane along the coast of Kwazulu-Natal. Farther south, moderate showers (10-25 mm or more) swept across the primary agricultural areas of Western Cape, boosting moisture reserves but hampering winter wheat harvests.

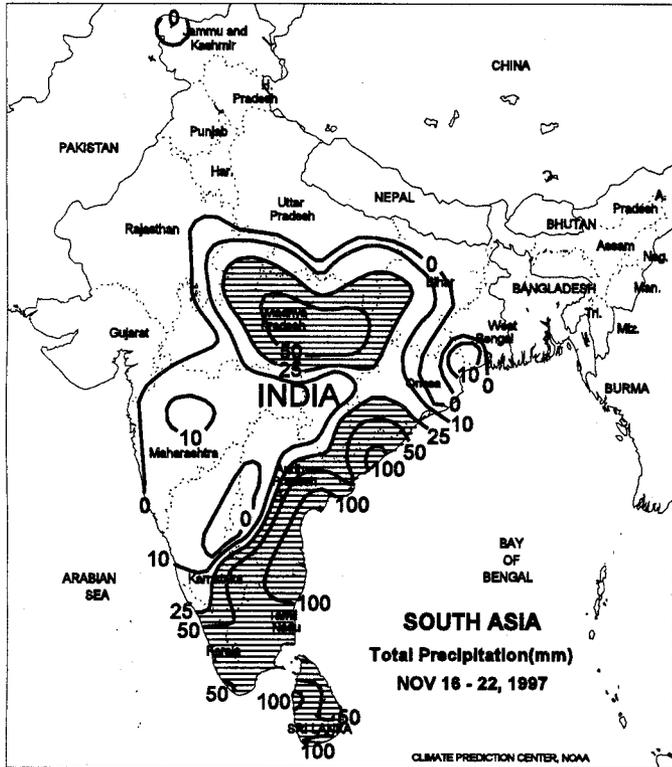


**SOUTH AMERICA**

In southern Brazil, drier weather (less than 15 mm) favored soybean planting across Rio Grande do Sul. To the north, widespread showers (25-90 mm) boosted soil moisture for soybean planting. In Mato Grosso, heavy showers (50-150 mm) eased dryness, but caused some local flooding. As of November 20, Brazilian soybeans were 54 percent planted, compared with the 5-year average of 53 percent. In central Argentina, rain (20-45 mm) boosted soil moisture supplies in southern Cordoba and Santa Fe. Drier weather in northern Buenos Aires favored summer crop planting. Moisture was favorable for filling to early-maturing winter wheat. According to reports as of November 14, corn in Argentina was 70 percent planted, soybeans 23 percent, sunflower 67 percent, sorghum 41 percent, and cotton 21 percent. Temperatures averaged 1 to 3 degrees C below normal across central Argentina and near to slightly above normal in southern Brazil.

