

# 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

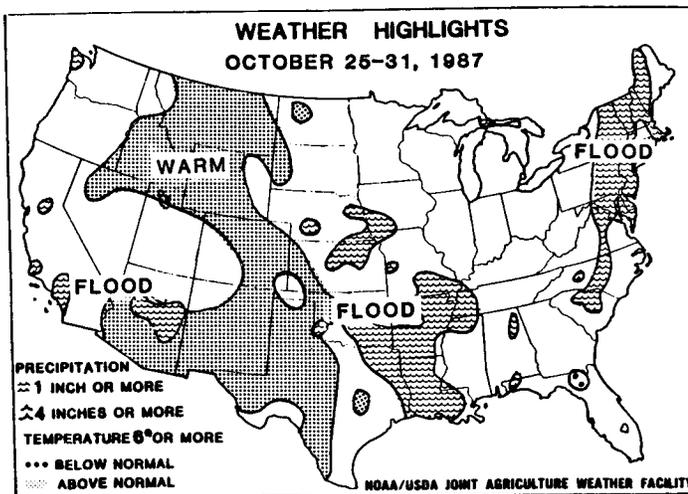
Volume 74, No. 44

Washington, D.C.

Nov. 3, 1987

## National Weather Summary

October 25 to 31, 1987



**HIGHLIGHTS:** An east coast storm brought substantial rains to the Middle Atlantic States and the Northeast early in the week. Showers and thunderstorms again soaked much of the Southwest as moisture from dying tropical storm Selma streamed into the region. At week's end, rains finally came to the Pacific Northwest.

**SUNDAY...**Light rain fell along a cold front extending southwestward from Maine to Texas. Rainshowers were widely scattered across the Southeast. Strong northwesterly winds, gusting to 50 miles per hour over western Pennsylvania and West Virginia, ushered cold air into the Northeast. Thunderstorms reached the central Great Plains by afternoon. Heavy rain fell in Kansas, Nebraska, and Louisiana. Drought continued in the Pacific Northwest.

**TUESDAY...**An intensifying front, extending north to south through the Mississippi Valley, brought rain to the eastern part of the Nation. Development of a low pressure system along the North Carolina coast caused heavy precipitation in the Middle Atlantic States. Flooding occurred late in the day in New Jersey and New York, as the storm moved northward along the coast. Some light rain fell in California, with a few thunderstorms reported between Monterey and San Francisco.

**WEDNESDAY...**Local flooding spread into New England as showers continued until evening over the Northeast. Temperatures were seasonably mild over most of the Nation. Rains continued in California, with some flooding in the San Francisco Bay area.

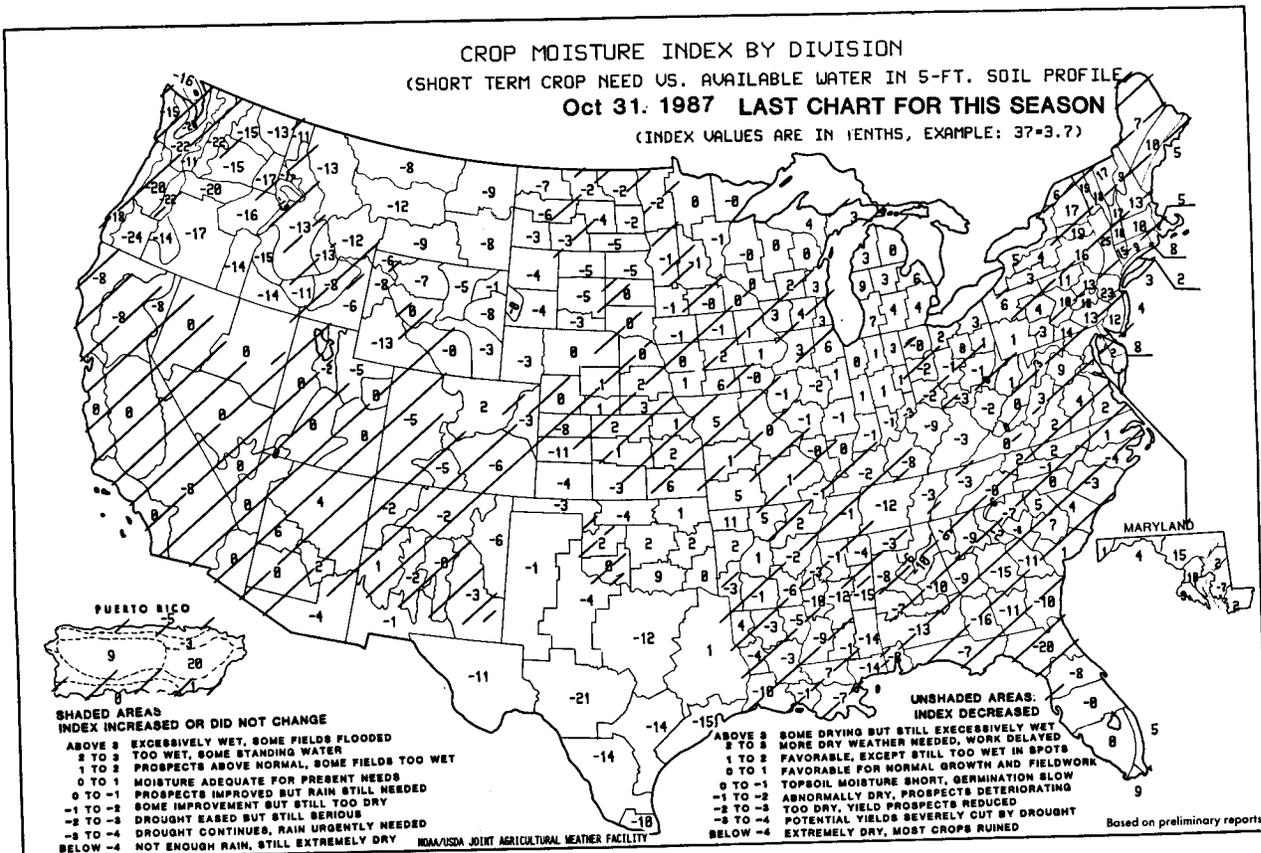
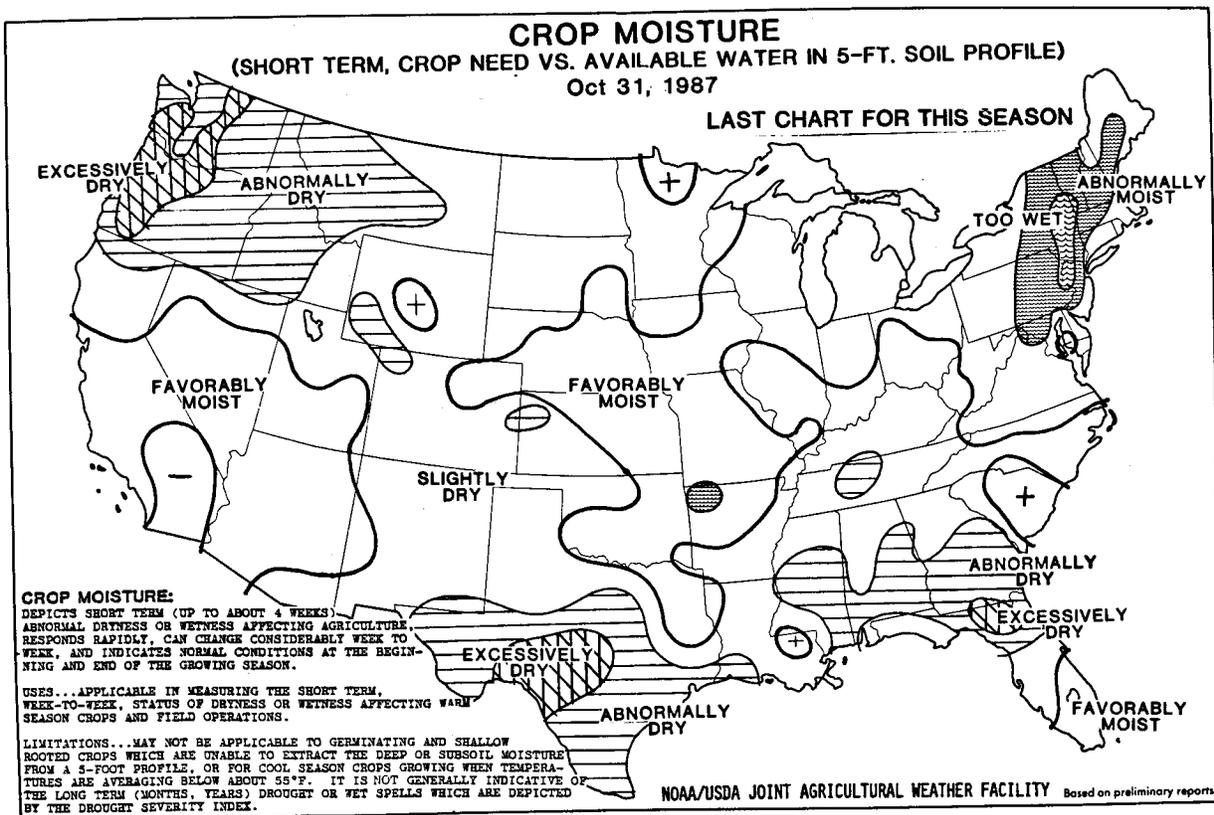
**THURSDAY...**Showers and locally heavy thunderstorms moved over central and southern California, southern Nevada, and western Arizona. In the afternoon, a large area of thunderstorms and rainshowers caused local flooding in central Arizona. Snowshowers over upper Michigan changed to rain by midday. Indian summer generally prevailed over the Great Plains, with temperatures climbing into the seventies as far north as North Dakota and Montana. Highs were in the forties and fifties from the upper Mississippi Valley across the Great Lakes and the upper Ohio Valley to the middle and northern Atlantic Coast States.

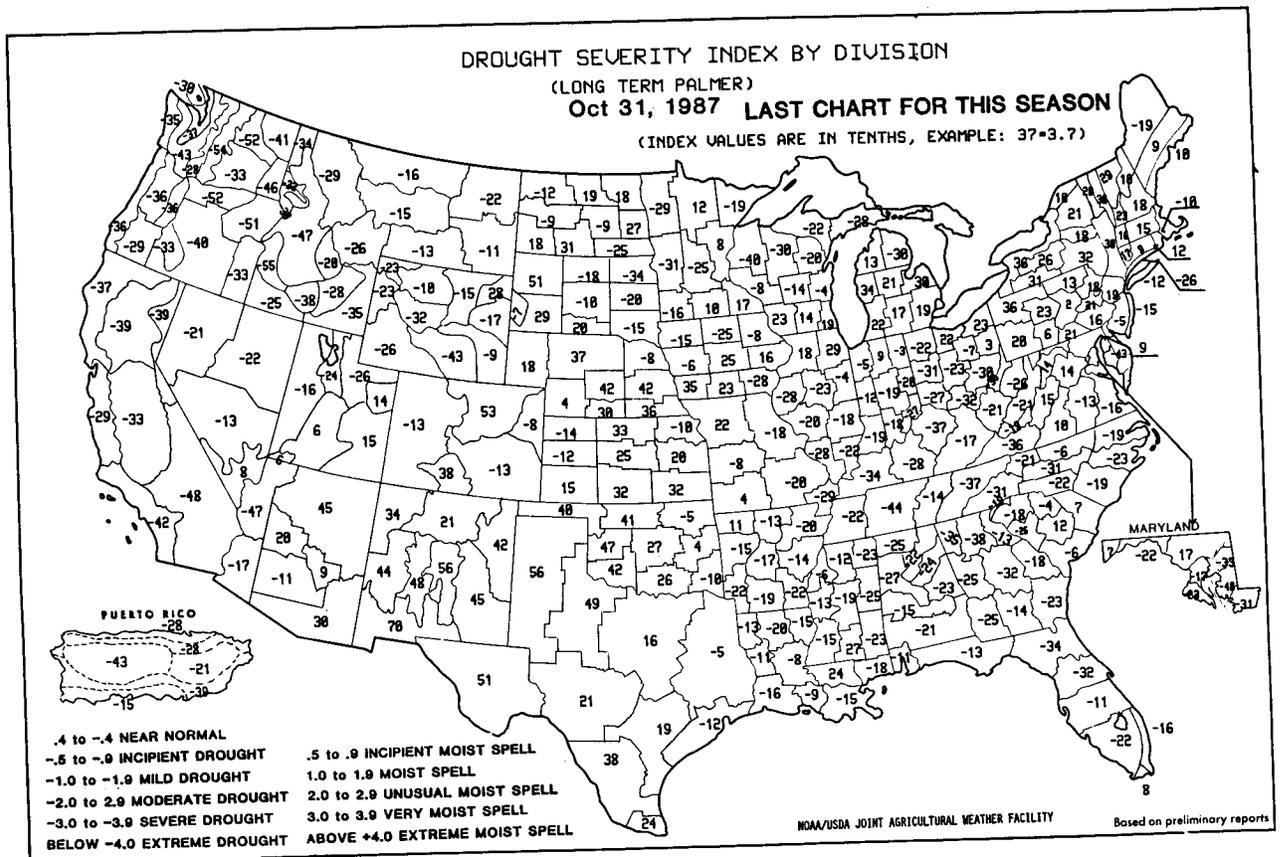
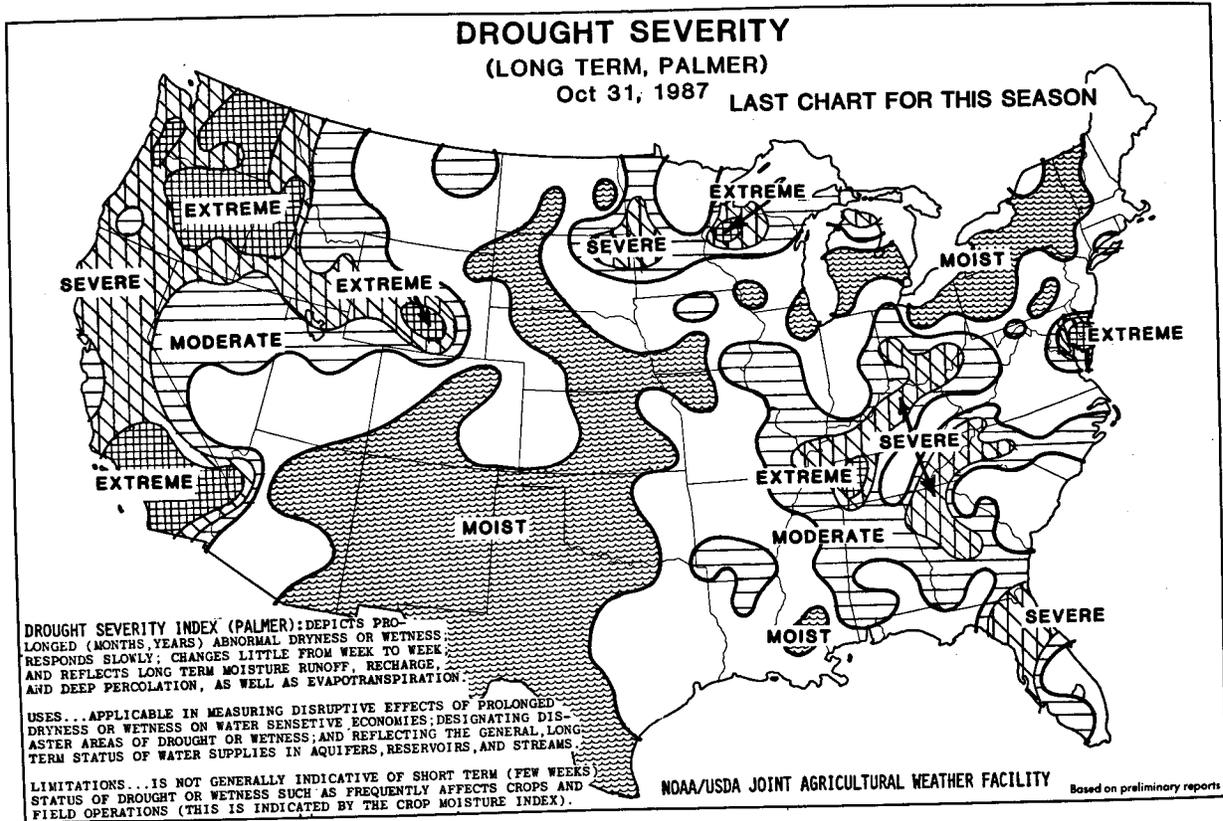
**FRIDAY...**Strong damaging winds and large hail accompanied severe thunderstorms in Arizona. Showers were widespread across the Intermountain region. Indian summer continued over most of the Great Plains and the Ohio Valley. Late in the day, the storm system that produced widespread thunderstorms across the desert Southwest caused new outbreaks of severe thunderstorms, hail, and damaging winds in the central Plains. A cold front brought cooler weather to the Great Lakes region, the upper Mississippi Valley, and the Dakotas. It was mostly sunny over the eastern third of the Nation.

**SATURDAY...**Rainshowers moved into the Pacific Northwest, giving many areas their first measurable rainfall in over 3 months. In Kansas and Oklahoma, locally severe thunderstorms developed, as strong southerly winds brought warm moist air from the Gulf of Mexico. Showers and thunderstorms were also numerous in Iowa, Nebraska, and Missouri. Rainshowers caused more flooding in southern California and southern Arizona, as remnants of tropical storm Selma moved into this region. Indian summer continued over the Ohio Valley and most of the Southeast. Blustery northwesterly winds swept across New England.