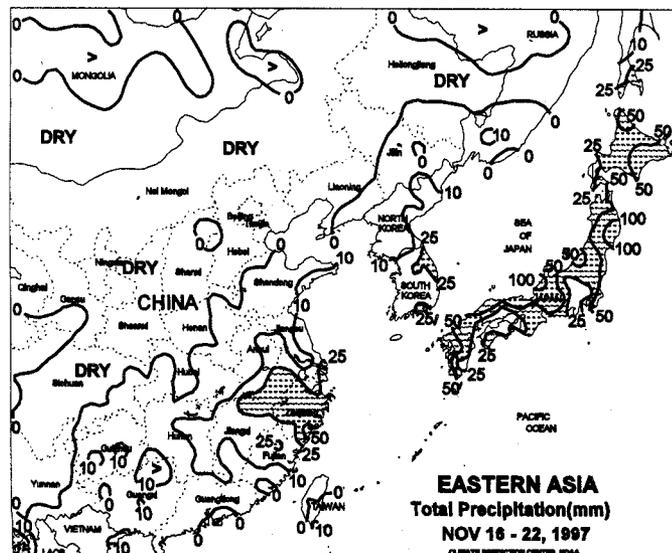
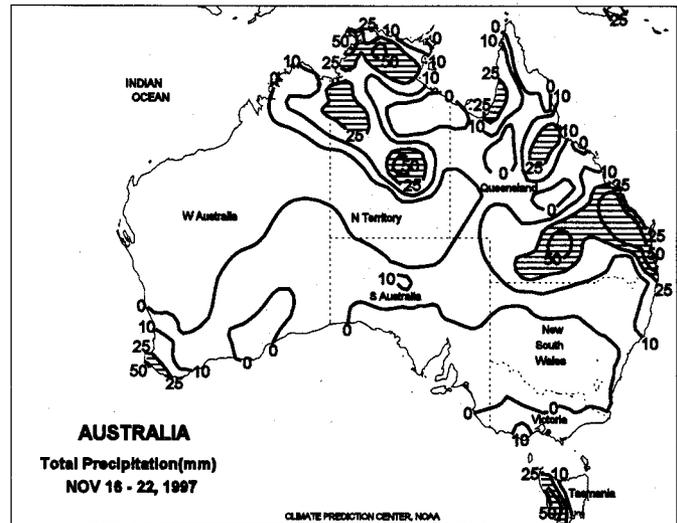
**SOUTH ASIA**

Unseasonable showers (15-50 mm or more) returned to central India, raising concern for unharvested summer crops. The heaviest rainfall was concentrated over Madhya Pradesh, threatening important soybean, rice, coarse grain, and cotton crops. Farther south, heavy rain (50-100 mm or more) continued over India's southern tip and extended northward along the southeastern coast. Long-term moisture reserves are abundant to excessive for rice and other second-season crops in this part of southern India. Local washout may necessitate some replanting. Elsewhere, seasonable dryness continued across the north and in the primary rice areas of eastern India and Bangladesh, where harvest and transplanting activities are underway.



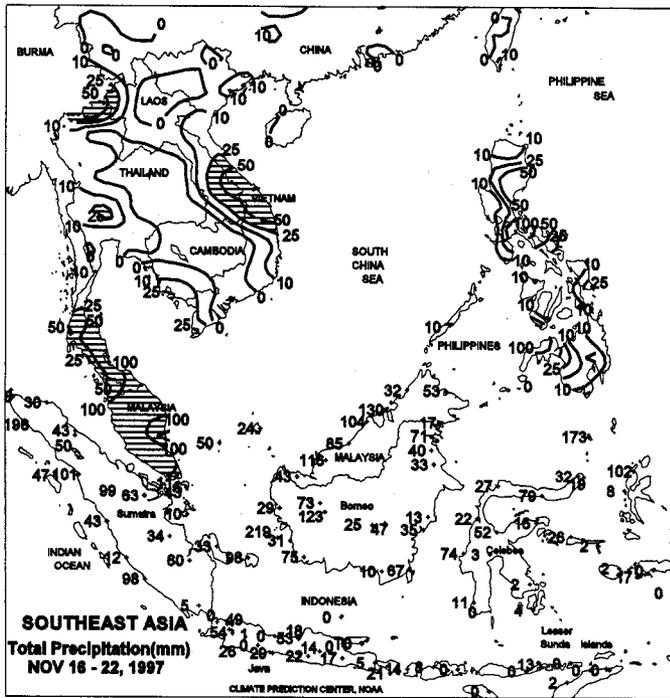
**AUSTRALIA**

Moderate to heavy rain (10-50 mm or more) fell throughout Queensland's primary sorghum and cotton areas. Drier weather returned to interior summer crop areas of New South Wales, although moderate rain (12-37 mm) extended southward to coastal sugarcane areas east of the Dividing Range. Beneficial rain since early November has improved prospects for newly planted summer crops, especially in Queensland. Temperatures remained favorable, averaging near to slightly below normal, with highs generally confined to the low 30's C. Elsewhere, a return to drier weather favored winter grain maturation and harvesting across the west and southeast. In New Zealand, rainfall was generally light (10 mm or less) throughout the main pasture areas.