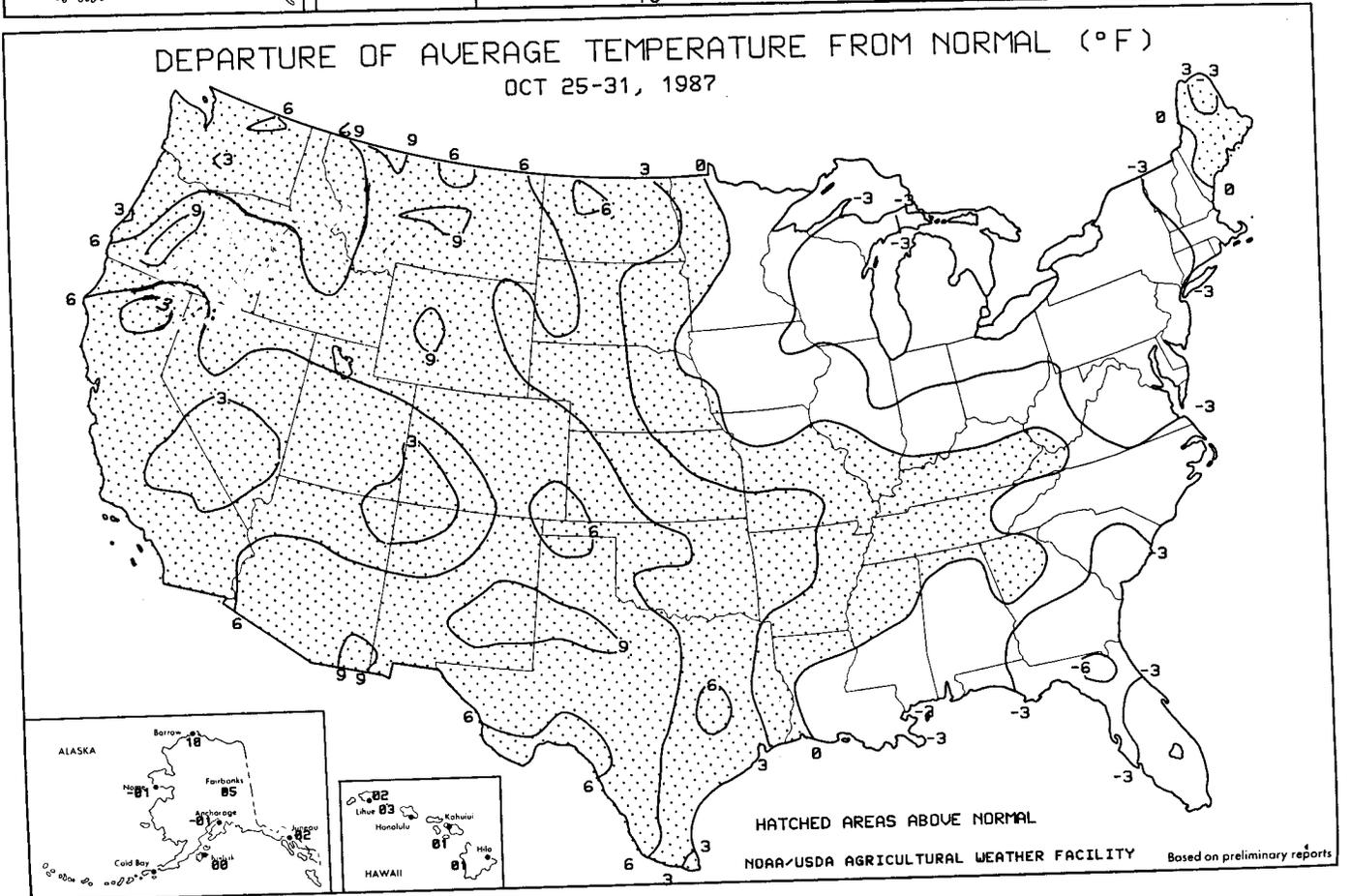
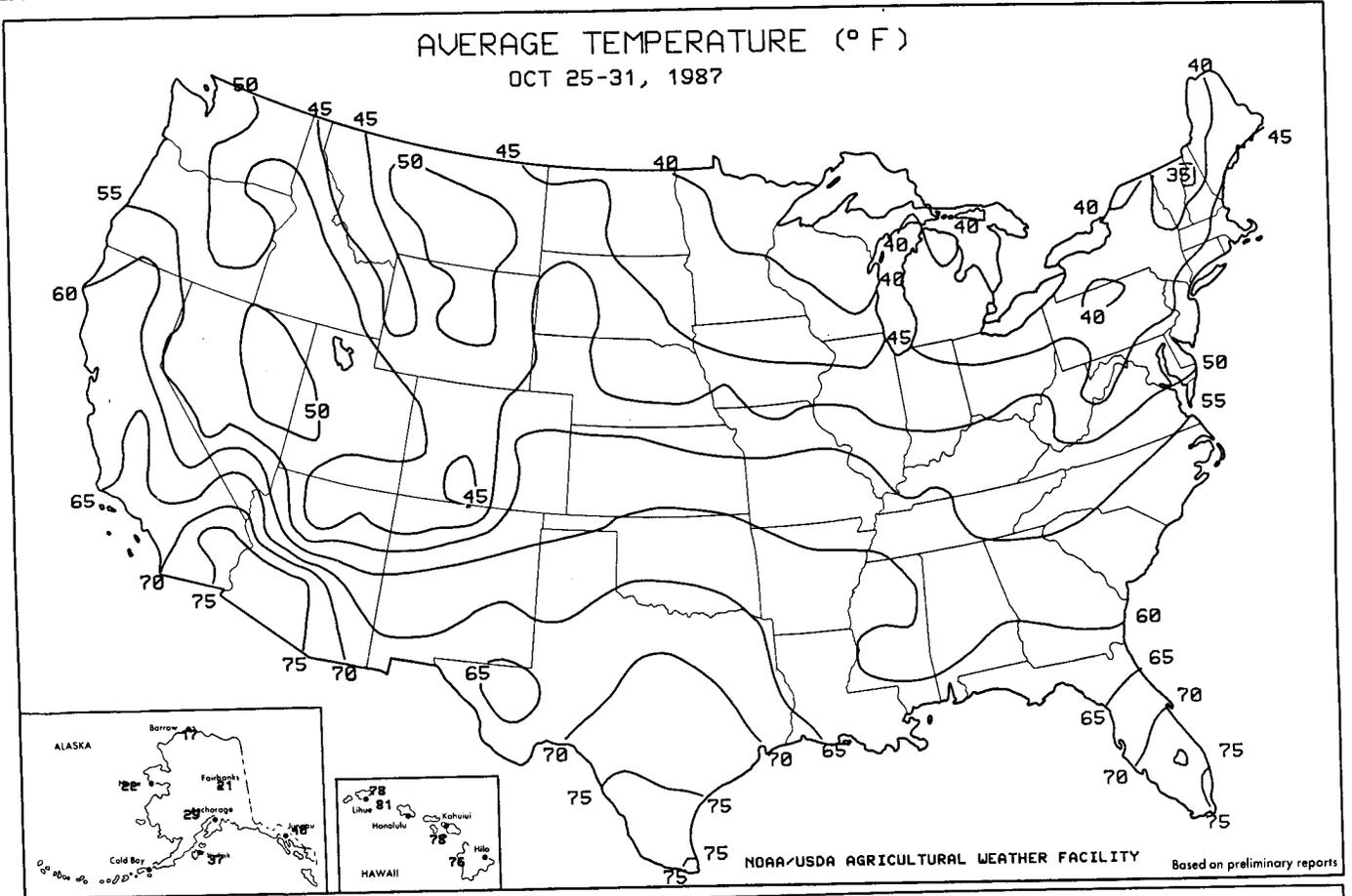
Contents	Page
National Weather Summary . . . . .	1
Total Precipitation . . . . .	2
Crop Moisture & Crop Moisture Index . . . . .	3
Drought Severity & Drought Severity Index . . . . .	4
Precipitation Needed to End Drought & Extreme Minimum Temperature . . . . .	5
Average Temperature & Departure . . . . .	6
National Weather Data for Selected Cities . . . . .	7
Heating Degree Days Summary Table . . . . .	10
National Agricultural Summary . . . . .	11
Crop Progress & Condition Tables . . . . .	12
State Summaries of Weather and Agriculture . . . . .	13
Global Weather Satellite Image . . . . .	18
International Weather and Crop Summary & October Temperature and Precipitation Table . . . . .	19
Argentine Corn Areas and Climatic Profiles . . . . .	23
Subscription and Mailing Permit Information . . . . .	24











# National Weather Data for Selected Cities

Weather Data for the Week Ending October 31, 1987

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 SEPT. 1	PCT. NORMAL SINCE SEPT. 1	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE		PRECIPITATION		
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
AL BIRMINGHAM	72	41	81	32	57	-2	.9	-.3	.7	4.5	65	34.3	75	95	31	0	0	2	1	
MOBILE	76	48	82	36	62	-2	T	-.5	T	3.6	40	58.2	105	87	31	0	0	1	0	
MONTGOMERY	76	42	84	32	59	-2	.4	0	.4	4.4	63	45.7	111	94	28	0	0	1	0	
AK ANCHORAGE	35	23	45	12	29	0	0	-.3	0	4.6	111	11.9	93	80	48	0	6	0	0	
BARROW	22	13	29	4	18	10	.1	-.1	0	1.6	141	4.8	117	91	77	0	7	4	0	
FAIRBANKS	25	18	36	4	21	4	.2	0	.1	1.0	52	5.3	59	95	80	0	7	5	0	
JUNEAU	44	36	48	27	40	2	1.6	0	.6	17.8	127	45.5	105	97	76	0	2	6	1	
KODIAK	44	30	48	21	37	0	1.2	-.4	.7	15.0	114	62.8	127	83	51	0	4	2	1	
NOME	28	15	38	6	22	-2	.1	-.1	.1	4.3	120	10.1	78	86	64	0	7	7	0	
AZ PHOENIX	86	67	93	63	77	8	.2	0	.1	1.0	82	5.7	102	77	33	0	0	2	2	
PRESCOTT	70	45	78	36	58	8	1.9	1.7	1.0	4.1	150	13.4	85	83	36	0	0	1	1	
TUCSON	86	60	92	55	73	7	.1	-.1	.1	2.6	119	10.6	113	70	25	3	0	0	1	
YUMA	85	68	91	61	77	5	1.0	1.0	1.0	1.6	315	2.8	138	65	31	1	0	2	1	
AR FORT SMITH	75	49	83	34	62	5	.6	-.2	.4	3.8	60	29.8	89	96	47	0	0	1	1	
LITTLE ROCK	71	52	79	44	62	3	.6	-.1	.6	6.7	94	30.9	77	72	48	0	0	0	0	
CA BAKERSFIELD	76	57	83	51	66	3	.2	.1	.1	.3	73	4.3	102	94	53	0	0	3	0	
EUREKA	65	54	73	49	60	7	.1	-.8	.1	1.1	30	19.0	73	94	79	0	0	4	0	
FRESNO	75	57	82	53	66	6	.6	.5	.4	.8	148	7.5	100	97	51	0	0	3	1	
LOS ANGELES	76	62	87	57	69	4	1.3	1.1	1.1	1.9	474	4.9	55	94	60	0	0	0	0	
REDDING	77	55	81	52	65	5	.1	-.2	.1	1.1	97	9.9	70	93	40	0	0	1	0	
SACRAMENTO	75	55	81	52	65	5	.1	-.2	.1	2.6	524	7.8	115	88	64	0	0	2	1	
SAN DIEGO	76	63	86	59	69	4	.8	.7	.6	.9	76	9.4	69	94	57	0	0	3	1	
SAN FRANCISCO	72	57	80	51	64	6	.7	.4	.6	1.9	89	17.1	125	73	24	0	1	1	1	
CO DENVER	68	40	78	29	54	7	.6	.4	.6	.8	51	8.7	132	91	36	0	0	0	0	
GRAND JUNCTION	64	41	70	35	52	3	.2	0	.1	.8	21	9.4	94	77	20	0	1	1	0	
PUEBLO	74	38	80	28	56	3	.5	-.3	.5	3.6	55	26.7	79	76	41	0	0	1	1	
CT BRIDGEPORT	58	40	61	34	49	-3	.9	-.1	.8	10.9	147	39.6	110	91	40	0	4	2	1	
HARTFORD	58	31	61	25	45	-4	.9	.1	1.6	7.6	125	29.6	90	86	42	0	0	1	1	
DC WASHINGTON	60	40	71	36	50	-5	1.6	1.0	1.6	4.5	41.6	85	90	38	0	0	0	0	0	
FL APALACHICOLA	76	51	80	45	64	-3	.2	-.3	.2	5.4	74	39.4	90	94	59	0	0	1	0	
DAYTONA BEACH	76	59	80	48	68	-2	.4	-.5	.4	8.3	71	38.1	80	98	54	0	0	3	0	
JACKSONVILLE	72	50	75	39	61	-6	.1	-.5	.1	7.3	71	38.1	80	98	54	0	0	1	0	
KEY WEST	79	70	81	67	75	-3	.1	-.9	0	15.5	138	40.5	118	87	63	0	0	2	0	
MIAMI	84	60	87	62	76	0	.1	-.2	.1	14.9	98	41.5	78	91	50	0	0	1	0	
ORLANDO	79	61	85	55	70	-2	.4	-.1	.4	12.1	128	45.9	101	92	52	0	1	0	0	
TALLAHASSEE	78	43	83	31	60	-4	0	-.6	0	4.0	42	60.4	107	93	29	0	0	0	0	
TAMPA	78	58	83	48	68	-3	0	-.3	0	6.2	73	44.2	104	94	49	0	0	3	0	
WEST PALM BEACH	83	66	85	60	75	-1	.3	-.1	.2	16.4	96	47.6	88	91	55	0	0	2	0	
GA ATLANTA	71	47	80	37	59	1	.7	-.1	.4	3.7	65	39.7	98	80	32	0	0	2	0	
AUGUSTA	74	41	82	30	58	-1	.2	-.2	T	2.2	40	35.7	95	97	29	0	1	1	0	
MACON	74	41	82	30	58	-3	T	-.4	T	1.6	29	32.9	86	93	29	0	0	1	0	
SAVANNAH	70	48	75	36	59	-4	.3	0	.2	8.5	114	52.8	117	92	47	0	0	7	1	
HI HILO	83	68	84	67	76	1	2.2	-.6	.8	20.2	170	106.2	106	96	63	0	0	2	0	
HONOLULU	89	73	89	71	81	3	T	-.5	T	1.3	51	4.8	29	83	46	0	0	0	0	
KAHULUI	86	70	86	68	78	1	T	-.3	T	1.4	128	14.2	107	81	52	0	0	0	0	
LIHUE	82	75	83	73	78	2	T	-.1	T	7.8	115	22.5	69	85	68	0	0	2	0	
ID BOISE	69	41	71	36	55	8	T	-.2	T	0	6.5	73	66	28	0	0	0	0	0	
LEWISTON	64	40	67	37	52	5	T	-.3	T	1	8.0	77	62	32	0	0	3	2	0	
POCATELLO	64	36	71	26	50	7	T	-.2	T	.2	16	8.6	98	90	37	0	3	3	1	
IL CHICAGO	57	35	72	29	46	-3	.7	.4	.6	2.6	42	34.9	118	95	45	0	2	2	0	
MOLINE	58	34	76	25	46	-2	.2	-.3	.2	1.9	30	29.9	90	93	48	0	2	2	0	
PBORIA	60	36	75	26	48	-1	.2	-.2	.2	2.4	38	20.4	66	94	48	0	2	2	0	
QUINCY	62	38	79	27	50	0	.3	-.3	.3	2.7	36	23.1	68	89	46	0	6	2	0	
ROCKFORD	55	31	69	23	43	-4	.2	-.4	.2	3.2	48	32.3	100	96	55	0	2	1	0	
SPRINGFIELD	62	39	77	29	51	0	.1	-.5	.1	2.2	37	21.1	70	92	47	0	2	1	0	
IN EVANSVILLE	67	38	82	31	53	0	.3	-.3	.3	3.3	64	25.5	73	94	40	0	4	2	1	
FORT WAYNE	56	32	67	28	44	-4	.7	.2	.6	3.2	63	27.2	92	98	52	0	2	2	1	
INDIANAPOLIS	61	35	76	28	48	-2	.7	.1	.7	2.7	53	26.1	79	98	50	0	3	2	0	
SOUTH BEND	55	33	69	28	44	-4	.2	-.5	.2	6.8	107	28.4	88	95	48	0	3	3	1	
IA DES MOINES	59	36	76	28	47	-1	.7	.3	.6	2.4	46	31.1	97	89	36	0	4	2	0	
SIoux CITY	59	33	74	26	46	-2	.2	-.1	.2	1.9	44	23.1	97	89	36	0	6	1	0	
WATERLOO	56	29	71	19	43	-3	.3	-.2	.3	2.6	45	27.7	92	90	43	0	2	2	1	
KS CONCORDIA	66	40	79	30	53	2	1.4	1.1	.9	3.5	72	32.7	129	90	45	0	2	2	1	
DODGE CITY	75	44	86	37	60	8	T	-.2	T	2.0	65	22.5	117	84	31	0	1	1	0	
GOODLAND	71	40	80	29	55	8	T	-.2	T	1.6	67	18.3	121	62	27	0	2	3	1	
TOPEKA	67	39	82	27	53	1	1.0	-.4	.7	3.7	59	33.3	110	96	49	0	2	0	0	
WICHITA	70	44	83	35	57	4	.1	-.3	.1	3.0	51	34.8	133	94	46	0	0	2	0	
KY BOWLING GREEN	68	41	80	33	54	1	.3	-.4	.1	1.5	26	27.8	72	84	38	0	1	2	0	
LEXINGTON	65	40	79	32	52	0	.1	-.4	.1	1.5	26	25.4	70	89	37	0	0	3	0	
LOUISVILLE	66	40	81	33	53	0	.1	-.5	.1	1.5	26	25.4	70	89	37	0	0	1	1	
LA ALEXANDRIA	76	48	82	39	62	-1	1.1	-.3	1.1	2.8	46	41.2	95	94	46	0	0	1	1	
BATON ROUGE	76	50	81	41	63	-1	1.5	-.9	1.5	2.3	33	54.3	116	95	41	0	0	1	1	
LAKE CHARLES	77	54	81	47	65	0	3.0	2.2	3.0	7.0	75	51.0	114	97	50	0	0	1	1	
NEW ORLEANS	75	51	79	41	63	-2	.8	-.2	.8	2.1	25	54.8	109	99	42	0	0	1	1	

Based on 1951-80 normals.

Weather Data for the Week Ending October 31, 1987

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 SEPT. 1	PCT. NORMAL SINCE SEPT. 1	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPITATION	
																90 AND ABOVE	72 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	77	52	83	41	65	2	2.3	1.7	1.8	6.4	109	36.4	101	96	43	0	0	2	2
ME CARIBOU	49	35	56	27	42	3	.9	.2	.6	6.6	100	23.9	79	94	60	0	1	4	1
PORTLAND	55	34	58	25	44	0	.7	.2	.6	7.2	102	35.0	103	94	46	0	3	3	1
MD BALTIMORE	60	35	68	30	47	-5	1.5	.8	1.5	9.6	147	33.9	96	91	46	0	4	1	1
SALISBURY	64	34	69	32	49	-4	1.0	1.0	1.8	6.9	90	32.0	83	93	37	0	4	1	1
MA BOSTON	58	42	65	37	50	-1	.5	.3	.5	10.1	150	40.0	115	83	39	0	0	1	1
CHATHAM	57	43	64	40	50	-1	.4	.5	.4	10.6	142	42.6	114	87	57	0	7	2	0
MI ALPENA	50	27	56	21	39	-5	.2	.2	.2	5.8	112	20.8	84	96	53	0	4	2	0
DETROIT	54	32	65	28	43	-4	.6	.1	.5	4.7	108	30.5	118	96	49	0	4	2	0
FLINT	53	30	61	28	42	-4	.5	.0	.3	7.7	173	23.7	96	99	50	0	4	2	0
GRAND RAPIDS	52	30	58	25	41	-5	.2	-.4	.1	6.8	116	27.3	97	96	54	0	5	2	0
HOUGHTON LAKE	49	31	56	26	40	-2	.2	-.3	.2	6.0	120	20.4	85	89	49	0	7	3	0
LANSING	53	29	62	25	41	-5	.4	-.1	.2	6.6	136	24.4	98	94	50	0	7	3	0
MARQUETTE	44	28	48	20	36	-7	.3	-.3	.2	7.0	109	28.8	110	94	59	0	6	4	0
MUSKEGON	52	30	57	25	41	-7	.1	-.5	.1	6.3	110	26.7	104	93	51	0	6	2	0
SAULT ST. MARIE	47	31	53	25	39	-2	1.0	.4	.5	6.9	102	24.4	89	98	61	0	5	5	1
MN ALEXANDRIA	52	31	58	25	41	1	T	-.4	T	3.1	75	15.5	68	93	42	0	4	0	0
DULUTH	47	30	52	22	38	-1	T	-.4	T	3.9	71	17.8	67	88	50	0	4	0	0
INT'L FALLS	46	27	54	21	36	-1	.1	-.2	.1	2.0	41	18.4	84	93	54	0	6	1	0
MINNEAPOLIS	53	34	58	26	43	-1	.0	-.4	.0	2.0	46	29.0	121	82	45	0	2	0	0
ROCHESTER	51	30	58	21	41	-3	.1	-.4	.1	3.7	64	24.3	93	88	49	0	3	1	0
MS GREENWOOD	74	47	84	32	60	1	.1	-.6	.1	1.5	24	32.0	74	87	33	0	1	2	0
JACKSON	75	44	85	33	59	-1	.2	-.3	.2	1.8	30	39.6	93	95	33	0	0	1	0
MERIDIAN	76	41	84	30	58	-1	T	-.6	T	4.4	72	46.7	106	97	27	0	2	1	0
MO CAPE GIRARDEAU	67	47	79	35	57	-	.9	-.3	.9	4.8	78	30.2	81	85	39	0	0	1	1
COLUMBIA	63	43	80	32	53	1	.4	-.3	.3	4.7	66	24.8	76	90	52	0	1	3	0
KANSAS CITY	65	42	82	30	53	0	.5	-.2	.2	5.0	65	30.0	91	94	50	0	1	3	0
SAINT LOUIS	66	44	81	31	55	3	T	-.5	T	3.4	68	26.9	93	89	44	0	1	1	0
SPRINGFIELD	68	45	79	28	57	4	.5	-.2	.4	7.4	99	39.0	114	93	49	0	1	3	0
MT BILLINGS	67	39	74	29	53	9	0	-.2	0	.7	28	11.8	89	54	22	0	1	0	0
GLASGOW	64	31	72	22	47	7	0	-.1	T	.7	48	9.2	90	72	26	0	4	0	0
GREAT FALLS	66	36	74	27	51	8	T	-.2	T	1.4	76	13.5	100	62	20	0	3	0	0
HAVRE	65	28	72	18	46	5	0	-.1	0	.8	47	7.8	73	74	25	0	5	0	0
HELENA	65	35	72	28	50	10	0	-.1	.9	.9	57	9.5	93	59	20	0	4	0	0
KALISPELL	59	27	64	23	43	5	T	-.2	T	.7	32	13.4	104	89	36	0	6	1	0
MILES CITY	68	34	77	21	51	9	0	-.2	0	.8	42	12.0	93	60	19	0	2	0	0
MISSOULA	60	29	65	23	45	5	0	-.2	.1	.6	6	8.8	80	74	26	0	5	0	0
NE GRAND ISLAND	64	35	79	27	50	2	.7	.5	.6	2.0	56	23.8	110	91	33	0	2	2	1
LINCOLN	63	35	76	25	49	1	.7	.4	.5	4.3	94	30.1	119	95	42	0	3	2	0
NORFOLK	61	33	75	22	47	1	1.0	.8	.6	4.3	126	26.5	119	90	34	0	2	2	1
NORTH PLATTE	68	31	80	23	49	5	1.4	1.3	1.2	2.8	111	18.3	100	90	25	0	5	2	1
OMAHA	60	40	75	32	50	1	1.0	.6	.7	3.2	58	30.8	110	81	49	0	2	2	1
SCOTT'S BLUFF	68	31	77	25	50	5	T	-.1	T	1.6	87	21.8	161	74	20	0	5	0	0
VALENTINE	67	30	77	23	48	4	T	-.1	T	.9	37	18.8	116	75	23	0	5	0	0
NV ELY	60	34	69	28	47	5	.4	.3	.4	1.5	116	10.0	134	91	45	0	4	3	0
LAS VEGAS	75	56	84	49	65	3	.2	.2	.5	.5	85	3.9	119	80	36	0	0	2	0
RENO	65	37	70	32	51	5	.2	.1	.2	.6	90	6.6	120	82	34	0	3	2	1
WINNEMUCA	67	35	76	24	51	7	.6	.4	.6	.6	64	7.5	123	82	34	0	5	4	1
NH CONCORD	56	28	64	18	42	-2	1.3	.6	1.2	8.1	131	32.7	111	93	42	0	5	1	1
NJ ATLANTIC CITY	61	30	65	26	46	-6	1.2	.5	1.2	6.0	102	36.9	107	94	40	0	0	3	0
NM ALBUQUERQUE	71	45	77	40	58	5	.3	.1	.2	.7	39	7.6	108	82	29	0	0	0	0
CLOVIS	77	49	83	43	63	10	0	-.3	0	3.8	103	22.6	141	68	24	0	0	0	0
ROSWELL	81	49	87	45	65	11	0	-.2	0	1.1	38	14.2	143	71	24	0	0	0	0
NY ALBANY	53	30	57	24	41	-5	2.2	1.5	1.2	12.4	203	34.4	117	97	46	0	6	4	2
BINGHAMTON	48	31	52	26	39	-5	1.4	.7	1.1	7.2	114	30.7	100	98	57	0	5	4	1
BUFFALO	52	35	57	29	44	-4	.2	-.5	.1	7.9	127	34.8	115	94	49	0	1	2	0
NEW YORK	59	43	63	40	51	-2	1.5	.8	1.4	7.8	117	39.5	112	84	43	0	0	2	1
ROCHESTER	52	33	56	27	43	-5	T	-.5	T	6.0	115	28.4	109	96	53	0	3	1	0
SYRACUSE	52	33	55	28	42	-5	1.0	.3	.7	9.1	142	28.7	89	89	49	0	4	3	1
NC ASHEVILLE	64	36	76	24	50	-2	.2	-.5	.2	7.2	103	37.9	101	94	40	0	0	1	1
CHARLOTTE	67	44	80	35	56	-1	.8	.3	.8	7.7	122	32.0	87	82	35	0	2	1	1
GREENSBORO	64	40	78	28	52	-2	.6	-.1	.6	7.9	117	40.8	112	86	39	0	0	1	0
HATTERAS	67	50	72	40	58	-3	.4	-.6	.4	8.8	83	53.7	116	95	52	0	0	1	1
NEW BERN	72	46	79	38	59	-1	1.0	.3	1.0	3.4	37	45.0	97	92	38	0	1	1	1
RALEIGH	66	41	80	29	54	-2	1.1	.5	1.1	7.4	124	37.9	107	90	38	0	0	1	1
WILMINGTON	72	47	79	36	59	-1	.5	-.1	.5	6.9	80	44.3	95	95	40	0	0	1	1
ND BISMARCK	61	28	72	23	45	4	T	-.1	T	.4	18	17.1	121	84	31	0	6	0	0
FARGO	55	32	63	25	43	3	0	-.2	0	1.9	61	13.9	77	82	41	0	3	0	0
GRAND FORKS	56	28	66	23	42	3	0	-.1	0	2.0	64	18.1	107	86	38	0	0	1	0
WILLISTON	61	28	73	22	45	5	0	-.1	0	.8	36	11.4	91	80	28	0	5	0	0
OH AKRON-CANTON	55	34	63	29	44	-4	.3	-.2	.3	4.2	80	25.9	85	93	44	0	3	1	0
CINCINNATI	61	35	77	30	48	-2	.3	-.3	.3	2.6	47	27.3	81	91	43	0	2	1	0
CLEVELAND	55	33	65	27	44	-5	.3	-.2	.3	5.6	105	34.2	115	95	47	0	4	1	0
COLUMBUS	60	34	72	29	47	-2	.2	-.2	.2	3.1	67	22.2	71	91	41	0	2	1	0

Based on 1951-80 normals.

Weather Data for the Week Ending October 31, 1987

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 SEPT. 1	PCT. NORMAL SINCE SEPT. 1	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	68	34	74	29	47	-3	.3	-2	.2	1.5	35	28.0	68	89	42	0	0	2	0
TOLEDO	55	28	65	22	42	-5	.7	-2	.4	4.5	102	24.4	92	97	49	0	6	2	0
YOUNGSTOWN	54	31	63	23	43	-4	.4	-2	.3	6.4	112	34.2	109	97	47	0	4	3	0
OK OKLAHOMA CITY	73	53	80	44	63	0	1.5	1.0	1.0	6.4	104	38.9	139	88	45	0	0	2	2
TULSA	74	52	82	38	63	0	.4	-3	.3	5.1	66	35.4	103	89	42	0	0	2	0
OR ASTORIA	63	43	68	34	53	3	.5	-1.3	.5	1.4	15	34.1	71	97	65	0	0	0	0
BURNS	67	30	71	24	49	6	0	-2	0	0	2	8.0	95	***	***	0	4	0	0
MEDFORD	73	44	81	36	58	9	0	-5	0	0	2	5.7	64	75	39	1	1	0	0
PENDLETON	65	39	68	32	52	4	0	-3	0	0	2	20.1	78	99	56	0	0	1	0
PORTLAND	67	43	74	37	55	5	.3	-6	.3	.6	12	22.5	82	95	58	0	0	2	0
SALEM	67	40	74	33	54	5	.5	-5	.4	.6	12	22.5	82	95	58	0	0	4	2
PA ALLENTOWN	57	32	61	27	44	-5	1.2	.5	1.2	11.4	162	41.1	112	90	46	0	1	3	0
ERIE	53	36	60	30	45	-4	.5	-3	.4	10.4	138	38.4	117	91	49	0	0	1	1
HARRISBURG	56	33	61	28	44	-6	1.5	.9	1.5	10.8	170	32.4	99	93	45	0	3	1	1
PHILADELPHIA	60	37	64	33	48	-4	1.4	.8	1.4	5.4	86	29.7	86	92	41	0	4	2	1
PITTSBURGH	56	34	66	27	45	-3	.3	-3	.3	5.0	95	34.9	111	93	41	0	4	2	1
SCRANTON	52	32	56	28	42	-5	1.3	.7	1.3	10.9	180	36.3	124	95	49	0	0	2	0
RI PROVIDENCE	59	36	64	31	48	-2	1.0	.1	1.0	9.7	133	34.9	96	87	39	0	1	1	1
SC CHARLESTON	68	48	75	37	58	-4	1.0	.5	1.0	15.2	193	51.0	111	96	45	0	0	3	0
COLUMBIA	72	41	81	31	56	-3	1.0	.8	1.0	6.2	92	48.1	112	97	33	0	1	2	1
FLORENCE	69	46	80	38	58	-2	.9	.4	.8	5.1	79	32.5	84	92	35	0	0	2	1
GREENVILLE	69	43	80	30	56	-1	.4	-3	.4	3.6	45	37.3	85	91	31	0	1	1	0
SD ABERDEEN	59	28	70	21	44	2	0	-2	0	1.6	63	11.4	69	80	30	0	5	0	0
HURON	60	31	75	25	45	2	0	-3	0	1.8	66	17.4	101	93	32	0	4	0	0
RAPID CITY	69	34	79	23	51	7	0	-2	0	1.0	53	11.8	78	64	19	0	2	0	0
SIoux FALLS	56	30	69	26	43	0	.2	0	.2	2.4	55	15.6	70	91	36	0	6	2	0
TN CHATTANOOGA	70	41	79	31	55	0	.2	-4	.1	5.2	71	41.0	95	98	34	0	2	2	0
KNOXVILLE	68	39	79	29	54	-1	.4	-3	.2	2.5	45	30.0	77	98	38	0	0	3	0
MEMPHIS	72	51	81	40	62	3	2.1	1.5	1.3	3.3	55	30.7	72	79	36	0	0	2	2
NASHVILLE	70	44	83	35	57	2	.2	-4	.1	2.3	37	21.3	53	89	36	0	0	0	0
TX ABILENE	81	59	85	47	70	9	0	0	0	2.4	44	21.4	101	80	36	0	0	0	0
AMARILLO	76	45	82	38	61	7	0	-3	0	4.5	145	19.8	111	88	25	0	0	0	0
AUSTIN	83	60	90	50	72	6	0	-7	0	5.3	77	32.3	119	92	40	1	0	0	0
BEAUMONT	79	56	83	47	67	1	0	-8	0	11.7	129	52.2	114	98	53	0	0	1	0
BROWNSVILLE	84	65	88	58	74	2	0	-6	0	7.4	85	22.8	101	96	54	0	0	0	0
CORPUS CHRISTI	84	64	93	59	74	4	0	-4	0	2.4	26	28.0	99	94	48	1	0	0	0
DEL RIO	80	61	83	53	70	4	.1	-3	.1	4	7	21.7	137	75	39	0	0	1	0
EL PASO	82	52	84	48	67	8	0	-1	0	1.2	59	8.0	115	67	27	0	0	0	0
FORT WORTH	80	57	84	43	68	6	0	-6	0	1.5	23	20.2	74	88	41	0	0	0	0
GALVESTON	79	66	85	60	72	3	0	-5	0	4.5	52	30.5	90	85	54	0	0	0	0
HOUSTON	83	58	88	49	71	4	0	-8	0	3.6	41	32.8	84	97	43	0	0	0	0
LUBBOCK	81	51	87	41	66	10	0	-3	0	3.4	90	17.8	107	86	31	0	0	0	0
MIDLAND	83	51	89	44	67	7	0	-2	0	1.8	53	13.8	111	88	31	0	0	0	0
SAN ANGELO	83	54	86	40	69	7	0	-4	0	4.2	83	29.0	177	89	33	0	0	0	0
SAN ANTONIO	84	61	91	49	73	7	0	-6	0	2.7	41	33.2	132	91	37	1	0	0	0
VICTORIA	85	61	92	50	73	4	0	-5	0	3.5	37	35.3	109	97	43	1	0	0	0
WACO	82	58	87	45	70	6	0	-6	0	6.9	111	27.4	103	91	41	0	0	0	0
WICHITA FALLS	81	54	86	40	67	7	0	-5	0	2.3	39	28.2	118	88	38	0	0	0	0
UT BLANDING	60	39	67	34	50	3	1.0	.7	.6	2.7	116	16.2	170	96	61	0	0	4	1
CEDAR CITY	62	39	69	34	51	4	0	0	.2	2.4	144	9.9	113	99	52	0	0	2	0
SALT LAKE CITY	64	43	69	37	54	6	.3	0	.2	1.3	63	10.3	82	86	42	0	0	1	0
VT BURLINGTON	50	32	57	27	41	-3	1.6	.9	1.3	6.9	115	24.0	85	88	46	0	5	5	1
VA NORFOLK	64	45	70	40	55	-3	1.0	.3	1.0	8.9	115	39.0	100	88	44	0	0	1	1
RICHMOND	63	36	78	29	50	-5	.4	-4	.4	5.3	73	33.9	91	91	37	0	1	1	1
ROANOKE	63	37	78	28	50	-2	.5	-2	.5	12.2	186	44.5	133	86	36	0	3	2	1
WA COLVILLE	58	36	63	31	46	5	0	-3	0	.6	30	13.2	101	88	60	0	3	1	0
QUILLAYUTE	60	42	63	35	51	4	1.1	-1.5	.6	3.1	19	57.9	76	99	65	0	0	4	1
SEATTLE-TACOMA	60	47	65	40	54	4	.3	-7	.2	1.2	22	20.7	78	98	65	0	0	3	0
SPOKANE	59	32	63	25	46	3	0	-3	0	0	2	11.3	94	84	39	0	4	1	0
YAKIMA	64	31	68	24	48	3	0	-1	0	0	3	4.3	78	91	42	0	3	1	0
WV BECKLEY	58	38	73	30	48	0	.2	-4	.2	4.1	65	32.6	90	79	40	0	2	1	0
CHARLESTON	63	37	77	28	50	-2	.2	-4	.2	4.8	85	30.4	84	93	36	0	3	1	0
HUNTINGTON	64	38	79	29	51	-1	.1	-5	.1	2.6	49	26.2	75	90	38	0	3	1	0
PARKERSBURG	61	35	75	28	48	-3	.1	-4	.1	3.3	63	21.0	64	93	40	0	3	1	0
WI GREEN BAY	60	29	56	21	39	-4	.4	0	.4	3.3	64	18.1	73	97	52	0	5	1	0
LACROSSE	54	32	61	26	43	-3	.3	-1	.3	2.7	48	29.1	106	90	44	0	4	2	0
MADISON	52	28	65	21	40	-5	.3	-2	.2	4.9	93	26.1	96	95	53	0	6	2	0
MILWAUKEE	51	34	63	28	43	-4	.4	-1	.3	3.3	65	31.1	116	98	57	0	4	2	0
WAUSAU	47	28	53	23	38	-8	.3	-2	.3	4.3	70	20.8	73	94	55	0	0	2	0
WY CASPER	65	34	73	22	50	0	0	-2	0	1.1	66	11.7	116	71	24	0	2	2	0
CHEYENNE	62	37	73	23	49	9	.1	-2	.1	1.2	71	13.7	110	74	28	0	2	1	0
LANDER	64	36	70	28	50	9	0	-2	.1	1.3	62	13.2	113	69	25	0	4	0	0
SHERIDAN	68	33	76	25	50	9	0	-2	.1	2.1	88	12.9	96	70	21	0	4	0	0
PR SAN JUAN	89	77	91	76	83	2	.6	-7	.3	4.1	35	46.1	105	85	73	1	0	3	0