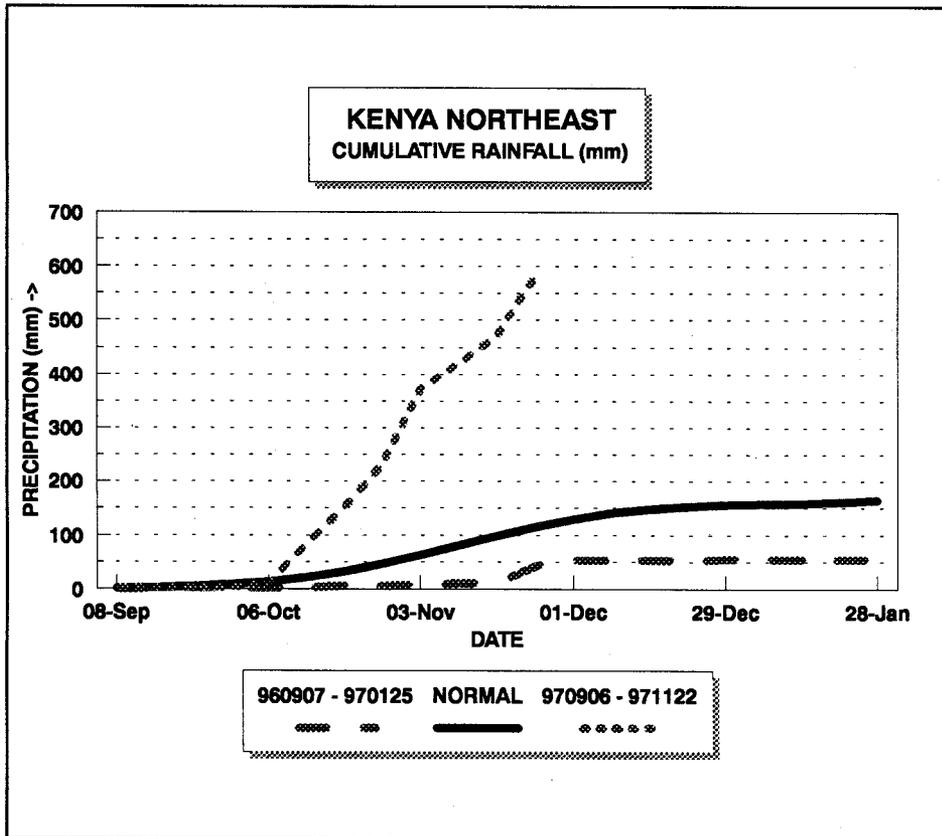
**EASTERN ASIA**

Early-week light rain (less than 5 mm) continued to favor vegetative winter wheat across the North China Plain. Heavier rainfall (15-45 mm) benefited winter grains and oilseeds across east-central China. Freezing temperatures reached as far south as the Yangtze Valley (2-3 degrees C below normal). Moderate to heavy rain (25-80 mm) slowed late rice harvesting across South Korea and Japan.



**SOUTHEAST ASIA**

Scattered showers (5-30 mm) again prevailed across Java, easing dryness, but more widespread showers are needed. Southern Sumatra and Borneo received the heaviest showers (10-80 mm) of the drought-stricken areas of southern Indonesia. Despite moderate showers (20-55 mm) across the eastern Philippines, rainfall is still averaging below normal. Typically, rainfall averages 75 to 100 mm per week across the eastern Philippines. The oil palm areas of peninsular Malaysia received beneficial showers (90-150 mm). Mostly dry weather aided rice harvesting in Thailand and Vietnam.