Based on 1951-80 normals.

Heating Degree Days Summary

CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA  
ASSESSMENT AND INFORMATION SERVICES CENTER-NESDIS-NOAA

LAST DATE OF DATA COLLECTION PERIOD IS 10-31-1987  
ACCUMULATIONS ARE FROM JULY 1  
\*\* = NORMAL LESS THAN 10% OR RATIO INCALCULABLE

Table with columns: STATE CITY, CALL, WEEK TOTAL, WEEK DEV FROM, WEEK DEV FROM NORM, CUM TOTAL, CUM DEV FROM, CUM DEV FROM NORM, CUM DEV FROM, CUM DEV FROM NORM, CUM DEV FROM PRCT, CUM DEV FROM PRCT. Rows list various cities and their corresponding heating degree day data.

## National Agricultural Summary

October 26 to November 1, 1987

**HIGHLIGHTS:** Row crop harvest was nearing completion considerably ahead of normal except in the Southeast and southern Great Plains. Rain provided much needed moisture but hampered harvest from Texas through the Delta and central Great Plains and into the Corn Belt. Dry conditions continued plaguing winter wheat seeding and growth and development in most of the eastern half of the Nation and the Pacific Northwest. Soil moisture remained short except in the Corn Belt. Despite heavy precipitation in some areas, fieldwork averaged 5 to 6 days.

Winter wheat was 93 percent (%) seeded, 8 percentage points above the 5-year average and 1986. Emergence was 85% finished compared with 73% normally. Dryness hampered germination in the Southeast, Oregon, and Washington. Corn harvest reached 93% completion, 30 points ahead of normal. Harvest was virtually finished in most States. Eighty-nine percent of the soybean acreage was combined, compared with 68% harvested in 1986 and the average. Cotton was 57% harvested, 11 points above the 46% average. Rain and slow maturity virtually halted harvest in Oklahoma and Texas. Grain sorghum was 81% combined, compared with 70% normally. Livestock was mostly good.

**SMALL GRAINS:** Winter wheat was 93% seeded, compared with 85% last year and average. Seeding was virtually finished except in the Southeast, Oregon, California, Arkansas, and Missouri. Seeding continued lagging behind normal in the Southeast and in Oregon because of dryness. Emergence reached 85% completion, 8 points ahead of 1986 and 12 points above average. Dryness hampered growth throughout most of the eastern half of the Nation and Pacific Northwest. Rain provided much needed moisture from Texas through the Delta and into the central Great Plains. However, moisture is badly needed in most other areas. Winter wheat was mostly good to fair, but condition declined to fair to poor in Georgia, and poor to fair in Oregon. Rain helped small grains in Arkansas. Dry soils caused germination problems in Kentucky. Nebraska wheat producers irrigated in areas of high stress. Mild, dry conditions promoted Russian wheat aphid development. Rain late in the week increased small grain seeding in Oregon. In South Dakota, fall seeded crops need rain. Kansas wheat producers were still concerned about the lack of moisture for wheat emergence and stand development before winter in western and central areas. Leaf rust was present Statewide but was most prevalent in early-seeded wheat.

**CORN:** Corn harvest advanced 7 points to 93% completion. Harvest was 32 points above 1986 and 30 points above the 63% average. Rain caused minor delay in the central Great Plains and some Corn Belt States. Harvest was virtually finished except in Colorado, Michigan, Pennsylvania, and Wisconsin. Michigan's harvest surged 20 points ahead of the previous week to 75% completion. Colorado producers harvested nearly a fourth of their acreage. Harvest was ahead of normal in all major producing States except Colorado and North Carolina.

**SOYBEANS:** Rain interrupted soybean harvest from Texas through the Delta and central Great Plains into the Corn Belt. However, harvest increased 5 points from the previous week. Eighty-nine percent of the acreage was harvested, 21 points ahead of both 1986 and average. With the exception of the Carolinas, harvesting progress was at least 10 points or more ahead of normal in the other major producing States. Some late-planted soybeans

suffered severe freeze damage in Kansas and may not be harvested.

**COTTON:** Rain and slow maturity halted cotton harvest in Oklahoma. Many producers await a killing frost before harvesting. Warm temperatures benefited late-planted cotton. Cotton desiccation activities progressed well in the Plains. Warm weather helped many bolls to open. Cotton harvest progressed well in California, gaining 25 points. Midweek rain knocked cotton from upper bolls. Rain and hail brought cotton harvest to a standstill in Arizona. The extent of damage was unknown, and growers were waiting for lint and soils to dry before harvest progressed. In the 14 major producing States, harvest reached 57% completion, 9 points ahead of 1986 and 11 points above normal.

**SORGHUM:** Sorghum was 81% harvested, compared with 68% in 1986 and the 70% average. Slow maturity delayed harvest in Texas. Some fields will probably not be harvested until a freeze. In some areas of southern Kansas, producers were waiting for a freeze to dry-down the crop so harvest can be completed. Rain halted harvest in Oklahoma. Many producers were awaiting a killing frost before harvesting.

**OTHER CROPS:** Peanut harvest was virtually finished in the Southeast, except in the Carolinas. Harvest was progressing normally in both States. Peanut harvest advanced rapidly in Texas but was still 7 points behind the 48% average. Yields were good but grades remained fair.

Kentucky's burley stripping was 22% finished, just slightly ahead of normal. Rain was needed to bring the hanging crop into case and improve color and quality. Forty percent of Tennessee burley tobacco was stripped, equaling the average.

**FRUIT AND NUTS:** Rain ceased the need for irrigation in all of Florida's citrus areas. Tree growth was minimal, but early fruit showed good natural color break. Fresh fruit movement increased with more crops passing maturity. Caretakers winterized young trees. In Texas, grapefruit and orange harvests progressed normally. Fruit size and appearance were good. Damage from heavy wind and rain in Arizona's citrus groves was not determined. The moisture is expected to promote sizing, but the incidences of brown rot will increase. Apple and grape harvests were virtually complete in California. Navel orange, desert grapefruit, lemon, and tangerine harvests continued. Almond, walnut, and valencia orange harvests neared completion.

**VEGETABLES:** Winter vegetable planting progressed well in Florida. Fall crop harvest continued its seasonal increase. Good supplies of sweet corn, cucumbers, eggplant, peppers, radishes, squash, and tomatoes were available. Vegetable harvest continued in Texas. In Arizona, lettuce, cauliflower, broccoli, and celery progressed well. Cultivation, thinning, hoeing, irrigation, and insect controls continued. California vegetable harvest consisted mostly of broccoli, carrots, cauliflower, celery, sweet corn, and lettuce.

**PASTURES AND LIVESTOCK:** Livestock was mostly good. Supplemental feeding increased as pastures deteriorated. Pastures were mostly fair to poor. Dry conditions have virtually halted growth in most areas.

Crop Progress

FOR WEEK ENDING NOVEMBER 1, 1987

	CORN % HARVESTED		
	1987	1986	AVG.
COLO	56	50	60
GA	100	100	98
ILL	99	80	78
IND	96	71	62
IOWA	96	53	63
KANS	97	85	80
KY	94	86	74
MICH	75	30	45
MINN	97	50	53
MO	97	65	73
NEBR	90	52	55
N C	92	91	93
OHIO	92	58	56
PA	54	50	44
S DAK	96	33	58
TEX	100	97	98
WIS	84	38	37

17 STATES 93 61 63

THESE 17 STATES PRODUCED 94% OF THE 1986 CORN CROP.

	COTTON % HARVESTED		
	1987	1986	AVG.
ALA	96	80	74
ARIZ	68	55	55
ARK	95	89	72
CALIF	75	45	41
GA	74	50	56
LA	98	93	73
MISS	98	98	72
MO	97	92	78
N MEX	20	22	28
N C	62	54	54
OKLA	10	1	10
S C	91	51	72
TENN	94	82	80
TEX	21	18	26

14 STATES 57 48 46

THESE 14 STATES PRODUCED 100% OF THE 1986 COTTON CROP.

	SOYBEANS % HARVESTED		
	1987	1986	AVG.
ALA	68	51	46
ARK	74	49	37
GA	41	24	31
ILL	99	87	85
IND	99	82	81
IOWA	100	83	85
KANS	90	45	60
KY	76	45	40
LA	85	58	53
MICH	85	35	65
MINN	100	92	82
MISS	75	54	41
MO	92	42	51
NEBR	99	74	76
N C	21	18	18
OHIO	98	80	82
S C	19	20	14
S DAK	100	82	86
TENN	70	55	45

19 STATES 89 68 68

THESE 19 STATES PRODUCED 96% OF THE 1986 SOYBEANS CROP.

	GRAIN SORGHUM % HARVESTED		
	1987	1986	AVG.
ARK	100	100	96
ILL	99	78	69
KANS	75	60	55
LA	100	100	99
MISS	100	100	96
MO	96	65	69
NEBR	93	60	65
OKLA	30	35	45
S DAK	97	61	74
TENN	100	92	84
TEX	74	73	81

11 STATES 81 68 70

THESE 11 STATES PRODUCED 96% OF THE 1986 GRAIN SORGHUM CROP.

	WINTER WHEAT % PLANTED		
	1987	1986	AVG.
ARK	72	52	45
CALIF	30	30	25
COLO	100	99	98
GA	13	29	25
IDAHO	95	98	98
ILL	98	78	80
IND	97	83	85
KANS	99	90	90
MICH	95	65	90
MO	88	46	59
MONT	100	95	94
NEBR	100	100	100
N MEX	100	100	NA
N C	37	40	43
OHIO	97	78	89
OKLA	97	80	85
OREG	77	93	91
S DAK	100	100	100
TEX	93	87	79
WASH	93	99	98

20 STATES 94 86 NA

EXCL. STATES WITH NA 93 85 85

THESE 20 STATES PRODUCED 91% OF THE 1986 WINTER WHEAT CROP. NA - NOT AVAILABLE.

	WINTER WHEAT % EMERGED		
	1987	1986	AVG.
ARK	51	34	NA
CALIF	5	5	8
COLO	95	90	91
GA	8	17	NA
IDAHO	78	77	79
ILL	82	49	63
IND	80	60	74
KANS	95	85	80
MICH	85	35	NA
MO	72	35	39
MONT	100	75	82
NEBR	100	100	100
N MEX	98	97	NA
N C	17	20	NA
OHIO	76	48	71
OKLA	80	65	60
OREG	34	81	72
S DAK	100	100	100
TEX	82	78	60
WASH	74	92	89

20 STATES 83 75 NA

EXCL. STATES WITH NA 85 77 73

THESE 20 STATES PRODUCED 91% OF THE 1986 WINTER WHEAT CROP. NA - NOT AVAILABLE.

Crop Condition

STATE	WINTER WHEAT				
	VP	P	F	G	EX
ARK	4	4	32	46	14
CALIF	0	0	25	50	25
COLO	0	4	33	56	7
GA	2	49	39	10	0
IDAHO	0	10	33	50	7
ILL	0	2	32	61	5
IND	2	4	37	56	1
KANS	0	10	25	31	34
MICH	1	4	15	50	30
MO	0	7	46	44	3
MONT	0	2	37	55	6
NEBR	0	14	44	40	2
N MEX	0	0	20	50	30
OHIO	0	3	23	64	10
OKLA	0	0	5	65	30
OREG	0	54	31	15	0
S DAK	0	7	21	63	9
TEX	0	8	40	40	12
WASH	0	10	40	50	0

VP - VERY POOR P - POOR  
F - FAIR G - GOOD  
EX - EXCELLENT

## State Summaries of Weather and Agriculture

These summaries 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.

**ALABAMA:** Rainfall totals mostly under 0.50 in.; 0.50 in. to over 1.00 in. northeast. Average temperatures 2° below normal to 2° above normal.

Days suitable for fieldwork 6.3. Soil moisture 98% short, 2% adequate. Extremely dry most areas; harvest neared completion. Sorghum 90% harvested, 85% 1986, 87% avg. Cotton 96% harvested, 80% 1986, 74% avg. Soybeans 97% dropping leaves, 94% 1986, 94% avg.; 92% mature, 82% 1986, 81% avg.; 68% harvested, 51% 1986, 46% avg.; 10% very poor, 21% poor, 65% fair, 4% good. Peanuts 97% combined, 72% 1986, 94% avg. Wheat 52% seeded, 48% 1986, 38% avg. Pastures mostly poor; livestock mostly fair. Primary activities: Harvesting row crops, pecans, catfish; defoliating cotton; planting small grains; providing cattle supplemental feed; general care of livestock, poultry.

**ARIZONA:** Sunny skies 25th replaced showers, thunderstorms. High pressure 26th, 27th produced warmer conditions, variable high clouds. Temperatures lower 90s western deserts, 70s at 5,000 ft., 60s high country. Cloudiness increased 28th; some rain west. Intense thunderstorms, hail, torrential rains Salt River Valley 29th; 86 mph winds, golfball size hail. Unofficial funnel cloud sightings. Activity ended west late 29th. Clear skies morning 30th. Evening 30th, storm system, combined with remains of tropical storm Selma set off rain statewide. Rain for period 1.00 to 3.00 in. central basins, Mogollon Rim, White Mountains; 0.50 to 1.00 in. elsewhere. Temperatures 3 to 12° above normal.

Rain, hail brought cotton harvest to a standstill; extent of damage un-assessed; growers waiting for lint, ground to dry before harvest progresses. Harvest active early in week. Boll weevil infestations bothersome Pima County. Cotton harvest, ginning continued west as weather permitted; stalk shredding, disking immediately followed harvest. Rains caused undetermined damage to cut alfalfa hay west; sheep pastured increased. Alfalfa going into dormancy Graham County. Harvest activity moderate Pima County. Lemon, grapefruit harvest continued west, other citrus fruits progress. Groves good. Heavy wind, rainfall damage unknown. Rainfall expected to promote sizing, incidences of brown rot will increase. Lemons, grapefruit, navels picked central valley. Lettuce, cauliflower, broccoli, celery progress west; cultivation, thinning, hoeing, irrigation, insect controls continued. Whiteflies numerous, active. Planting continued. Lettuce shipped central valley, La Paz and Pinal Counties; fields extremely wet. Asparagus cut west; red peppers harvested until first frost southeast. Apple deal neared completion southeast; granny smith picking continued. Pecans late; picking to commence soon. Cantaloup, honeydew, watermelon harvested west; casabas, canaries, santa claus, orange flesh picked. Melon harvest almost complete Aguila. Squash picked Pinal County. Cattle, calves generally good; 5% very poor, 11% poor, 45% fair, 39% good north. Cattle, calves faired better central, southern areas.

**ARKANSAS:** High pressure dominated weather patterns. Above normal temperatures. Temperature extremes 27°; 85°. Moderate to heavy rains all areas. Rainfall total 0.18 to 2.51 in. Days suitable for fieldwork 6.0. Soybean, cotton harvest continued. Soybeans 1% very poor, 13% poor, 56% fair, 30% good. Cotton 1% poor, 6% fair,

68% good, 25% excellent. Wheat seeding progressed to 72%, 51% emerged; 52% seeded 1986, 45% avg.; 34% emerged 1986. Livestock good; still being fed hay, grains. Pecan harvest continued. Rainfall helped small grains, pastures while hindering soybean harvest.

**CALIFORNIA:** Temperatures above normal, some rainfall occurred towards end of week. Low pressure area off coast created southwest flow bringing generally light amounts of rain. Some locally heavy rain occurred mainly foothills of Sierra Nevada, coastal mountains.

Wet fields slowed operations many areas. Rice 95% harvested, 95% 1986, 90% avg. Cotton harvest good progress; shredding, discing following rapidly. Midweek storm knocked cotton from upper bolls. Windrowed hay rain damaged. Corn, grain sorghum, sugarbeet harvests progressed conditions permitting. Seeding 1988 small grains normal progress. Apple picking virtually complete. Fall avocado varieties harvested. Date harvest progressed. Grape harvest nearly complete. Kiwi harvest continued. Fuyu persimmons, wonderful pomegranates being packed. Olives, valencia orange harvests winding down. Navel orange, desert grapefruit, lemon, tangerine harvests continued. Almond, walnut harvests virtually complete. Pecan harvest active. Pruning activities continued. Artichokes fairly light good quality Castroville. Broccoli fairly heavy Salinas, good quality. Santa Maria production moderate, good quality. Harvest continued Westside, Riverside. Carrot volume moderate Salinas, good quality. Cauliflower moderate both Santa Maria, Salinas; good quality. Cauliflower good quality Westside, Riverside. Celery fairly heavy Salinas-Watsonville, moderate Santa Maria-Oceano; quality good. Sweet corn harvest remained active Merced-Atwater. Lettuce fairly heavy central San Joaquin Valley, variable weight, quality. Santa Maria volume light, decreasing; variable quality. Westside lettuce harvest curtailed short time because storm left large quantities water standing; quality improving. Fertilizer applied to induce color, growth Riverside; land preparation, planting continued for additional crop. Palo Verde Valley melon harvest nearly completed; whitefly virus continued to depress harvest. Growers planted dry onions, garlic Westside. Pepper harvest active Delta, central valley, Riverside. Pepper supplies moderate, good quality, Santa Maria. Fall potato harvest to begin next week Hemet-San Jacinto. Tulalake-Butte Valley 80% harvested, good quality. Snap beans harvested Westside. Sweetpotato harvest active Clovis, Selma Districts. Processing, fresh market tomato production completed Merced-Atwater, preplant fumigation begun. Tomato harvest continued delta area. Fresh market cherry tomatoes harvested Westside. Fresh market tomato harvest underway Riverside. Pasture, range forage; northern, central districts; helped by light rains. Pastures nearly depleted, cattle moved to market Yreka. Supplemental feeding continued. Calving, early lambing continued to increase. Rain still needed for stock ponds, reservoirs Yreka.

**COLORADO:** Temperatures 5 to 8° above normal. Dry early week, scattered showers over weekend. Precipitation none to 1.58 in., most moisture occurred west of Continental Divide.

Days suitable for fieldwork 6.3. Soil moisture 26% very short, 59% short, 15% adequate. Corn 56% harvested, good progress. Onion, potato harvests

complete. Winter wheat seedings complete. Dry beans 99% threshed. Sugarbeets 98% harvested. Livestock good; pastures dry, fair to good.

**FLORIDA:** Dry, cool, then much warmer, windy, wet weekend. Coolest morning of season 29th. Near freezing Panhandle, extreme north; 40s central extending into northern Everglades. Little or no frost. Local weekend rains over 2.00 in., middle, lower east coast; most areas under 0.50 in. Wind gusts over 30 mph weekend.

Soil moisture lower half of Peninsula adequate; other areas mostly short. Moisture shortages Panhandle, upper Peninsula delayed planting fall crops. Dry conditions favored fall harvesting. Peanut, soybean harvest about complete. Cotton, sugarcane harvest active. Sugarcane planting continued. Pastures Panhandle, upper Peninsula very poor to fair. Elsewhere mostly good to excellent. Cattle mostly good to excellent. Rain all citrus areas; irrigation stopped. Very little new tree growth. Early fruit good natural color break. Fresh fruit movement increased, more crops passing maturity. Caretakers active winterizing young trees. Cool, dry weather continued, vegetable producing areas. Winter crop planting progress good. Harvest fall crops continued seasonal increase. Good volume available sweet corn, cucumbers, eggplant, peppers, radishes, squash, tomatoes; also light supplies snap beans, carrots.

**GEORGIA:** Temperatures normal northern half, 1 to 4° below normal central, south. Extreme lows low 20s mountains to low 30s Florida border, extreme highs 80s mountains to mid 80s south. Rainfall mostly under 0.50 in. over northern half. Rainfall central, south widely scattered, amounts mostly under 0.20 in., many areas received none.

Days suitable for fieldwork 6.3. Soil moisture 85% very short, 15% short. Cotton 46% fair, 54% good; 98% bolls open, 96% 1986, 96% avg. Sorghum grain 22% poor, 54% fair, 17% good, 7% excellent; 90% harvested, 78% 1986. Peanuts 11% very poor, 22% poor, 56% fair, 11% good; 100% dug, 91% 1986, 97% avg.; 97% threshed, 78% 1986, 93% avg. Soybeans 3% very poor, 19% poor, 49% fair, 25% good, 4% excellent; 100% dropping leaves, 98% 1986, 97% avg. Rye 3% very poor, 53% poor, 39% fair, 5% good; 46% planted, 54% 1986, 57% avg. Other small grains 25% planted, 47% 1986, 46% avg. Pecans 3% poor, 67% fair, 29% good, 1% excellent; 13% harvested, 14% 1986, 19% avg. Pasture 13% very poor, 39% poor, 39% fair, 9% good. Extremely dry weather plagued pastures. Hay 13% very poor, 45% poor, 34% fair, 8% good. Usage very early, heavy due to weak pastures. Cattle 1% poor, 52% fair, 47% good. Hogs 3% poor, 21% fair, 75% good, 1% excellent. Main activities: Harvesting cotton, peanuts, soybeans, pecans; reseeding pastures; small grain planting delayed.

**HAWAII:** Sunny days followed by showery nights. Rainfall light to moderate mostly windward, central areas. Temperatures above normal high. Temperatures low 70s to high 80s. Rainfall none to 3.60 in.

Days suitable for fieldwork 7.0. Crops fair to good. Disease prevalent some fields. Irrigation regular. Banana production steady. Papaya production steady, heavy. Chinese, head cabbage supplies steady. Watermelon production declined, relatively heavy.

**IDAHO:** Temperatures 2 to 6° above normal. Precipitation below normal, light.

Sugarbeet, corn for grain harvest continued. Other activities included fall plowing, preparing seedbeds, preparing machinery for winter storage. Livestock activities included movement of cattle to

winter pasture, weaning calves, some selling of cattle.

**ILLINOIS:** Temperatures average 1 to 3° above normal north, 3 to 6° above normal south. Precipitation widespread, total exceeded 1.00 in. few locations, typical weekly totals 0.25 to 0.50 in.

Days suitable for fieldwork 5.8. Soil moisture 64% short, 36% adequate. Pasture 4% very poor, 16% poor, 42% fair, 38% good. Harvest corn, soybeans, sorghum virtually complete.

**INDIANA:** Temperatures upper 50s north to mid 60s south, exceeded normals 1 to 6°. Low temperatures upper 20s common. Precipitation less than 0.50 in. most cases.

Days suitable for fieldwork 5.1. Topsoil moisture 42% short, 55% adequate, 3% surplus. Subsoil moisture 59% short, 40% adequate, 1% surplus. Rye 98% seeded, 91% 1986, 91% avg. Winter wheat cropland 97% plowed, 89% 1986, 92% avg. Pastures 7% very poor, 27% poor, 48% fair, 17% good, 1% excellent. Wet fields slowed harvesting, tilling activities early week.

**IOWA:** Mild, dry. Moderate to heavy rains south, central over weekend; 2.36 in. Lamoni 1st. Temperature extremes 19° Boone 28th, 79° Leon 30th.

Days suitable for fieldwork 6.7. Topsoil moisture 42% short, 58% adequate; subsoil moisture 23% short, 76% adequate, 1% surplus. Fall tillage 45%, 11% 1986, 21% avg.; fall fertilizer application 34%, 7% 1986, 18% avg. Livestock mostly good to excellent. Normal movement of cattle to market. Pastures 1% very poor, 9% poor, 35% fair, 48% good, 7% excellent.

**KANSAS:** Temperatures averaged 56° northwest to 62° southeast; 10° above normal northwest, 8° above normal southeast. Rain plentiful except west, south central; averaged 0.50 to 1.00 in. eastern two-thirds, 0.10 in. west, south central.

Days suitable for fieldwork 5.5. Soil moisture 54% short, 42% adequate, 4% surplus. Moisture still concern western third and south central, especially for wheat emergence, stand development before winter. Wheat streak mosaic still present, heaviest incidence western third. Leaf rust present statewide, most prevalent early seeded wheat. Row crop harvest well ahead of normal. Corn harvest nearly complete, north central largest share yet to be cut. Sorghum harvest progress good. Some areas southern area waiting for freeze, dry up crop so harvest can be completed. Soybean harvest rapid, all districts neared complete except southeast. Charcoal rot east central, southeast; lodging concern. Pod, stem blight southeast, disease incidence generally high. Very late planted soybeans, severe freeze damage, may not harvest. Pastures poor west, good central, excellent east. Cattle moving off pastures to corn, sorghum stubble. Significant wheat grazing underway stands established.

**KENTUCKY:** Weak cold front first of week with spotty light rain. Latter abnormally warm, dry. Average temperatures mostly middle 50s, 2 to 5° above normal. Precipitation averaged less than 0.25 in.

Days suitable for fieldwork 5.6. Drought conditions persist. Soil moisture 89% very short, 11% short. Corn harvest complete on most farms. Soybean harvest considerably ahead of 1986 and average. Yields on double crop fields generally poor to fair. Burley tobacco 22% stripped, 28% 1986, 21% avg. Rain needed to bring hanging crop into order, improve color, quality. Quality of stripped burley fair to good. Wheat 76% seeded, 75% 1986, 59% avg. Germination problems due to dry

soils; 16% very poor, 38% poor, 43% fair, 3% good. Pastures mostly poor or very poor. Feeding hay.

**LOUISIANA:** Temperature 2° below to 3° above normal. Temperature extremes 36°; 84°. Rainfall averaged 0.61 to 1.86 in.

Days suitable for fieldwork 5.4. Soil moisture 36% very short, 28% short, 36% adequate. Cotton, soybean harvests well above normal. Winter wheat 25% planted, slightly below normal. Rain helped wheat, pasture planting. Sugarcane good, 32% harvested, above average. Sweetpotatoes 95% harvested, above average, rain will help. Pecans poor to fair, 10% harvested, below 16% avg. Livestock fair to good; pasture improved to avg. Main activities: Harvesting cotton, soybeans, sugarcane, sweetpotatoes; planting winter wheat, winter pastures.

**MARYLAND & DELAWARE:** Maryland: Average temperature 48°, normal 51°. Precipitation averaged 1.13 in.

Days suitable for fieldwork 5.8. Topsoil, subsoil moisture short to adequate. Corn fair. Corn 100% mature, 100% avg. Corn 95% harvested, 85% avg. Soybeans poor to fair. Soybeans 99% shed leaves, 100% avg. Soybeans 50% harvested, 40% avg. Winter wheat 75% planted, 70% avg. Barley, rye 90% planted, 90% avg. Small grains good.

Delaware: Average temperature 51°, normal 53°. Precipitation averaged 1.28 in.

Days suitable for fieldwork 6.0. Topsoil moisture short to adequate. Subsoil moisture short. Corn, soybeans poor to fair, mostly poor. Corn 95% harvested, 95% avg. Soybeans 100% shed leaves, 95% avg. Soybeans 50% harvested, 50% avg. Small grains good. Wheat 65% planted, 55% avg. Barley 90% planted, 90% avg.

**MICHIGAN:** Temperatures 2 to 5° below normal. Temperature extremes 17°; 66°. Precipitation 0.12 to 1.15 in. across State.

Days suitable for fieldwork 4.0. Soil moisture 45% adequate, 55% surplus. Corn 75% harvested, 30% 1986, 45% avg. Soybeans 85% harvested, 35% 1986, 65% avg. Winter wheat 95% planted, 65% 1986, 90% avg.; 85% emerged, 35% 1986, NA avg.; 1% very poor, 4% poor, 15% fair, 50% good, 30% excellent. Dry beans 85% harvested, 75% 1986, 95% avg. Major activities: Corn for grain, soybean, sugarbeet, dry bean harvesting, wheat planting, fall tillage. Light rains delayed harvest early week. Apple harvest complete.

**MINNESOTA:** Temperatures averaged near normal to 5° above normal for State. Temperature extremes 20°; 70°. Precipitation averaged 0.07 to 0.42 in. below normal. Precipitation totals averaged none to 0.21 in.

Corn, sunflower harvest neared completion. Fall activities well ahead of normal. Fall moisture needed, especially mid section of State. Field corn 97% picked, 50% 1986, 53% avg. 70% stubble plowed or tilled, 19% 1986, 25% avg. Sunflowers 97% harvested, 85% 1986, 66% avg.

**MISSISSIPPI:** Temperatures 7° below to 6° above normal; extremes 27°; 85°. Mostly sunny skies, scattered showers on 27th. Greatest 24-hour rainfall 3.14 in.; greatest weekly rainfall 3.17 in.

Days suitable for fieldwork 5.9, 5.2 1986, 3.8 avg. Soil moisture 80% very short, 15% short, 5% adequate. Wild fire alert all counties. Cotton 98% harvested, 98% 1986, 72% avg. Soybeans 75% harvested, 54% 1986, 41% avg. Wheat 40% planted, 42% 1986, 35% avg.; 30% very poor, 35% poor, 30% fair, 5% good. Pasture 30% very poor, 35% poor, 30% fair, 5% good. Livestock 10% poor, 50% fair,

40% good. Cattlemen feeding hay due to pasture conditions.

**MISSOURI:** Temperatures 2° above normal. Rainfall average 1.00 in. southern third, less than 0.50 in. elsewhere.

Days suitable for fieldwork 5.5. Topsoil moisture 50% short, 49% adequate, 1% surplus. Harvest neared completion. More rain needed for wheat, pastures. Fall tillage for spring crops 48%, 16% 1986, 30% avg. Pasture 1% very poor, 20% poor, 54% fair, 23% good, 2% excellent.

**MONTANA:** Temperatures 6 to 8° above normal over west, 10° above normal elsewhere. No precipitation.

Continued dry weather caused concern for moisture conditions statewide. No crop damage occurred, winter wheat remained fair to good. Grazing open all areas. Nearly all livestock moved from summer pastures.

**NEBRASKA:** Temperatures averaged 5° above normal. Extremes 22°; 81°. Precipitation ranged 0.10 to 1.00 in.

Days suitable for fieldwork 5.0 days. Topsoil moisture 59% short, 41% adequate. Subsoil moisture 31% short, 69% adequate. Fall harvest over 2 weeks ahead of normal. Dry bean, sugarbeet, sunflower, millet harvest neared completion. Tillage, fertilizing active. Winter wheat irrigated areas of high stress. Condition should improve with weekend rain. Mild, dry conditions promote Russian wheat aphid development. Cattle glean stalk fields. Feed supplies adequate. Hay moved to winter feeding areas.

**NEVADA:** Split flow in jet stream dominate feature over west coast, resulted in several storm systems moving northeast across State from southern California. Since low pressure areas came from southwest temperatures continued above normal statewide, snow confined to highest elevations. Temperatures 5 to 10° above normal northwest, northeast, about 5° above normal south. Rainfall averaged 0.40 to 0.50 in. northern areas with 0.30 in. across south, south central.

Ranches busy moving, sorting cattle, movement to market continued. Livestock generally good.

**NEW ENGLAND:** Average temperatures around 40° northern sections of Maine, Vermont, New Hampshire; northwest hills of Massachusetts, Connecticut. Temperatures little below normal for this time of year. Average temperatures near normal elsewhere ranged mid 40s to upper 40s along coastal south. Precipitation averaged between 1.00 to 1.50 in. across central State. Precipitation elsewhere averaged between 0.50 to 1.00 in. Bulk of precipitation occurred 27th afternoon, night.

Cranberry harvest complete. Corn, hay harvest complete. Major farm activities: Fall cleanup, preparations for winter.