**Heavy Rains Continue in East Africa**

Very heavy rains continued to plague East Africa last week, aggravating the flooding that has taken a tremendous toll in lives, crops, and property. As shown in the graph of cumulative rainfall for northeastern Kenya, the heavy rains began in early October and have been unusually heavy and persistent. According to rainfall reports and satellite estimates, totals since October 1 range from 400 to 800 mm across extreme southern Ethiopia, eastern Kenya, and southern Somalia, with localized amounts well over 1,000 mm. The bulk of the impacts have been in southern Somalia, where the floodwaters from the Juba and Shebelle Rivers have joined to form a gigantic lake. The current rainy season contrasts sharply with last year's, when drought covered the region.

The *Weekly Weather and Crop Bulletin* 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.

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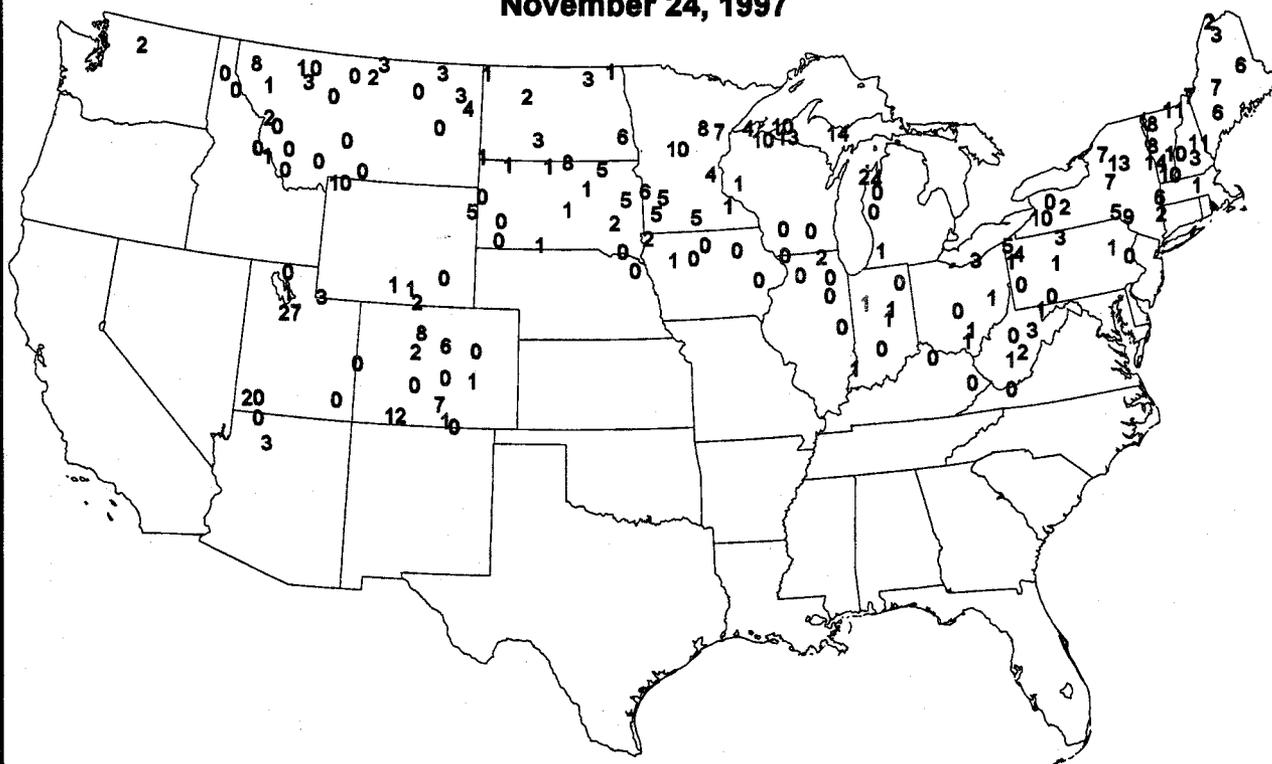
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**Snow Depth (Inches)  
November 24, 1997**



Experimental product based on preliminary data  
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*The NWS co-operative observer network is the principal source of the snow depth reports.*

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