**NEW JERSEY:** Temperatures averaged below normal. Extremes 23°; 68°. Rainfall averaged 2.36 in. north, 2.00 in. central, 1.75 in. south. Heaviest 24-hour total 3.52 in. on 27th, 28th. Estimated soil moisture percent field capacity averaged 96% north, 93% central, 92% south. Four inch soil temperatures averaged 47° north, 49° central, 50° south.

Topsoil moisture adequate. Recent rainfall beneficial to late crops, fall seeded grains. Harvest of irish potatoes, sweetpotatoes, apples, cranberries about complete. Pasture conditions improved with warmer temperatures, midweek rains.

**NEW MEXICO:** Temperatures 3 to 12° above normal; trace to 1.52 in. precipitation statewide.

Days suitable for fieldwork 7.0. Soil moisture 30% short, 70% adequate. Light freezes some areas. Cotton 20% fair, 70% good, 10% excellent; harvest activity about midpoint Mesilla Valley, desert areas, beginning other locations. Barley 40% fair, 40% good, 20% excellent. Wheat 20% fair, 50% good, 30% excellent; planting virtually complete statewide; good growth. Irrigated grain sorghum 29% fair, 57% good, 14% excellent; harvest activity continued. Dryland sorghum 20% fair, 60% good, 20% excellent; good to excellent yields continued. Corn 20% fair, 60% good, 20% excellent; harvest past midpoint. Pecans 17% fair, 83% good; husks began to split. Lettuce 100% good; harvest activity finished Luna County; neared completion Mesilla, Hatch Valleys. Price increased end of week. Red chile harvest continued; fair to good. Cattle 100% good. Pace of cattle movement slowed some. Sheep 100% good. Range 20% fair, 80% good; additional rains needed many areas.

**NEW YORK:** Heavy rain midweek eastern part of State, 3.00 in. some areas. Temperatures averaged several degrees below normal.

Days suitable for fieldwork 5.0. Soil moisture adequate to surplus. Harvest progressed rapidly. Corn silage 93%, up 10 points from last week. Grain corn 46%, up 16 points from last week. Potato digging virtually complete. Fruit harvest winding down.

**NORTH CAROLINA:** Temperatures averaged 1 to 3° below normal statewide. Coldest October in history most locations. Temperature extremes 23°; 81°. Precipitation none to 2.98 in. across State.

Days suitable for fieldwork 5.3. Soil moisture 7% very short, 56% short, 35% adequate, 2% surplus. Peanuts 89% dug, 98% 1986, 90% avg.; 78% threshed, 89% 1986, 80% avg. Sorghum 79% harvested, 70% 1986, 74% avg. Sweetpotatoes 86% harvested, 79% 1986, 82% avg. Apples 94% harvested, 96% 1986, 92% avg. Oats 58% planted, 57% 1986, 59% avg. Barley 69% planted, 52% 1986, 57% avg. Rye 56% planted, 52% 1986, 57% avg. Pasture 20% poor, 52% fair, 28% good. Major farm activities: Harvesting corn, cotton, sweetpotatoes, hay, peanuts, soybeans, apples, sorghum, vegetables; seeding small grains; digging, tagging Christmas trees; spreading lime; fertilizer; tending livestock; general farm maintenance.

**NORTH DAKOTA:** Temperatures averaged normal northeast to 5° above normal southwest. Extremes 14° central, 75° west central. Precipitation very light.

Days suitable for fieldwork 6.8. Topsoil moisture below normal; 30% very short, 63% short, 7% adequate. Subsoil moisture below normal; 13% very short, 50% short, 37% adequate. Late season harvest neared completion, earliest since 1976. Sunflower 98% combined, 73% 1986, 64% avg.; corn 97% harvested, 67% 1986, 71% avg. Farmers busy preparing for winter.

**OHIO:** Temperatures averaged mid 50s to mid 60s; near normal. Extremes 30s to 80s. Precipitation averaged under 0.56 in.

Days suitable for fieldwork 5.7. Soil moisture 42% short, 54% adequate, 4% surplus. Corn, soybean harvests advanced rapidly, good weather. Winter wheat seedings adequate soil moisture major production areas, except west central. Fruit, potato, sugarbeet harvests almost complete. Grasslands across south need rain.

**OKLAHOMA:** Temperatures averaged 3° above normal southeast to 8° above normal Panhandle. Precipitation averaged none Panhandle, southeast third of State to 0.87 in. west central.

Days suitable for fieldwork 5.2. Topsoil moisture 40% short, 55% adequate, 5% surplus.

Subsoil moisture 10% short, 90% adequate. Wheat 5% fair, 65% good, 30% excellent; 97% planted, 80% 1986, 85% avg.; 80% emerged, 65% 1986, 60% avg. West wheat pasture needs moisture. Cattle grazing 15% acreage. Sorghum 30% harvested, 35% 1986, 45% avg. Cotton 80% open bolls, 65% 1986, 95% avg.; 10% harvested, 1% 1986, 10% avg. Many producers await killing frost before harvest. Warm temperature benefit late cotton. Pastures, livestock good. Cattle marketings, prices lower than preceding week.

**OREGON:** Temperatures nearer to normal across State; clear, dry weather kept temperatures higher than usual. Precipitation measured slightly over 0.33 in. coastal regions. Measurable rain Willamette Valley, some eastern areas.

Soil moisture 90% short, 10% adequate. Barley 62% seeded. Late rains may increase fall seeding. Soil erosion may become problem where cover crops absent. Sugarbeets 60% harvested Malheur County. Fall copper sprays being applied to caneberrys, blueberries, peaches. Cherries, filberts also received fall sprays. Strawberry growers who didn't irrigate may have poor showing in spring despite recent rains western areas. Cranberries 75% harvested Coos County; blackvine weevil many bogs. Potato harvest near end Hermiston. Storage onions showed some decay Malheur County. Carrots suffer from dryness Jefferson County. Livestock mainly good east; fair west. Ranges, pastures poor west, may improve with recent rains; poor to fair east. Many cattle received supplemental feeding. Respiratory problems in weaning calves; significant drop in livestock prices at local sales Wallowa County.

**PENNSYLVANIA:** Rapid changes in weather patterns, temperature. Series of fast moving frontal systems swept through region. Average temperature 42°, 5° below normal. Temperature extremes 18°; 73°. Average precipitation 0.87 in., 0.19 in. above normal.

Days suitable for fieldwork 4.0. Soil moisture 78% adequate, 22% surplus. Corn 96% mature, 99% 1986, 97% avg.; 54% harvested, 50% 1986, 44% avg. Ensilage corn 97% harvested, 96% 1986, 97% avg. Soybean 48% harvested, 47% 1986, 42% avg. Soybeans 3% very poor, 7% poor, 29% fair, 40% good, 21% excellent. Potatoes 96% harvested, 97% 1986, 99% avg. Third cutting alfalfa 94%, 100% 1986. Fourth cutting alfalfa 78%, 94% 1986. Quality of hay fair to poor. Amount of feed being obtained from pastures average to above average. Apples 89% harvested, 94% 1986. Grapes 98% harvested, 97% 1986. Fall plowing 93%, 94% 1986. Winter wheat 90% planted, 96% 1986. Barley 97% planted, 100% 1986. Activities: Harvesting hay, haylage, corn for grain, silage, soybeans, fruit, potatoes, other vegetables; seeding wheat, barley; hauling manure; spreading lime, fertilizer; installing conservation practices; machinery maintenance; caring for livestock.

**PUERTO RICO:** Island average rainfall 1.66 in., 0.01 in. above normal. Highest weekly total rainfall 6.18 in. Juana Diaz Camp, 5.62 in. Pone 4E Farm, 4.69 in. Santa Isabel. Highest 24-hour total 6.05 in. Juana Diaz Camp. San Juan mean temperature 83°, 2° above normal. Divisional temperatures averaged about 80 to 82° on coasts, 76 to 78° interior divisions, mean station temperatures 84° San Juan City to 73° Adjuntas. Lowest minimum temperature 56° Adjuntas. Highest maximum temperature 94° San Juan City.

**SOUTH CAROLINA:** Temperatures below normal, scattered frost. Rainfall 0.25 to 2.00 in. early week.

Days suitable for fieldwork 5.7. Soil moisture 19% very short, 73% short, 8% adequate. Cotton

91% harvested, 51% 1986, 72% avg.; 4% poor, 93% fair, 3% good. Soybeans 84% leaves shedding, 83% 1986, 86% avg.; 74% mature, 67% 1986, 58% avg.; 19% harvested, 20% 1986, 14% avg.; 2% very poor, 4% poor, 77% fair, 17% good. Peanuts fair; 87% harvested, 67% 1986, 87% avg. Pastures fair. Livestock fair to good.

**SOUTH DAKOTA:** Average temperatures 1° below normal to 10° above normal. Extremes 18°; 81°.

Days suitable for fieldwork 6.1. Topsoil moisture conditions deteriorated from previous week; 29% critically short, 54% short, 17% adequate. Subsoil moisture 25% critically short, 44% short, 31% adequate. Row crop harvest virtually complete. Fall seeded crops need rain.

**TENNESSEE:** Rainfall 1.00 to 3.00 in. west; middle, east less than 0.50 in. Temperatures above normal.

Days suitable for fieldwork 5.5. Soil moisture 50% very short, 41% short, 9% adequate. Burley 40% stripped, 40% 1986, 40% avg. Winter wheat 65% seeded, 50% 1986, 50% avg. Pastures poor.

**TEXAS:** Dry weather most areas. Open weather allowed producers to make good progress planting small grains, harvesting grain, cotton. Dry weather affected small grain planting, caused many producers dust in hope for rain. Some beneficial rain northeastern section. Harvest activity peanuts, soybeans, pecans expanded. Ranges, pastures showed effects of dry weather. Forage availability declined grasses turning brown many areas. Supplemental feeding livestock increased. Most livestock good shape despite lack of forage. Markets down from earlier levels.

**Crops:** Grain sorghum harvest continued good pace Plains, Cross-Timbers; many fields slow mature. Fields probably remain until freeze. Test weights remained good overall; 97% mature, 92% 1986, 97% avg. Excellent weather Plains allowed cotton producers to make good progress desiccation harvesting activities. Warm temperatures helped many bolls open. Harvest operation about completed Blacklands, Central. Harvest continued without delay Trans-Pecos; 70% open bolls, 60%, 1986, 78% avg. Small grain seeding progressed slow pace again last week. Many producers "dusting in" grain. Some early planted fields on Plains irrigated, established good stands, growth. Fields provided adequate grazing. Many dryland fields, slow growth. General rain needed soon over State. Soybean harvest continued on Plains along Upper Coast. Yields good Plains, not so good Upper Coast. Lack rainfall decreased yields. Peanut harvest advanced rapidly many areas. Yields good, grades remained fair. Sugarbeet, sugarcane harvest continued good yields, sugar content. Other crops planted: Oats 83%, 79% 1986, 72% avg. Other crops harvested: Corn 100%, 97% 1986, 98% avg. Peanuts 41%, 54% 1986, 48% avg. Pecans 18%, 38% 1986, 18% avg. Soybeans 55%, 59% 1986, 48% avg. Sugarbeets 41%, 25% 1986, 42% avg. Sunflowers 61%, 53% 1986, 66% avg.

**Commercial Vegetables:** Rio Grande Valley harvest continued tomatoes, peppers, cucumbers, cabbage. Onion planting active. Harvest grapefruit, oranges normal pace. Fruit good size, appearance. San Antonio-Winter Garden harvest cabbage, carrots continued. Onion planting soon. High Plains harvest pumpkins active. Harvest carrots, peppers continued. Trans-Pecos harvest bell, chili peppers continued. Pecan harvesting expanded across State. Quality good overall. Many nuts not filled properly due to dry conditions. Many nuts falling prematurely.

**Range and Pasture:** Range, pasture conditions continued to decline many areas. Rain northeast well received. Lingering effects previous rains valley left pastures fair shape; rest of State needs rain. Irrigated small grains provided good grazing Plains; some livestock being held off until

further growth occurs. Markets down some from previous weeks. Supplemental feeding held body conditions many areas.

**UTAH:** Precipitation light to moderate north, heavy to very heavy south. Temperatures 3 to 7° above normal.

Fall harvests completed. Livestock movement to winter ranges neared completion. Major farm activities: Working livestock, fence repair, hauling hay, winterizing equipment, cutting wood. **VIRGINIA:** Cool, clear till end period. Warm, sunny end period. Temperature range 20s to 70s. Rainfall average 0.50 in.

Days suitable for fieldwork 5.1. Topsoil moisture 43% short, 53% adequate, 4% surplus. Grain corn 86% harvested, 81% 1986, 80% avg. Soybeans 30% harvested, 28% 1986, 32% avg. Peanut harvest ended, 97% dug, 99% 1986, 99% avg. Combining 93%, 97% 1986, 97% avg. Apples over 90% harvested. Curing, marketing flue-cured tobacco. Oats 90% seeded, 88% 1986, 92% avg. Barley 92% seeded, 85% 1986, 87% avg. Wheat 59% seeded, 46% 1986, 55% avg. Rain helped germinating small grains. Some alfalfa cut, alfalfa seeded. Seeded rye, cover crops. Market cattle. Fall calving.

**WASHINGTON:** High pressure remained over State, dry conditions prevailed. Early week disturbance brought light rain to western area. Near weekend another disturbance brought more rainfall to coastal area. Temperatures statewide above normal.

Days suitable for fieldwork 6.8. Soil moisture 90% short, 10% adequate. Winter wheat 93% seeded, 99% 1986, 98% avg. Winter wheat 74% emerged, 92% 1986, 89% avg. Dry conditions hampered fall field operations. Winter wheat fair to good. Conservation reserve program seeding continued Douglas County. Orchardists busy with cleanup, weed control, fertilizer application, rodent control. Soil moisture low, concern for trees set up for winter damage. Rome apples being picked Kittitas County. Carrot harvest past midpoint Grant County. Vegetable growers preparing fields for next year. Harvest of fall vegetables carrots, celery continued King, Pierce Counties, harvest activity decreasing. Range, pastures 90% short, 10% adequate. Pastures Stevens County dry, no green regrowth in fields, ranges. Livestock being moved into corn, alfalfa, wheat fields. Hay, other roughage feed supplies 80% adequate, 20% surplus.

**WEST VIRGINIA:** Average temperature 49°. Temperatures 1° to 3° above normal; except 1° below central, 3° below northeast. Precipitation averaged 0.28 in.; below normal.

Days suitable for fieldwork 4.9. Soil moisture 67% short, 33% adequate. Farm activities: General farm maintenance, harvesting corn, livestock care. Corn good to fair. Hay mostly fair. Fall seedings: Wheat 94%, barley 97%.

**WISCONSIN:** Temperatures averaged 41°, 1° below normal. Extremes 14°; 70°. Rainfall 0.10 to 0.60 in.

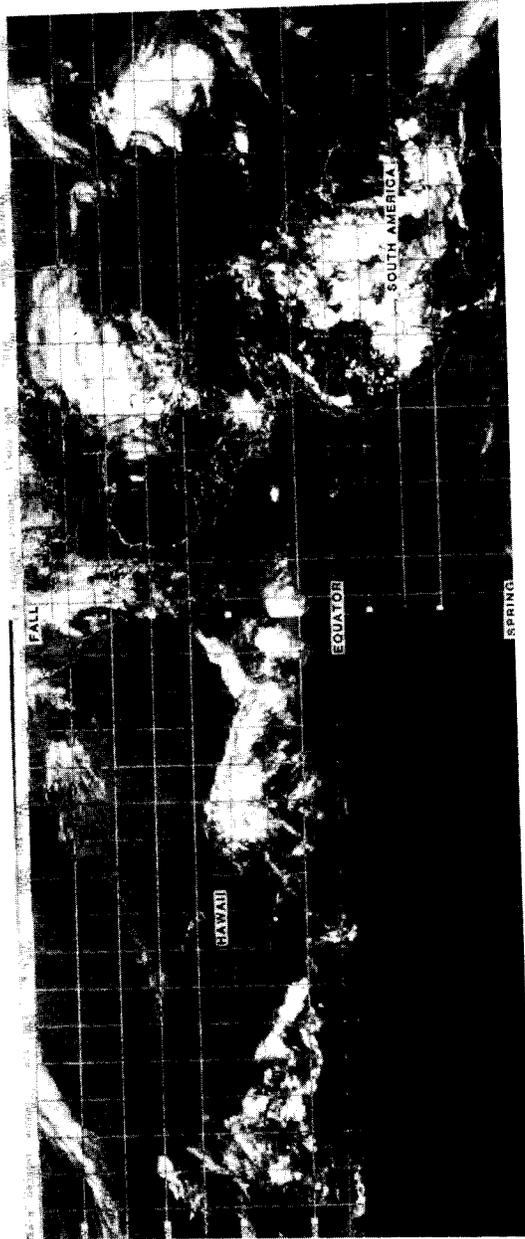
Days suitable for fieldwork 4.5. Soil moisture 14% short, 84% adequate, 2% surplus. Corn for grain 84% harvested, 38% 1986, 37% avg. Yields above average, low moisture levels. Soybeans 95% harvested, 49% 1986, 52% avg. Fall plowing 58%, 24% 1986, 28% avg. Hay, winter wheat good. Hay disease light, due to dry soils.

**WYOMING:** Temperatures above normal. Precipitation generally below normal.

Corn for grain harvest continued. Dry bean harvest windup stages. Most sugarbeets harvested. Winter wheat fair to good. Russian aphid infestations. Additional moisture needed for good development. Livestock good to excellent. Movement to winter pasture, market continued. Hay supplies adequate or better.

# Global Weather Satellite Image

November 1-2, 1987



International Weather and Crop Summary

October 1987

MONTHLY DATA FROM SELECTED FOREIGN CITIES  
CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA  
\*\*\* = DATA NOT AVAILABLE

October 25 - 31, 1987

**HIGHLIGHTS:**

**UNITED STATES...**Row crop harvest nears completion considerably ahead of normal except in the Southeast and southern Great Plains. Rain provides much needed moisture but hampers harvest from Texas through the Delta and central Great Plains and into the Corn Belt. Dry conditions continue plaguing winter wheat seeding, germination, and growth and development in most of the eastern half of the Nation and the Pacific Northwest.

**WESTERN U.S.S.R....**Unseasonable cold weather halts wheat growth over much of the region.

**EUROPE...**Heavy rain delays harvest and planting activities in the west and south but gives ample moisture for crop establishment. Widespread freezing temperatures harden emerging crops in the east.

**SOUTH ASIA...**Dry weather covers all but southernmost Indian crop regions, promoting wheat planting and helping flooded areas of the east.

**NORTHWESTERN AFRICA...**Substantial rains benefit moisture levels in the northwest, while other areas remain dry.

**SOUTH AFRICA...**Showers continue in South Africa's corn region as some areas continue too wet for planting.

**SOUTHEAST ASIA...**Dry weather covers heading to filling rice in Thailand's northern half.

**EASTERN ASIA...**Rain covers vegetative wheat in the North China Plain. Mild, dry weather in southern China favors maturing rice.

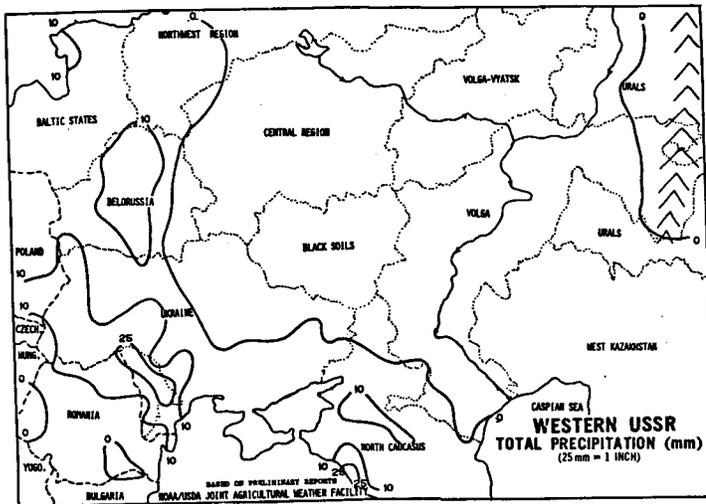
**SOUTH AMERICA...**Rain benefits summer crop planting in Argentina and south-central Brazil. Locally heavy showers fall again in southern Mato Grosso do Sul.

**AUSTRALIA...**Rain benefits late planted crops in the west and south, but delays early harvest in Queensland.

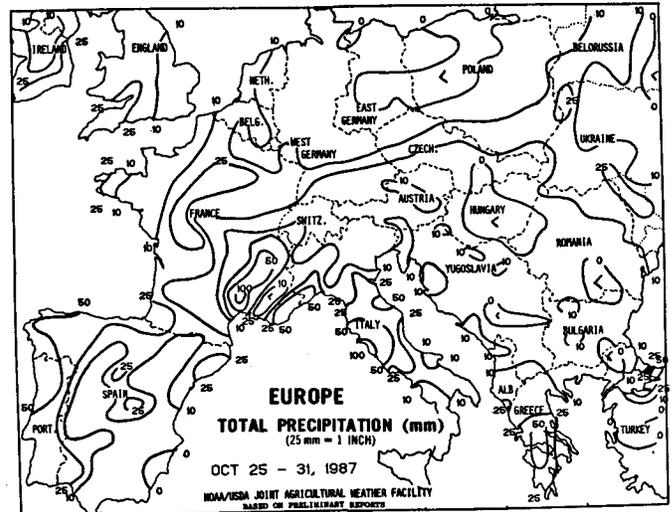
**MEXICO...**Dryness favors crop harvesting in the Southern Plateau.

COUNTRY CITY	TEMPERATURE (C)					PRECIPITATION (MM)		
	AVG MAX	AVG MIN	HI	LO	AVG	DPART F/NRM	TOTAL	DPART F/NRM
NORWAY OSLO	9	4	14	-3	6	1.7	216.3	123.3
SWEDEN STOCKHOLM	11	6	14	1	9	1.4	23.5	-27.9
FINLND HELSINKI	10	5	15	0	7	1.6	34.3	-32.0
U KING GLASGOW	12	5	16	-3	8	-1.5	142.8	12.8
EDINBURGH	12	5	15	-2	8	-1.6	98.6	41.3
BIRMINGHAM	13	6	18	-3	9	-0.8	113.2	61.5
LONDON	15	7	20	-2	11	0.2	186.2	124.5
IRELND DUBLIN	12	7	15	1	10	-1.1	124.7	56.4
ICELND REYKJAVIK	5	0	10	-6	2	-2.5	64.3	-30.9
DENMRK COPENHAGEN	13	8	16	3	10	1.0	10.6	-48.3
LUXEMB LUXEMBOURG	13	7	18	2	10	0.7	198.5	140.6
SWITZL ZURICH	13	8	23	3	11	1.6	35.6	-36.4
GENEVA	15	9	24	3	12	2.1	106.3	34.5
FRANCE PARIS	16	9	23	4	12	1.1	85.7	38.7
STRASBOURG	15	8	21	2	11	1.6	93.9	55.7
BOURGES	17	9	23	4	13	1.8	102.9	44.8
BORDEAUX	19	11	23	5	15	1.9	142.0	59.8
TOULOUSE	20	12	24	5	16	2.7	25.3	-24.8
MARSEILLE	21	14	25	7	18	2.4	128.3	44.3
SPAIN VALLADOLID	16	9	22	3	12	-0.1	52.5	11.8
MADRID	19	9	24	3	14	-0.8	68.1	14.8
SEVILLE	23	14	30	8	18	-1.1	140.6	72.3
E GRMY LEIPZIG	14	6	24	0	10	0.6	10.3	-32.9
DRESDEN	14	7	22	1	11	1.6	31.4	-20.6
W GRMY HAMBURG	13	7	20	1	10	0.6	56.8	-1.4
BERLIN	14	7	22	-1	10	0.4	16.2	-25.3
DUSSELDORF	16	9	23	3	12	1.9	67.7	15.6
STUTTGART	15	6	23	0	10	0.6	59.3	17.9
NURNBERG	14	6	23	0	10	1.6	27.8	-16.2
MUNICH	14	5	25	0	10	1.5	24.6	-33.0
AUSTRI VIENNA	15	8	23	-1	11	1.3	25.7	-24.3
INNSBRUCK	17	7	23	1	12	2.7	31.8	-28.3
CZECH PRAGUE	13	5	20	-2	9	0.6	19.1	-18.5
POLAND WARSAW	13	5	20	-4	9	0.5	16.4	-22.8
LODZ	13	6	21	-3	10	1.5	32.3	-6.8
KATOWICE	14	6	23	-5	10	1.9	43.9	-10.2
PRZEMYSL	12	5	20	-4	8	-0.3	43.4	-3.8
HUNGAR BUDAPEST	16	8	23	-3	12	1.0	9.5	-29.7
YUGOSL SARAJEVO	18	7	24	-2	12	2.5	57.0	-73.0
ROMANI BUCHAREST	15	6	21	-5	11	-0.9	17.8	-11.9
BULGAR SOFIA	14	6	22	-4	10	-0.5	47.3	20.5
ITALY MILAN	17	11	22	6	14	1.8	138.7	25.0
VERONA	18	12	23	6	15	2.1	160.0	85.8
VENICE	18	12	25	7	15	1.4	78.8	0.7
GENOA	20	15	24	10	17	-0.3	275.2	103.2
ROME	24	15	27	11	20	3.2	233.9	151.5
NAPLES	24	14	29	10	19	3.2	174.3	51.5
GREECE THESSALONIKA	19	12	23	7	15	-0.8	87.1	36.8
LARISSA	19	11	25	5	15	-1.0	50.4	-9.9
ATHENS	22	15	27	8	18	-1.3	34.6	-30.2
TURKEY ISTANBUL	18	12	23	2	15	-0.6	50.8	-13.2
ANKARA	17	4	29	-3	11	-1.0	22.8	4.8
CYPRUS LARNACA	26	16	33	8	21	-0.7	27.5	1.6
USSR TALLINN	10	4	17	-2	7	0.7	12.6	-45.9
LENINGRAD	9	4	15	-3	7	1.3	6.2	-54.3
KAUNAS	11	4	16	-8	7	0.3	15.2	-33.2
MINSK	10	2	17	-8	6	-0.3	38.7	-8.5
KAZAN	6	-2	13	-10	2	-1.4	0.1	-43.1
MOSCOW	7	0	15	-7	4	-1.0	0.6	-54.9
SVERDLOVSK	5	-1	12	-12	2	0.7	15.2	-21.5
OMSK	4	-3	14	-21	1	-0.7	7.4	-22.6
KUSTANAY	8	-1	16	-11	4	0.8	10.9	-14.8
KRASNOYARSK	2	-4	10	-22	-1	-2.4	43.7	9.2
NOVOSIBIRSK	2	-2	13	-19	0	-1.2	50.7	20.2
BARNAUL	3	-3	17	-19	0	-2.7	59.7	14.6
KHABAROVSK	9	1	27	-8	5	0.7	48.7	6.2
VLADIVOSTOK	12	6	19	-3	9	0.4	21.4	-40.9
KIEV	11	3	17	-6	7	-0.8	15.4	-23.7
LVOV	12	5	18	-3	8	0.6	40.1	-8.4
KIROVOGRAD	13	3	19	-5	8	-0.8	1.0	-30.5

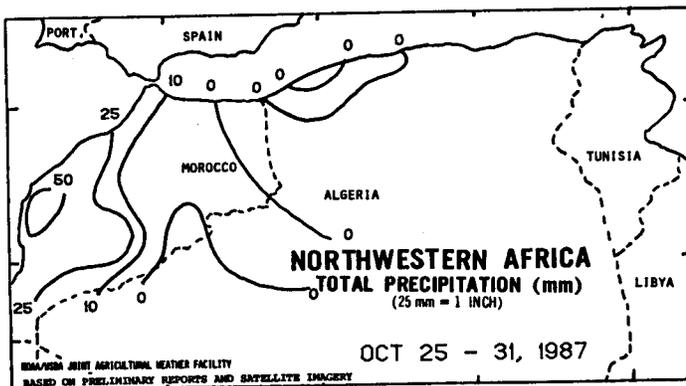
COUNTRY CITY	TEMPERATURE (C)					PRECIPITATION (MM)			COUNTRY CITY	TEMPERATURE (C)					PRECIPITATION (MM)				
	October 1987		October 1987		October 1987		October 1987			October 1987		October 1987		October 1987		October 1987			
	AVG	AVG	HI	LO	DPART	DPART	AVG	AVG		HI	LO	DPART	DPART	AVG	AVG	HI	LO	DPART	DPART
	MAX	MIN	MAX	MIN	AVG	F/NRM	TOTAL	F/NRM		MAX	MIN	MAX	MIN	AVG	F/NRM	TOTAL	F/NRM		
USSR	ODESSA	13	8	17	-1	10	-0.9	8.8	-11.0	TANZAN	DAR ES SALAAM	31	20	33	14	26	0.5	38.8	-18.4
	YALTA	16	10	21	5	13	-1.5	39.2	-7.8	GABON	LIBREVILLE	29	24	30	22	26	0.5	125.5	-280.9
	VORONEZH	9	-1	14	-9	4	-1.9	0.1	-39.5	TOGO	LOME	30	24	33	22	27	1.2	116.2	18.0
	SARATOV	8	0	13	-8	4	-1.0	0.1	-36.9	B FASO	OUAGADOUGOU	35	23	37	20	29	0.2	39.0	-0.5
	KHARKOV	10	2	15	-6	6	-0.9	1.6	-31.7	IVRY C	ABIDJAN	30	25	32	22	27	1.3	280.8	112.6
	VOLGOGRAD	10	1	15	-7	6	-2.0	1.0	-29.7	MOZAMB	MAPUTO	26	18	32	13	22	-0.5	34.0	-26.6
	ROSTOV	12	4	18	-6	8	-1.2	6.9	-29.7	ZAMBIA	KABWE	30	17	33	14	24	-0.7	0.1	-21.2
	ASTRAKHAN	13	3	19	-6	8	-1.4	2.6	-13.2	S AFRI	PRETORIA	26	14	31	7	20	0.1	33.5	-37.6
	KRASNODAR	15	6	20	1	10	-0.8	24.0	-11.6	JOHANNESBURG		23	11	28	3	17	-0.1	57.3	-11.2
	ORENBURG	8	-2	13	-10	3	-0.7	6.6	-35.1	BETHAL		19	10	24	4	15	-2.7	66.5	-9.4
	TSELINOGRAD	5	-3	25	-18	1	-1.8	23.6	6.0	DURBAN		23	17	28	12	20	-0.2	72.5	-18.3
	KARAGANDA	4	-4	25	-19	0	-2.9	33.5	5.4	CAPE TOWN		22	11	28	4	16	0.9	14.4	-21.3
	TBILISI	14	8	26	-1	11	-2.2	55.6	14.6	CANADA	TORONTO	12	2	21	-3	7	-2.2	48.4	-13.4
	TASHKENT	16	5	29	-6	10	-2.7	25.0	-7.7	MONTREAL		13	3	20	-4	8	-1.0	56.8	-18.7
	ASHKHABAD	17	6	35	-2	12	-3.8	32.8	15.0	WINNIPEG		9	-2	23	-11	4	-2.6	33.5	2.7
SYRIA	DAMASCUS	25	9	33	1	17	-2.5	35.2	25.5	REGINA		11	-3	29	-11	4	-1.0	11.3	-7.5
ISRAEL	JERUSALEM	23	13	33	8	18	-2.7	14.0	-8.5	SASKATOON		11	-2	26	-8	5	-0.2	9.8	-6.6
PAKIST	KARACHI	36	21	40	16	29	0.9	0.1	0.1	LETHBRIDGE		16	1	28	-8	9	1.0	9.3	-8.6
INDIA	AMRITSAR	32	16	36	10	24	-0.4	39.0	14.2	CALGARY		15	-1	27	-8	7	1.7	1.8	-15.8
	NEW DELHI	35	21	38	16	28	1.4	1.0	-34.4	EDMONTON		13	1	28	-7	7	1.3	5.2	-11.4
	AHMEDABAD	39	24	41	20	31	2.9	0.1	-10.7	VANCOUVER		16	6	21	3	11	0.9	20.9	-93.2
	INDORE	34	19	38	15	26	1.2	67.3	31.7	MEXICO	GUADALAJARA	28	9	31	1	18	-0.6	28.9	-40.9
	CALCUTTA	33	24	36	20	29	0.8	68.0	-64.0	MEXICO CITY		23	9	29	6	16	1.4	1.6	-32.9
	VERAVAL	35	23	39	20	29	1.4	0.1	-26.5	ACAPULCO		34	24	37	22	29	1.1	0.6	-159.2
	BOMBAY	34	25	37	21	29	1.6	73.5	-43.5	BERMUD	ST. GEORGES	27	24	29	21	26	1.0	120.9	-40.4
	POONA	31	18	34	11	25	-0.6	167.2	90.8	BAHAMA	NASSAU	30	24	33	20	27	1.2	109.8	-96.8
	BEGAMPET	31	22	33	17	26	1.1	127.8	38.8	CUBA	HAVANA	28	24	33	20	26	0.3	166.3	-10.3
	MADRAS	32	24	35	15	28	0.3	308.8	30.1	JAMAIC	KINGSTON	32	25	35	23	29	1.2	116.3	-61.9
	MANGALORE	32	24	35	22	28	0.9	240.3	34.3	P RICO	SAN JUAN	33	25	36	23	29	1.1	59.3	-81.3
H KONG	HONG KONG	28	24	31	20	26	1.1	70.3	-50.9	GUADEL	RAIZET	32	24	34	22	28	1.3	73.2	-95.1
N KREA	PYONGYANG	18	6	25	-4	12	0.6	24.2	-27.9	MARTNQ	LAMENTIN	32	24	32	23	28	1.8	17.3	-213.8
S KREA	SEOUL	21	11	27	3	16	2.6	21.9	-27.1	BARBAD	BRIDGETOWN	30	25	31	23	28	0.4	66.1	-101.7
JAPAN	SAPORO	16	8	26	3	12	1.5	120.6	5.2	TRINID	PORT OF SPAIN	33	24	34	23	28	2.2	105.6	-59.8
	NAGOYA	24	15	28	9	19	2.3	86.0	-35.0	COLOMB	BOGOTA	18	9	22	6	14	0.5	164.5	51.2
	TOKYO	22	16	28	11	19	1.6	197.0	15.9	VENEZU	CARACAS	33	25	36	22	29	1.7	61.1	16.6
	YOKOHAMA	22	16	27	13	19	1.7	199.0	12.3	F GUIA	CAYENNE	33	23	34	20	28	1.3	31.1	-37.4
	KYOTO	24	15	29	9	19	2.8	116.5	-7.9	BRAZIL	FORTALEZA	31	24	32	22	27	0.1	25.3	11.9
	OSAKA	24	16	29	11	20	2.1	103.5	-10.5	RECIFE		29	22	30	20	26	0.0	161.6	115.2
THAILN	PHETCHABUN	33	23	35	19	28	1.1	52.1	-42.9	BELO HORIZONTE		31	20	37	14	25	3.2	50.7	-88.2
	BANGKOK	33	25	35	21	29	0.6	227.3	9.8	CAMPO GRANDE		31	20	35	12	25	1.7	241.9	79.8
MALAYS	KUALA LUMPUR	32	24	34	22	28	1.8	528.1	258.9	FRANCA		29	19	34	13	24	3.0	171.1	40.0
VIETNM	HANOI	30	23	34	16	26	1.1	146.1	47.0	RIO DE JANEIRO		26	21	35	17	24	0.6	97.6	12.8
CHINA	HARBIN	11	1	26	-10	6	0.9	24.6	-3.1	LONDRINA		28	17	36	11	22	1.2	162.9	-18.0
	HAMI	15	3	28	-5	9	-0.9	20.1	18.5	SANTA MARIA		25	14	35	7	20	0.7	137.6	-39.4
	LANCHOW	18	5	27	-3	12	2.2	9.9	-14.8	PORTO ALEGRE		24	16	31	8	20	0.7	81.8	-37.3
	BEIJING	19	9	28	2	14	1.5	15.9	-8.2	PERU	LIMA	22	17	24	14	20	2.5	0.1	0.1
	TIENTSIN	20	11	30	2	16	2.0	11.1	-13.8	BOLIVI	LA PAZ	14	1	19	-3	8	-2.3	82.9	45.5
	LHASA	17	2	21	-3	9	0.3	6.7	-0.8	GHILE	SANTIAGO	21	9	28	4	15	1.2	61.0	50.2
	KUNMING	22	13	26	8	17	2.5	58.6	-25.2	ARGENT	IGUAZU	27	16	36	9	21	***	151.7	****
	CHENGCHOW	22	11	34	3	16	1.5	103.4	59.4	FORMOSA		28	17	40	9	22	-0.2	52.1	-90.9
	YEHCHANG	23	15	33	9	19	0.7	101.4	24.3	CERES		28	13	38	8	20	0.8	36.0	-40.7
	HANKOW	23	15	32	8	19	1.8	275.3	213.1	CORDOBA		26	13	38	6	19	1.3	46.9	-23.4
	CHIHKIANG	22	15	31	6	18	0.6	207.3	110.2	RIO CUARTO		24	12	33	7	18	1.4	82.8	-8.8
	SHANGHAI	23	17	29	10	20	2.2	65.5	15.2	ROSARIO		23	12	31	4	17	0.5	94.1	-3.8
	NANCHANG	23	18	30	12	20	0.9	185.1	129.6	BUENOS AIRES		22	10	29	1	16	0.2	76.9	-16.7
	TAIPEI	29	24	32	19	26	3.3	344.0	222.1	SANTA ROSA		22	10	30	3	16	0.5	112.6	39.0
	CANTON	29	22	33	16	26	1.8	13.7	-55.1	TRES ARROYOS		20	8	31	1	14	0.6	33.7	-33.2
	NANNING	29	21	33	14	25	1.9	47.3	-21.8	MIDW I	MIDWAY ISLAND	28	23	30	20	25	1.1	16.1	-166.4
CNRY I	LAS PALMAS	26	19	28	15	22	0.2	50.1	34.8	N CALD	NOUMEA	27	19	31	17	23	0.8	70.5	23.8
MOROCC	CASABLANCA	23	16	26	10	20	0.6	39.5	2.0	FIJI	NAUSORI	27	21	29	18	24	-0.2	99.4	-99.5
	MARRAKECH	26	16	32	10	21	0.1	28.4	6.8	SAMOA	PAGO PAGO	29	25	31	23	27	0.3	98.4	-182.3
ALGERI	ALGER	29	18	37	12	23	4.5	28.2	-80.6	TAHITI	PAPEETE	29	23	31	20	26	0.7	28.0	-56.8
	BATNA	25	12	35	6	18	3.5	22.1	-6.9	N ZEAL	AUCKLAND	18	12	22	7	15	0.3	237.7	146.9
TUNISI	TUNIS	29	18	34	13	23	3.7	19.5	-58.2	WELLINGTON		16	9	19	3	12	0.6	75.0	-26.0
NIGER	NIAMEY	38	25	39	22	31	0.8	10.1	-6.0	MOREE		25	14	32	6	19	-0.3	48.6	-0.3
MALI	TIMBUKTU	39	24	43	20	32	0.5	7.3	4.5	BRISBANE		25	16	31	10	20	-0.4	185.8	87.5
	BAMAKO	34	23	36	21	29	1.2	71.6	7.3	PERTH		22	13	31	9	18	1.1	53.3	-0.3
MAURIT	NOUAKCHOTT	36	24	45	19	30	1.3												



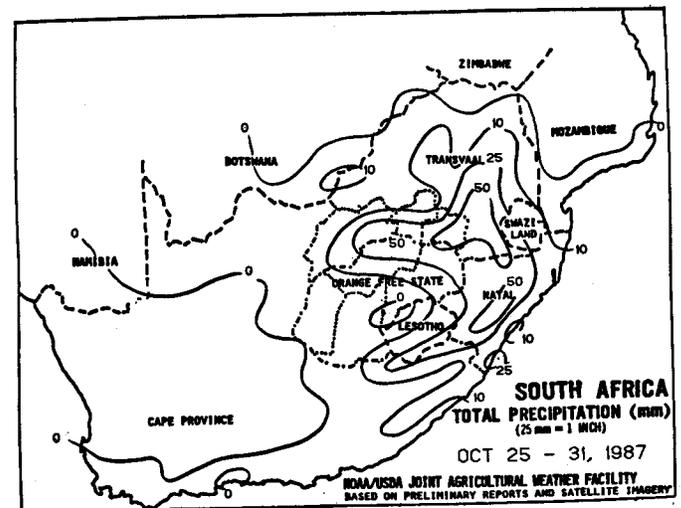
**WESTERN U.S.S.R.**...Unseasonably cold weather spread south and west, halting further winter grain growth over much of the region. Winter grains entered dormancy in eastern Belorussia, the Central Region, the Black Soils Region, the Volga Vyatsk, and the Volga. During the last 2 weeks, a sharp decrease in temperatures in these areas shortened the period for cold hardening, making the crop more susceptible to extreme cold. Winter wheat in major producing areas of the Ukraine and North Caucasus began cold hardening about 1-2 weeks earlier than usual. Persistent dryness and this past week's cold snap in the southern Ukraine has limited wheat establishment, making the crop more susceptible to potential winterkill conditions. In south central U.S.S.R. cotton areas, very cold weather and light to moderate snow in central and eastern Uzbekistan and southern Tadzhikistan halted the cotton harvest already delayed by late plantings and unseasonably cool weather during the growing season.



**EUROPE**...A series of weather fronts moving off of the Atlantic Ocean brought rainfall to much of Europe. Heavy rain (25-118mm) fell over western England, central and southern France, Portugal, northwestern Spain, and central Italy, delaying late harvest activities but providing ample moisture for winter crop establishment. Rain and freezing temperatures early in the period continued to hamper sugar beet harvesting in England, where persistent wet weather since early October has delayed most fall field activities. Freezing temperatures were also widespread across much of eastern Europe, hardening emerging winter crops but slowing germination of those planted late. Scattered light showers offered some limited relief to unfavorably dry southeastern Europe, with the exception of southern Greece where substantial rain fell.

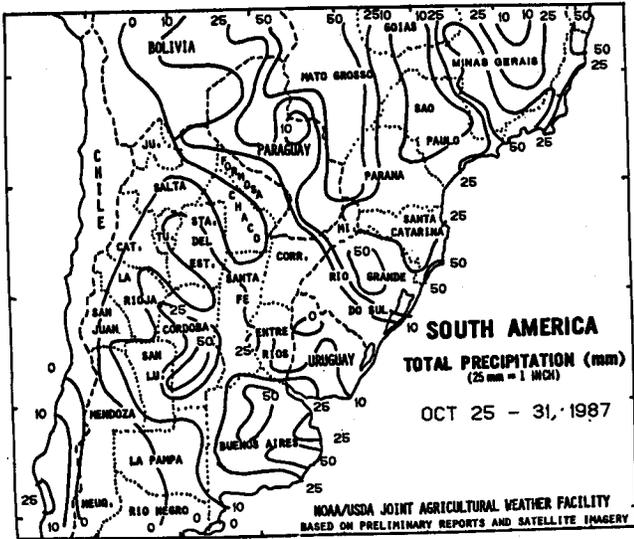


**NORTHWESTERN AFRICA**...A series of slow-moving weather fronts brought substantial rains (up to 50mm) to much of Morocco and parts of western and northern Algeria. The rains delayed the planting activity now in progress across northern areas of the region, but increased pre-emergence soil moisture levels, which have not yet been sufficient for crop establishment in some eastern and southern areas. Elsewhere, dry weather covered much of eastern Algeria and Tunisia, continuing a dry trend of several weeks.



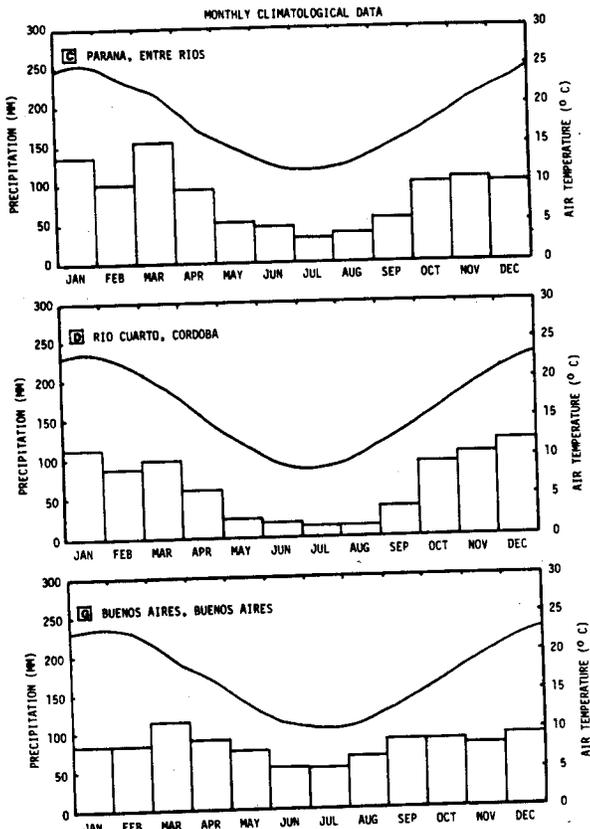
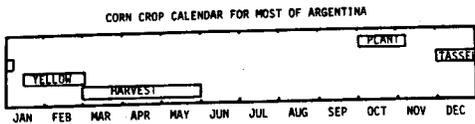
**SOUTH AFRICA**...Variable showers (10-75mm) continued in the eastern half of South Africa, maintaining favorable pre-planting moisture levels. Heaviest rainfall (25-75mm) continued in the southeastern Transvaal and Natal, continuing planting delays due to wet field conditions. More rain is needed in the western Maize Triangle for planting as rainfall continues to be minimal.



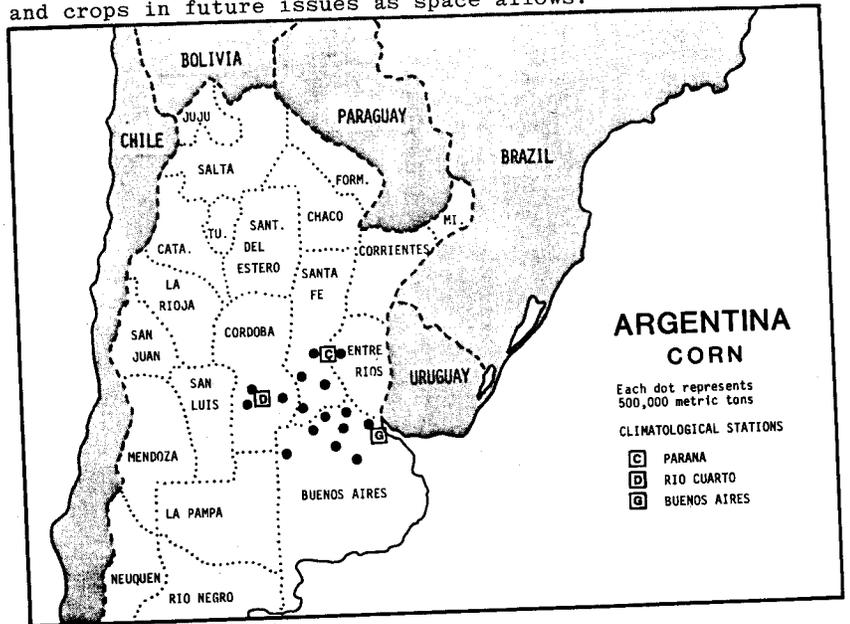


**SOUTH AMERICA...**In Argentina, beneficial rain covered summer crop areas of Cordoba, Santa Fe, and Buenos Aires. While the moisture was likely too late for maturing wheat in Cordoba, it provided much-needed topsoil moisture for corn and soybean planting. Weekly amounts averaged 25-73mm in central Cordoba and much of Buenos Aires and generally ranged 10-25mm over extreme southern Cordoba, Santa Fe, and westernmost Buenos Aires. Mostly dry weather prevailed in northern cotton areas. In Brazil, widespread rain covered nearly all south-central crop areas. Weekly amounts averaged 50-90mm in northwest Rio Grande do Sul, Mato Grosso do Sul, and southern Minas Gerais. Total rainfall generally averaged 10-35mm elsewhere, except in southern Rio Grande do Sul where only 1-5mm of rain fell. The topsoil moisture favored late corn and early soybean plantings.

### ARGENTINE CORN AREAS AND CLIMATIC PROFILES



Similar charts will be depicted for other regions and crops in future issues as space allows.



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), 53d Congress, 3d Session. NOAA is responsible for managing, printing, and distributing the bulletin. The contents may be reprinted freely, with proper credit.

Annual subscriptions: domestic \$25, foreign \$33 (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 Weekly Weather and Crop Bulletin, NOAA/USDA, Joint Agricultural Weather Facility, USDA South Building, Room 5844, Washington, D.C. 20250. Order subscriptions from the office and address listed above. Second class postage paid at Washington, D.C. and additional mailing offices.

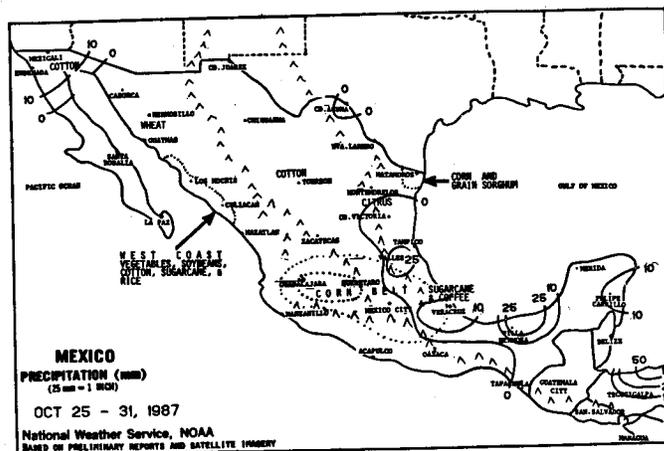
U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Weather Service/Climate Analysis Center  
Managing Editor (Acting) . . . . . Tom Heddinghaus  
Meteorologists . . . . . Ray McInturff,  
Jim Williams, Wes Byrd, and Randy Taylor

Subscriptions (202) 447-7917 . . Andrea Kuiper

U.S. DEPARTMENT OF AGRICULTURE  
Economics Management Staff  
Editor . . . . . Sharon Lee  
National Agricultural Statistics Service  
Agricultural Statistician . . . . . Cliff James  
World Agricultural Outlook Board  
Agricultural Weather Analysts. . . Ray Motha,  
Tom Puterbaugh, Mark Brusberg,  
and Jeff Andresen

(Continued from p. 22)

and all but southernmost Indonesia. Except for isolated areas, Java received only minimal rain. Irrigation levels in Java are likely too low for normal rice planting activities, usually beginning in November. Following the passage of Typhoon Lynn, drier weather returned to the northwest Philippines, but moderate to heavy showers (5-156mm) continued in the eastern half of the country from Mindanao to east-central Luzon.



MEXICO...Dry weather covered northern and western Mexico. Scattered showers produced highly variable rainfall along the east coast, extending into the Yucatan peninsula. Weekly amounts ranged 1-37mm in the southeast. The dryness favored harvest activities in the Southern Plateau corn belt, but the lack of moisture along the west coast farming region continued the reliance of frequent irrigation for immature crops. The light rain in the south helped immature corn, but moisture reserves may be short for vegetative growth in the Yucatan peninsula.

NOAA/USDA Joint Agricultural  
Weather Facility  
Room 5844 USDA South Building  
Washington, D.C. 20250

SECOND CLASS MAIL  
POSTAGE AND FEES PAID  
NOAA PERMIT NO.  
ISSN 0043 1974

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE, \$300

WEEKLY NEWS BULLETIN  
SECOND CLASS